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ECTOPIC GESTATION.

By W. GILL WYLIE, M.D., of New York City,
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Twenty-eight years ago I had scarcely heard a word of extra-uterine pregnancy, although I was an interne at the Woman’s Hospital and had been through Bellevue Hospital as an interne. Clinically, this was simply an unknown subject at that time. While I was house surgeon at the Woman’s Hospital I was called to see a tenement house patient, who had a large abdominal tumor. The woman was extremely thin, the abdominal walls were thin, and when I examined the tumor I detected the shape of a child in the abdomen. She gave a history of having labor begin at full term, and she had been told by a physician that the baby was due at that time. This was the thirteenth month—the fourth month after the usual time for birth. The physician seemed not to understand the case, and the patient had simply waited. I diagnosed it as a case of extra-uterine pregnancy—took the patient to the Woman’s Hospital and placed her in the service of Dr. Sims. At that time the leading authorities here were Sims, Emmet, Thomas and Peaslee, and Dr. Sims alone corroborated my diagnosis. Dr. Thomas opposed my views and held that it was a case of cancer. I held to my views so warmly as to be severely criticised by Dr. Sims. When the abdomen was opened, the child appeared, and Thomas then said I was right. The child, which weighed nine pounds, was found lying in a thin sac of adhesions among the intestines. No attempt was made to remove the placenta which was firmly adherent to the left broad ligament, occupying a large portion of the pelvis. When the child was removed, drainage was inserted, but the patient died of septic infection. This was my first experience with extra-uterine pregnancy. Nowadays this condition would be easily recognized, yet you will find a number of the older men to-day who have never had, or rather diagnosed, a case of extra-uterine pregnancy. From that time on I watched for this condition, and I understood it so little when I began to operate in Bellevue in 1882, after I had operated on about twenty-five or thirty abdominal cases. Later, when the subject of extra-
uterine pregnancy was better understood, I found that of these cases which were operated on for what was then called "local peritonitis with abscess," pyosalpinx and hematosalpinx, etc., on examination of the specimens four proved to be genuine cases of extra-uterine pregnancy.

About seven or eight years ago, when I was probably doing more abdominal work, or as much, as anyone in this country, I operated during one winter on eleven cases of extra-uterine pregnancy. Nine of them I diagnosed before opening the abdomen. One of these patients, a young woman, had been married only six weeks, and yet from the symptoms I diagnosed the case as one of extra-uterine pregnancy. The symptoms which guided me were some signs of local dilation of the Fallopian tube, together with the irregular menstruation. I claimed that there was some uterine hemorrhage even at that early stage, and when I opened the abdomen I found the left tube bleeding freely, an ounce of blood in the left side and an extra-uterine pregnancy about one inch in diameter in the Fallopian tube; the whole tube had not burst, but there was hemorrhage from the fimbriated extremity.

In the majority of cases the pregnancy begins in the Fallopian tube, and most frequently becomes attached to the mucous membrane of the tube, the placenta begins to form and the whole tube is gradually distended, and usually between the second and third months the tube itself becomes so distended and covered with large bloodvessels that the bloodvessels break on the surface, and we have the first severe hemorrhage which is generally indicated by sharp, fainting, sinking pain, sometimes fainting and collapse, although the hemorrhage may not be greater. As a rule, the hemorrhage preceding complete rupture is slight. If the pregnancy reaches the second month, the hemorrhage is often very great; if the third or fourth month, it may be violent and may cause death unless early operation is performed. It sometimes happens that there is a desperate hemorrhage at the second or third month, but if the woman is young and strong, she faints or is in collapse, then gradually revives: the fainting condition gives time for the blood to coagulate and stops by pressure, so that death does not ensue at once. Injection and stimulants greatly aid the recovery of the patient, although I believe that nature does more for these cases by reabsorbing the serum of the escaping blood than the doctor. I waited in one case, in which hemorrhage had ceased, 72 hours, in another five days, before I operated. The object in waiting was to get the patient's bloodvessels refilled with the best quality of blood that we could get in a short time. Undoubtedly, in peritoneal hemorrhage much of the serum of the blood is reabsorbed into the general circulation and helps to revive the heart's action. The bowels must be regulated to prevent intestinal obstruction. The patient is given easily digestible food and stimulating enemata until there is complete restoration of the heart's action; the temperature and other symptoms are carefully watched. In the last case the temperature rose to $100^{1/2}$°, and I did not dare wait any
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longer. I operated per vaginam, removing the ovary and one tube. The patient made a good recovery and is now apparently well with one normal tube and ovary in good condition, so that she may become pregnant again.

In another case I did an abdominal section. This patient had never had a child, and the indications were that hemorrhage had extended as far as the diaphragm. The pregnancy had probably advanced to the second or third month. The hemorrhage was extensive. When I operated on the fifth day, the blood clots were still floating around in the peritoneal cavity. I operated very successfully, although there was some suppuration along the line of incision. As in the previous case, one ovary and tube were left.

The most important thing to-day in extra-uterine pregnancy is that of diagnosis, and when one becomes familiar with, and understands, the subject, the diagnosis is comparatively easy, although to be absolutely certain in the early months is somewhat difficult. I would simply say this: If you have a case in which the woman has been normal so far as her menstruation function is concerned, and she has without any other well-defined reason an irregular menstruation, and the blood itself exhibits a different character, with perhaps the menstruation more prolonged, extra-uterine pregnancy may be suspected. Usually there are no symptoms until menstruation is due. The patient will complain of pain in one side, which will sometimes take the form of a neuralgic pain extending down the thighs, but in the more common cases the pain comes rather suddenly with a feeling of faintness. When the pregnancy has passed the second month, the hemorrhage is severe enough to cause violent pain. One of the most important points about this is the total absence of anything like local peritonitis with fever, etc. If you have a comparatively normal healthy woman, who has an opportunity to become pregnant and who misses a menstruation, and has severe local pain accompanied with faintness without any fever symptoms, it would indicate pretty clearly that the woman has extra-uterine pregnancy. If such a history had been given me, and there had been no fever, and I found by manual examination enlargement on either side in the broad ligament, I would consider these symptoms almost pathognomonic of extra-uterine pregnancy in its early stages.

The majority of cases are not in the hands of experts, and experts do not see them until a violent hemorrhage has taken place. Sometimes the fetus escapes and an abdominal pregnancy results. Instead of splitting externally it splits under the perineum in the layers of the broad ligament, and you have what is called a hematoma, hemorrhage not in the peritoneal cavity but underneath it. In this case hemorrhage may be limited and the extension is not so great, although the pain is severe, and you can usually, if you make a proper diagnosis, remove the clots or fetus by the vagina without any great risk. I prefer, however, to do the operation by the abdominal method. In this way you can save one tube and ovary, preventing its prolapse or coming in contact with the clots,
or of exudation taking place, leaving an abnormal condition of occlusion which would prevent pregnancy afterward.

As before mentioned, the specialist too often does not see the patient until after hemorrhage has occurred, but if I am not sure of my diagnosis I at once get the patient ready for operation. The bowels are freely moved, and she is gotten in the best condition possible. If I do not see the patient before the hemorrhage is violent, I operate even then. I would never wait and see a patient in collapse with indications of hemorrhage going on, hoping that nature would stop the hemorrhage, or resort to the miserable old plan once practised of trying to get reaction and resuscitate the patient, before stopping the hemorrhage by operating at once. I think a man is either ignorant or a coward who has not the courage to open the abdomen and stop the hemorrhage, and the chances of saving the patient by this procedure are infinitely better than by waiting. The waiting method may be better for the surgeon but worse for the patient. If there is any certainty that hemorrhage has ceased and the patient's pulse is very weak, then it is our duty to wait until she has sufficient strength to warrant the operation, but such cases are very rare and very difficult to diagnose.

I never in a single instance resorted to electricity to kill the fetus or to stop its growth, and when it was strongly advocated by nearly all the gynecologists of this city, about twelve or fifteen years ago, I stood up almost alone in the Obstetrical Society and opposed trifling with electricity in dealing with such a dangerous condition as extra-uterine pregnancy, and I would do then just what I would do to-day, operate at once. If I diagnosed clearly a case of extra-uterine pregnancy, I would open the cavity and remove the mass. If it had passed the fifth month, I would watch it carefully until the seventh, eighth or ninth month and remove the living child by the abdominal cavity. Those cases have been operated on successfully, although there is some risk in it, but if they do not burst by the fifth month, they will, as a rule, go to full term. In one case which came under my observation complete rupture occurred at 4½ months. I removed the living child, but, of course, it was too young to live.

The patient made a good recovery, and it demonstrated the fact that, although the patient in this instance had failed until she had no pulse, the operation can be done immediately after the pulse disappears in cases that would be fatal if delayed.

It is surprising, how often a physician can find a condition when he is looking for it, which he might not notice if he were not looking for it, yet I have never made a mistake in a single instance in opening the abdomen for extra-uterine pregnancy, although I have found extra-uterine unexpectedly when operating for sequelae and other complicating conditions.

I have never seen what we would call a double pregnancy—one in the Fallopian tube and one in the uterus, although I have seen cases in which such a condition seemed not improbable.

A few years ago, when gauze drainage was so fashionable, and
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at present, when there is such a craze about curetting, a great many mistakes are made in supposing these cases to be abortions, and the doctor will curette when there is an extra-uterine pregnancy; sepsis results and the patient is lost. Not infrequently in these cases the uterus is considerably enlarged, and there may be symptoms which simulate abortion, but a careful examination should show that this was not the case.

I will relate an instance to show you the extreme views that were held on this subject but a few years ago, particularly as to the supposed influence of electricity in extra-uterine pregnancy.

A case was reported in the New York Obstetrical Society, about 13 years ago, diagnosed as extra-uterine pregnancy which diagnosis was confirmed by two of the most famous gynecologists of that time. Electricity was applied three or four times at intervals of several days, and finally quite a severe hemorrhage occurred. To check this a vaginal tampon had been inserted, and the next day, when the tampon had been removed, the fetus and the placenta were found in the vagina. The author said his explanation was that electricity had stimulated the muscular fibers of the Fallopian tube, that gradually the tube had distended and the placenta and fetus had been forced into the uterine cavity and had been expelled into the vagina. This man was perfectly honorable and sincere in what he said. He related the instance as a wonderful illustration of the power of electricity. That view was accepted at that time. The President of the Society was in the habit of calling on the members to make remarks on the cases discussed; when it came round to me—at that time I had the reputation of being a pretty bold operator, and I had already expressed my views in reference to diagnosing a case of extra-uterine pregnancy in favor of operating and not trifling with electricity—I said there was not a single member of that Society for whose veracity and reputation I had greater respect, but to my mind his diagnosis was a mistaken one; that it would be physically impossible for the small muscular fibers of the tube, even if stimulated by electricity or any other force, to propel such a large mass into this undilated uterus. It was a physical impossibility. I said if the doctor had sat there and looked through the abdominal wall and saw the child, irritated by the electricity, walk out into the uterus, turn around and catch hold of the umbilical cord and pull the placenta after him hand over hand into the uterus, it would seem as probable as his explanation.

At the time the ignorance on the subject was so dense that several similar cases were reported as having been observed by some of those present at this meeting.

Now as to the mistakes that are made. First, by making a diagnosis in a case by assuming it to be a miscarriage or some irregularity of menstruation, and not recognizing that severe local pain of this kind in a comparatively healthy woman without fever, when a mass in the tube is made out, must be explained, and can only be explained, by some radical change in the tube and ovary,
and, if any such change took place, it would certainly be followed by fever unless caused by hemorrhage.

The next mistake is in not recognizing the earlier symptoms and waiting until rupture, dangerous hemorrhage takes place. And instead of waiting to bring about a reaction, the operation should be done before death from hemorrhage can occur.

As to the cause of uterine pregnancy, I am uncertain. All kinds of causes have been suggested, but I do not know any rational explanation, unless the condition may be due to an abnormal condition of the endometrium which causes the spermatozoa to ascend into the Fallopian tube; or it may be due to a dilated condition of the Fallopian tube at its uterine end. It does not seem to depend upon the condition of the uterus. It is rare for a woman to have an extra-uterine pregnancy on one side and then to have another one on the other side, but this has happened. I have seen it in two cases, one that of a Japanese woman. She had what was supposed to be a miscarriage, a large mass was found in the pelvis; she came to New York, I operated upon her and removed the remains of an extra-uterine pregnancy. She was very desirous of having children, and I then curetted the uterus and there was a tendency to prolapse. I shortened the round ligament and treated the uterus until the uterine canal was normal. Within a year from the time of the first operation she had some symptoms of pregnancy, and on examination, when she ought to have been five or six weeks pregnant, I found a mass about the size of a lemon dropping toward the cul de sac, movable at that time, not very painful, and I simply watched it. I had Dr. Thomas see the case in consultation. I decided, since there was no fever, that it was an extra-uterine pregnancy. With the very first symptoms of hemorrhage I opened the abdomen and found a perfectly typical case of tubal pregnancy.

It is only in recent times that this subject has been given proper attention, and one of the chief aids in diagnosis is the wonderful change in the "sense of touch," due largely to the efforts of Marion Sims, advocating educating the sense of touch, and I believe that the vast difference between the operation performed by what is termed now the general surgeon and the gynecological surgeon consists in the fact that the gynecologist has an immense advantage, owing to his more perfectly educated sense of touch. You will find very few general surgeons attempting to do a vaginal hysterectomy, because to operate through the vagina requires a very well developed sense of touch. I believe that before long special training will be given in the sense of touch, and in time men will be selected who have by inherited power or artistic ability shown fitness for this class of work. In other words, the indications for making a good surgeon should be found in a young man while at college preparing for his work. Many surgeons have reached prominent positions by their writings or by their opportunities to teach and yet are not good surgeons, and can never be made first-class surgeons, because they cannot be made good artists.

28 West Fortieth Street.
POINTS ON THE PREPARATION OF THE SKIN FOR THE SURGEON
AND PATIENT BEFORE OPERATION.

By ROBERT T. MORRIS, M.D., of New York City,
Professor of Surgery, Post Graduate School and Hospital; Visiting Surgeon to
the Post Graduate Hospital, Park Avenue Hospital, Fellow
of the New York Academy of Medicine.

The very elaborate methods for aseptic preparation of the skin
of the surgeon’s hands, and of the field of operation, which were
cumbrous and not very effective in the early days of antiseptic sur-
gery, have gradually given way to the more refined methods that
are based upon an accurate knowledge of the factors with which
we have to deal, and I have recently been employing a method which
promises to be used simply that we can spare our patient very much
of the disturbance that follows the rather complicated methods for
preparation of the skin when the work is to be thoroughly done.

There are two chief factors of skin preparation.

1. We know that bacteria cling to the roots of hairs and that
they are found slightly beneath the surface in the hair follicles, and
also imbedded in the superficial epithelium.

2. The second fact embodies the idea that it is not absolutely
necessary to get all bacteria out of the field of operation, because
a small number may be readily handled by the leukocytes of the
patient, and it requires a rather full degree of infection to over-
come the factors of natural resistance of the patient.

The preparation of the skin of the surgeon’s hands by the
method of using potassium permanganate and oxalic acid seemed
at one time to be the most thorough one for securing asepsis of the
skin, but this method, when employed at frequent intervals, would
leave the surgeon’s hands so rough that the superficial cracks of
the skin would be prone to harbor bacteria in their recesses, and,
further, the surgeon’s nice sense of touch would be injured by the
hardening of the superficial epithelium.

The same criticism applies to the method of preparation of the
hands with a strong bichloride of mercury solution after care-
fully washing with green soap, and I have seen the skin of as-
sistants so discolored and cracked that there was danger of perma-
nent injury being done.

When rubber gloves came into vogue a short time ago, it was
thought that the surgeon’s hands would be saved, and that the
patient would be given a further guarantee of asepsis on the part
of the surgeon; but there is one very important objection to the
use of rubber gloves—they certainly interfere with that sense
of touch which is so important if one wishes to do very rapid work
and in a delicate way without much handling of the tissues of the
patient, and with the idea of conserving his strength by finishing the
operation in the shortest possible time.

This feature is so important that I have not been willing to
use rubber gloves excepting in exceptional cases, as for instance,
in a patient with diabetes, whose natural cell resistance would be
diminished and whose blood was a particularly good culture
medium for bacteria. Sometimes, in operating upon a septic
patient, it has seemed wise to put on the rubber gloves before pro-
ceeding to work upon another patient who is without infection.

The rubber gloves are of advantage if the surgeon is not in
good health at the time when he is operating; the principles in-
volved in this point are not, perhaps, as fully appreciated as they
should be. Every operator carries in the superficial epithelium
of his hands a number of bacteria which are not destroyed by any
ordinary preparation in advance of operation. These bacteria in a
surgeon who is strong and well are latent and are kept in check
by the cell resistance of the surgeon and are not likely to make foci
of infection in the patient. If the surgeon, on the other hand, is
not feeling well, if he is even suffering from so simple a matter as
a "hard cold," his cell resistance is diminished for the time being,
and bacteria which would ordinarily be latent are in a state of
proliferation and are ready to form foci or infection.

There are some men, further, whose hands are apt to be rather
moist most of the time, and whose epithelium, consequently, is apt
to harbor more proliferating bacteria than that of others whose
hands are normally dry. With these few exceptions, the use of
rubber gloves is by no means necessary and may be considered to
be very undesirable on the score of interference with that most
precious possession, a trained touch.

The best method for preparation of the hands that I have em-
ployed is the one that has been so well described by Dr. Robert
F. Weir. It consists in sterilizing the hands by means of nascent
chlorine gas. The surgeon takes in one hand a heaping teaspoon-
ful of commercial chloride of lime and an equal quantity of pow-
dered carbonate of sodium. If water is then poured into the hand,
the two powders make a paste in which a reaction rapidly sets free
chlorine gas, and, if this mixture is thoroughly rubbed over the
hands for two or three minutes, we get a very complete steriliza-
tion of the skin without much injury to the epithelium. At one of the
hospitals in which I sometimes work continuously at operating
from morning till night, this preparation of the hands has been the
only one that has allowed me to escape after the day's work with
my hands in condition for operative work on the following day.
The only objection to this method, that I know, is one that con-
cerns the nurses, for if any of the mixture of chloride of lime and
of carbonate of sodium happens to get upon towels or linen it will
injure the fabric.

The preparation of the skin of the patient in the field of opera-
tion has until very recently required shaving, for the purpose of
removing even the smallest hairs which carry bacteria about their
roots in such numbers that sterilization cannot be easily effected unless the hairs are removed. The green soap poultice, the bichloride scrubbing and the elaborate preparation of the skin of the patient are apt to cause a good deal of mental commotion on the patient's part, particularly, if the patient is a woman, we may have to prepare areas about which the patient is naturally very sensitive about having them exposed.

From the results obtained by the nascent chlorine method for preparation of the skin in emergency cases, I have come to feel that perhaps this short and simple method for preparation of the skin was all sufficient, and that we might do away with all of the preparation excepting shaving; even this now seems to be apparently unnecessary, if a method which I have employed for the past six months continues to be as satisfactory as it has up to the present time. I refer to the removal of the hair with depilatories which contain various sulphides. The sulphides of some of these depilatories are powerful germicides so that when the hair is removed the superficial epithelium is sterilized completely at the same time, and the whole preparation of the skin at the site of a prospective operation can be done in five or six minutes. I experimented at first upon a series of rabbits, using a number of the sulphide depilatories and not making further preparation of the skin. Primary union was obtained in practically all of the incisions. I then gradually extended the experiments to patients in cases in which not much harm would follow if we did not have complete sterilization, and in these cases also the depilatories seemed to be thoroughly effective in making an aseptic field for operation. The two depilatories that I found best are a powder known as foral and as gelatinous semifluid called sulphur starch. The first is mixed with water and is spread over the surface from which hair is to be removed, and the second is applied directly; the foral acts a little more quickly than the sulphur starch, but the latter has some advantage in being immediately ready for use and is somewhat less expensive. I had both of these preparations analyzed. The foral was reported to consist of sulphides of calcium and of zinc, of oxides of calcium and of zinc and to contain some starchy powder. The sulphur starch was reported to consist of sulphides of half a dozen metals embodied in a semifluid vehicle. Some of the depilatories with which I experimented were inert and some injurious to the skin, but these two seemed to be harmless, and the hair grows out at once afterward, as after ordinary shaving.

The simplest method, then, for preparation of my own hands I have found to be the employment of a nascent chlorine method, and the simplest preparation for the skin of the patient, the use of one of the sulphide depilatories. Experiments along this line are to be carefully conducted, but the method promises to be the simplest and most convenient for both surgeon and patient.

58 West Fifty-sixth Street.
ANORECTAL, OR ISCHIORECTAL ABSCESS (PERIPROCTITIS).

By SAMUEL GOODWIN GANT, M.D., LL.D., of New York, Professor of Rectal and Anal Surgery at the New York Post Graduate Medical School and Hospital; Attending Surgeon for Rectal and Anal Diseases to the New York Post Graduate Hospital, Hebrew Sheltering Guardian Orphan Asylum and New York Infant Asylum.

Periproctitis is an inflammation of the perirectal tissue, which usually terminates in abscess formation (commonly called ischiorectal abscess). It is a disease seldom met with in children, occurring most frequently in middle-aged persons; men are affected with it more frequently than women, the ratio, in private practice, being about five to one, while in dispensary practice the proportion is even greater. Because of diminished resistance due to poor blood-supply, the loose perirectal tissue is one of the most frequent sites of inflammation.

Etiology and Pathology:

Periproctitis and, secondarily, abscess in the anorectal region may be due either to extension of a proctitis or to external influences. Some of the more common causes are: Sitting on cold, damp seats; horseback riding; foreign bodies in the rectum (pins, fishbones, etc.;) stricture, rupture or traumatism of the rectum or buttocks by the nozzle of a syringe, kicks, falls or punctured wounds; infection following rectal operations; and superficial, deep, or perforating dysenteric, tubercular, malignant, syphilitic or chancroidal ulceration. Again, a perirectal inflammation may be secondary to disease in the Fallopian tubes, ovaries, uterus, vagina, bladder, prostate, seminal vesicles or urethra. It has been known to follow suppuration of pelvic glands and caries of the vertebra, sacrum, coccyx or pelvic bones. Other causes of periproctitis are injury produced by the passage of the child's head during parturi- tion, subgluteal and psoas abscesses, dermoid cysts of the sacrum, hip joint disease, pyemia, worms, enteroliths, typhoid fever and puerperal septicemia, the latter being a common cause of pelvirectal abscess.

A peri-anal inflammation resulting in marginal abscess is frequently caused by fissures or suppurating thrombotic hemorrhoids. In rare instances there occurs a furunculosis, beginning in the follicles about the anus. These collections of pus are known as follicular abscesses.

Chronic alcoholics; persons who are overworked, emaciated or generally run down, those having a tubercular, gouty or rheumatic tendency, and syphilitic subjects are frequently affected with perirectal inflammation and abscess, probably owing to reduced resistance to infection.

Pyogenic bacteria are always present in the terminal colon, and frequent bruising and injury to the mucosa by hardened feces and the activity of the pelvic musculature render the anorectal region
particularly liable to infection from this source. It would appear
that the infection is transmitted through the lymphatics and smaller
veins, and may cause abscess in the superficial or deep structures
at points a considerable distance away from the rectum.

The writer has had the pus from a large number of abscesses
of the anorectal region examined microscopically. These examina-
tions showed that the bacteria most commonly found in these
abscesses are, in the order of their frequency, the bacillus coli
communis, streptococcus pyogenes, staphylococcus pyogenes and
tubercle bacillus. In some cases two or more of these bacteria
were found.

Periproctitis may be diffuse and extend upward, involving
the peritoneum, and downward into the ischiorectal fossa and
perineum; or it may be circumscribed and confined to a small area
at the anal margin. The inflammation is usually of the phlegmo-
nous type.

When the inflammatory process is followed by necrosis and
the separation of enormous sloughs, it is called gangrenous; when it
begins as a diffuse inflammation of the skin and rapidly extends in
all directions, it is designated as crysipelatous.

Resolution rarely, if ever, takes place in cases of perirectal in-
flammation, and it is only a question of time until an abscess is
formed. Abscesses in this region derive their names principally from
their location. Those most commonly encountered are:

1. Follicular.
2. Marginal.
3. Intermural.
4. Pelvirectal.
5. Ischiorectal.

Follicular abscess (furunculosis) involves the follicles about
or near the anus; marginal abscess (subcutaneous, peri-anal) is
found subcutaneously at the junction of the skin and mucous mem-
brane; intermural abscess (submucous) occurs between the mucous
membrane and muscular coats at any point in the rectum; pelvi-
rectal abscess (periproctal) occurs above the levator ani muscle;
ischiorectal abscess, which is by far the most common form of
anorectal abscess, may be located in any part of the ischiorectal
fossa.

Symptoms.

The manifestations of anorectal abscess are variable and depend
upon the cause, location, size and activity of the inflammatory
process.

Follicular abscess begins with itching; later there are slight
soreness, swelling and inflammation of the skin, accompanied with
pain resembling in every respect that which attends a boil elsewhere.
Marginal abscess is usually secondary to a fissure or suppurating
hemorrhoid; it appears at the anal margin as a small, firm, oval
tumor, which soon breaks down. There are slight febrile symp-
toms and constant throbbing pain, which is intensified by defeca-
tion and the action of the sphincter muscle. Intermural abscess
is usually preceded by ulceration of the mucosa and the lodgment,
of some small foreign body beneath the membrane. In its onset patients complain of chilly sensation, some fever and slight aching pain during defecation; later, of constant, dull, aching pain, with heat and fullness in the rectum, which increase until the pus finds an outlet into the rectum.

Pelvirectal abscess may be acute or chronic, and results from extensive rectal operations, pelvic disease or puerperal septicemia. It is serious from the beginning. It is marked by the constitutional disturbances common to all extensive pus formations. The pus may burrow in any direction, involving the peritoneum, or open into the bladder; or it may pass downward, dissecting its way between the levators ani muscles and the rectum, and find an exit through the vagina or upon the surface in the ischiorectal region. Again, it may pass around the rectum and open above into the rectum and below through the skin on either side of the anus, thus forming a horseshoe fistula.

Ischiorectal abscess in its commencement is marked by a decided chill, followed by high temperature, quickened pulse, furred tongue, loss of appetite, constipation and headache. Later, there are sensations of heat and fullness in the rectum, constant heavy, throbbing pain, increased by defecation, tenesmus, irritable sphincter and difficult micturition. The infected area is rounded, swollen, firm and very tender, and the skin over it is reddened, tense and glistening. As the disease progresses, the pus forms and burrows in the direction of least resistance, and may point in the rectum or upon the surface in any part of the ischiorectal region, where fluctuation may be obtained. Goodsall says: "The weak points in this region are (1) the interval between the sphincters, (2) the incomplete stratum of deep fascia separating the fat of the fossa from that of the subcutaneous tissue, and (3) the incomplete attachment of the levators ani to the anococcygeal ligament."

When the abscess is incised or the skin or mucous membrane gives way under pressure, the pus escapes into the bowel or upon the surface, and immediately all pain and febrile symptoms disappear.

In chronic or so-called cold abscesses in this region (especially those of tubercular origin or resulting from bone necrosis) the inflammatory process is not so rapid, the symptoms are not well defined, and considerable time is required for the pus to accumulate and make its presence known.

Ischiorectal abscesses may be small or they may occupy the entire ischiorectal space. When anterior to the anus, they are more superficial than when situated on either side or posteriorly.

The writer has encountered symmetric ischiorectal abscesses situated one on either buttock, and which had no communication. They began at the same time and were alike as to location, size and appearance. Apparently they were not secondary to any previous ano-rectal disease.

The abscess may open into the rectum, bladder, vagina or urethra, or into the rectum and out upon the labia majora (labial ab-
scess), or upon the surface of the skin; or it may completely encircle the bowel and open at one or more points about the anus. In the majority of instances the opening into the rectum will be found posteriorly at the junction of the internal and external sphincter muscles.

The pus contained within these abscesses may be slight or enormous in quantity; it is thick, yellow and of very offensive odor; that from tubercular abscesses is thinner and whitish in color.

In gangrenous abscess the necrotic process may involve the skin and deeper structures at several points. Extensive sloughs are produced, leaving deep cavities, which heal slowly and are followed by troublesome contractions.

The manifestations of erysipelas inflammation of the anorectal region do not differ from erysipelas in other parts of the body.

**Diagnosis.**

Follicular abscesses are usually multiple, small, cone-shaped, movable swellings with pus pointing in the center. They are situated in the skin near the anus in the intergluteal region and are easily recognized because of their close resemblance to an ordinary boil. Marginal abscesses are ovoid swellings somewhat larger and less movable than the follicular variety. They are extremely sensitive and are situated beneath the skin and mucous membrane of the anus, frequently causing an eversion of the membrane and bulging of the skin. Intermural abscesses can be detected only by digital examination. They can be felt projecting into the rectum as fluctuating rounded tumors; if they have already opened, an inflammatory area is left from which pus can be squeezed with the finger.

Pelvirectal abscess in its beginning is extremely difficult to diagnosticate, because of its location, occasional latency and its advent secondary to disease of adjacent organs; vertebra or pelvic and hip bones.

In the earlier stages of deep-seated ischiorectal abscess a positive diagnosis can be made, after securing a history of the case, by palpating the rectum and deeper structures surrounding the anus. With the index finger acting as a pivot, the peri-anal structures in every direction should be grasped between the thumb and finger until the inflammatory area is left as a firm, rounded, painful swelling. When superficial or when much pus has accumulated, there is bulging of the skin, which is glistening, red and inflamed, and fluctuation is evident.

**Prognosis.**

The prognosis of follicular and marginal abscess is invariably good when they are properly treated. The same can be said of the intermural and ordinary ischiorectal forms in so far as life is concerned; but they sometimes require a long time and several operations to effect a cure; in exceptional cases, in which they communicate with adjacent organs, dangerous complications may develop. The prognosis of pelvirectal abscess is grave, because of the
danger of death from peritonitis. Moreover, it leaves adhesions and burrowing sinuses, which are difficult to manage.

In gangrenous proctitis and abscess the prognosis is even more grave than in the preceding form, and, when not promptly arrested, death follows either from extension to the bladder or peritoneum, or from septicemia or exhaustion. The prognosis of erysipelatous periproc-titis is favorable when the disease can be limited to a small area, but bad when it cannot be controlled.

Treatment.

Very little can be accomplished in the treatment of periproc-titis and anorectal abscess by palliative measures. In most cases periprocritis terminates in abscess in spite of all treatment, and the rules governing the management of abscess in other parts of the body should be adhered to in these cases. The patient should be made as comfortable as possible by the application of heat or cold, rest in bed and the use of mild laxatives until the diagnosis of abscess is certain, when the swelling should be freely incised without delay. The writer has had very little success in the abortive treat-ment of abscesses in this region by the injection of solutions of carbolic acid or other remedies. It has been his experience that, when fluctuation is present, absorption can hardly be expected to take place. In his opinion it is far better to incise the inflammatory swelling and fail to get pus than to procrastinate and allow the pus to accumulate and burrow, forming single or multiple fistulae. When allowed to pursue an uninterrupted course, anorectal abscess nearly always results in fistula, because of the frequent contractions of the sphincter muscle, which prevent healing. When properly treated, however, it seldom terminates in fistula.

Follicular and marginal abscesses should be injected with 3 per cent. beta-eucaine or 4 per cent. cocaine solution, or frozen with the ether spray, kelene or liquid air. They can then be transfixed with a curved bistoury and laid completely open with but little pain. They should then be irrigated and packed with antiseptic gauze.

A general anesthetic is usually necessary for operations upon intermural, ischiorectal and pelvirectal abscesses. After the parts have been thoroughly cleansed, the sphincter muscle should be divulsed. After this the steps of the operation depend upon the form of abscess to be dealt with.

When the abscess is of the submucous variety, a bistoury is guided upward in the rectum by the index finger until the most prominent part of the abscess is reached, when it is freely incised parallel with the long axis of the bowel to avoid the large hemor-rhoidal vessels. When the swelling is more than three inches (7.62 centimeters) above the anus, extreme care should be taken to avoid penetrating the peritoneal cavity. Bleeding is usually free, and it is necessary to pack the wound tightly to avoid secondary hemorrhage.

The operation for ischiorectal abscess should be radical. The operator must not be content with a simple puncture, for evacua-
tion of the pus in such a condition is little better than no treatment. He should proceed to lay the abscess wide open, curette and, if necessary, break up with the finger the various septa, not stopping until the cavity thus produced has been completely emptied of pus and necrotic debris. The cavity should be thoroughly irrigated and, if any unhealthy-looking tissue still remains, it should be cauterized with the Paquelin cautery or with pure carbolic acid, the action of the latter being controlled, if desirable, with 95 per cent alcohol. When the abscess is large, one or more counter-incisions should be made at right angles to the first to insure free drainage. It is rarely necessary to waste time in ligating bleeding vessels, unless they are large, for hemorrhage will be arrested when the wound is packed.

Pelvirectal abscess pointing in the ischiorectal fossa requires the same operation as one having its origin in this locality. The sinus leading upward from it should be curetted or cauterized with carbolic acid, then loosely packed with gauze and allowed to drain through the incision. In exceptional cases it is best to approach pelvirectal abscesses by laparotomy or through the vagina.

In these operations, unless there is already an opening into the bowel, the incisions should not extend through the sphincter, because of the danger of incontinence and a prolonged convalescence. At the primary dressing the wound should be packed tightly with gauze to prevent hemorrhage.

The postoperative treatment is of the greatest importance. The dressings, when soiled, should be removed and the wound irrigated with sterile water, antiseptic or stimulating solutions, and then loosely placed in the bottom and in every corner of the sinus. Care should be taken to break up with the probe any bridging over of the tissue in order to prevent the formation of sinuses. When granulations are sluggish, they should be stimulated with mild solutions of silver nitrate, ichthyol, balsam of Peru or other stimulating solutions. When they are too exuberant, they must be destroyed with stick silver, copper or acid.

In addition, these patients should have nourishing foods and pleasant surroundings and remain quietly in bed. When necessary, they should have cod-liver oil, malt, iron, hypophosphites or like remedies. When indicated, the bowels should be regulated with carabana or other reputable mineral waters.

LITERATURE.

2 East Forty-fifth Street.
THE EXISTENCE OF TYPHOID FEVER IN ATLANTIC CITY.

By PHILIP MARVEL, M.D., of Atlantic City, N. J.

Geographically speaking, Atlantic City is built upon an island, situated off the southeastern portion of the State of New Jersey, in latitude 39 degrees 22 minutes north, longitude 74 degrees 25 minutes west, and is about 55 miles in a direct line southeast from Philadelphia.

The city proper is built upon the northeastern end of the island, and is removed from the mainland seaward about five miles. The intervening distance between the city and mainland is an unbroken broad stretch of salt meadow land, except to the north and west, where it is broken by the Thoroughfare (Little Egg Harbor Inlet), Lake's, Absecon and Grassy Bays.

The history of Atlantic City dates from 1852, but from this year until 1882 there is little of interest known relative to the subject of this paper, no record of any attention whatever having been given the question of sanitation until the latter year, at which time Dr. Boardman Reed and other members of the profession succeeded in organizing a Board of Health. The prejudice and lack of harmony in public feeling at the time served here, as elsewhere, to retard the board in accomplishing much until the following year; however, they were resolute and determined men, with conviction no less strong than the dangers they had organized to combat, and shortly led others to realize the necessity for such an organization.

In 1884, acting upon the recommendation of the Board of Health, a sewerage system, known as the West system, was laid in the principal streets during this and the following year. Ordinance succeeded ordinance, recommending such legislation as would force property owners to connect their properties with the system, where the pipes were already conveniently placed. Year after year the pipes were extended to both old and new territories; properties provided with proper means of connection, and public feeling, hitherto prejudicial, was largely overcome.

The placing of water pipes in the smaller houses and subsequently destroying the surface wells, has led to the entire removal of surface drinking water, and how well the Board of Health has succeeded in its recommendations to have all properties connected with the sewer system may be seen in the recent report of the New Jersey State Board of Health for 1901, in which is briefly told the story of how persistent and untiring have been the efforts of our board. It is perhaps proper to state incidentally in this connection that no epidemic occurred in any of the unconnected districts previous to their being connected with the sewer, which fact doubtless was due to the strict and careful inspection that was given them. The following is extracted from the report: “Number of dwellings and tenement houses, 5,025; total number of dwellings connected with the water main, 4,550; total number of dwellings connected with the sewer system, 5,275.” The seeming discrepancy in the foregoing figures, I take it, is that the first are intended to include only dwellings and tenements; of the latter there were 25: and the last to include all the
above with the larger hotels and possibly recently built houses, not yet occupied, all of which are compelled to connect. In all, there are now upward of 35 miles of sewer pipe in active service in Atlantic City. The sewage, with two exceptions, is directed to one common center, from which it is pumped through a 30-inch iron disposal main to the Thoroughfare, a distance of two miles from the city. The average daily pumpage in the height of the season is five million gallons, for the remaining months it ranges from two to three million gallons, and the volume of water passing the outflow end of the sewage disposal pipe in 24 hours is estimated to be upward of 8,000,000,000 gallons. The exceptions referred to are: (1) A short run of pipe in the northern portion of what is known as the Moore Tract, a small outlying district north of the railroad, which drains directly into Penrose Canal, and (2) the northwestern portion of Chelsea, also north of the railroad, adjoining the back inlet and draining direct into the upper Thoroughfare.

The water supply of Atlantic City is from three sources, viz.: (1) From artesian wells within the city, ranging in depth from 750 to 800 feet. (2) Artesian wells driven to a depth of 40 to 100 feet on the mainland, between six and seven miles from the city, the larger number of which are self-flowing. (3) From an inland lake situated in an almost uninhabited section of Atlantic county, two miles farther inland. The overflow from this lake is continually renewed by constantly flowing springs, situated within its basin, and a few tributary streams from cedar lowlands. A large portion of the water from this lake daily overflows and collects in a dam constructed for that purpose. When required this water is brought from the lake to the pumping station, which is situated near the mainland series of artesian wells, through a narrow, open, artificial canal, made in the soil, the bottom of which is of white sand and gravel.

At the pumping station the water received from the lake with that received from the driven wells is pumped through a sealed iron main to Atlantic City and to the standpipe, a distance of five miles, where a million or more gallons are kept in storage, being constantly replenished. The subterranean source from which the first series (i.e., the deep wells) draw their supply, according to the description given in the State's Geological Survey, is that of the well-known 800-foot horizon extending northwest to southeast across the State, and is without possible pollution. The source of supply of the second series, and also of the flowing springs within the lake, has its beginning in the hill lands north of Hammonton, a distance of more than twenty miles, and filters through the strata of fine white sand, which is protected from the ordinary surface waters by a stratum of compact clay formation, between the six and 15-foot perpendicular. The third, or lake, supply of water, as stated by the engineer, is used very little except during the early spring months and Easter holidays, and in the midsummer months—more particularly July and August—when it composes less than two-fifths of the bulk supplied.

Therefore, the remaining eight months the city water supply is almost entirely from an artesian source. The greater number of the large hotels have their own artesian wells, and are, therefore, neither dependent upon nor required to use the city's supply. Analyses of these waters made by
Dr. Leffmann, of Philadelphia, and Dr. Cooper, State Geologist of New Jersey, taken independently from the three sources, have shown each to be exceptionally pure and wholesome. They have specially spoken of that obtained from the artesian wells, remarking upon its freedom from organic matter. Indeed, that received from the lake has so slight a percentage that it ranks much above the average spring and river supply. Whatever objections might arise in the future from the use of the water from this latter source will soon be removed, because the Water Commissioners have already in hand recommendations to put down more artesian wells—the depth of the second series—which, it is thought, will furnish a supply equal to and greater than the amount which will be required for many years. Also for the purpose of protecting the lake for possible future demands, a suitable portion is to be cleansed, dammed and properly protected for emergency supply, which supply will be brought through a conduit to the present pumping station and filtered.

The garbage is collected daily in covered wagons, made for the purpose, and removed to a plant on the meadows, a distance of a mile from the city, where it is incinerated. It must be admitted, however, to the discredit of the authorities having it in charge, that the collections have not always been made according to the requirements of the ordinance, therefore, the department of health has not been without numerous complaints during the months that the service was most taxed, but the increase of typhoid fever in the city during the past summer and autumn has served to impress the said authorities with the necessity for a more strict compliance than has hitherto been given to either individual complaints or the demands of the Board of Health.

The major part of the food supply of Atlantic City is drawn from Philadelphia, New York City and the rural districts of Pennsylvania, New York and New Jersey, the most important exception being fish, which in certain seasons of the year are mostly taken from waters adjacent to this city. Deep-water fish, however, and varieties foreign to these waters, except bluefish, are largely imported direct from the northeastern and southern markets. Oysters are brought from the waters of the Delaware and Chesapeake and planted in the bays north and west of this city, varying in distance from four to seven miles from where they are taken after proper growth to supply the city's market. The milk supply furnishes no exception to that of all large cities, being received from large and small dairies situated in various farming districts of this and adjoining States.

Having briefly referred to the sources through which typhoid fever infection usually finds its introduction into our homes, as well as our cities, before more particularly considering the investigation and report of the committee appointed by the Atlantic City Academy of Medicine to ascertain, if possible, its source in Atlantic City, I wish to refer to some possibilities arising from the special relation which this city bears to the sanitary condition of the country at large. This question, however, may be simplified by referring to that of Philadelphia and other large cities near by. It may not be a unique situation, but certainly an exceptional one, to find for eight or more months in the year a city of any number of inhabitants, its greater number being already accredited residents of other cities.

For instance, when Atlantic City has from 200,000 to 300,000 people
for its summer population, which represents a temporary transfer of large residential portions of various thickly populated sections of other cities, there must necessarily come with such an aggregation of humanity a large importation of infectious disease and disease producing germs. And again, the great and almost inestimable daily demands made upon the energies of those who have the responsibility of caring for this great army of health and pleasure seekers, rapidly exhausts their stored energies and leaves them with lessened resisting force, thus providing a suitable fallow ground for the development of infectious diseases. A study of this aspect of Atlantic City's position will show, without further argument, how very likely such an influx from so large a district as the "whole country" would disturb both the physical and sanitary conditions of the city, and the wonder is that it has not hitherto had many epidemic outbreaks of typhoid and other diseases—certainly no better or more potent argument can be used as evidence of the faithful guarding of the city's health in the past than the absence of epidemics, as verified by reference to the records of the city's Board of Health.

In 1882 Atlantic City's population was in round numbers 7,000; maximum daily number of visitors, in the summer, 40,000. In 1892, number of residents less than 20,000; maximum daily population in August, visitors, 100,000 to 125,000. In 1902, resident population, not more than 40,000; maximum daily population in August, visitors, not less than 250,000. During the remaining months, from September to July, the number of visitors will vary from 20,000 to 200,000. By this unequal relation Atlantic City's population is yearly increased, and suddenly transformed from that of a village to the number and importance of a great city. With the foregoing statement and figures before you, I now come to the special discussion of the subject in question: "The Existence of Typhoid Fever in Atlantic City."

Reference to Atlantic City's Board of Health records from 1885 to the present year reflects the condition of the city's past and present health more nearly correctly than can be presented in any other way. From a study of these records, which are complete, with the exception of from 1888 to 1894, I am able to make the following statements:

During the years of 1885 to 1887, inclusive, the number of typhoid fever cases reported was 19. The largest number reported for any one year, 13; the smallest number reported, 3, being an average of 6 1-6 for each year. Population: Resident, 6,000 to 8,000; visiting, estimated minimum, 5,000; maximum, 50,000; average about 25,000 to 30,000; from 1895 to 1901, inclusive, total number of cases reported, 208. Greatest number reported for any one year, 48 cases. Smallest number reported for any one year, 18 cases, being an average per year of 29 5-7 cases. Population: Resident, 20,000 to 35,000; visitors, 150,000 to 250,000. If we study this report in divisions, making the first include all cases reported between January and June of each year inclusive; the second, all reported between July and October, inclusive; and the third, all reported between November and December, inclusive, it forcibly demonstrates the period of the year when the largest number of cases have been observed. In the first division were reported 50 cases, or 1 1-16 per month. In the second division, 123 cases, or 4 1-28 per month; in the third division, 25 cases, or 11 1-14 per month.
It is to be regretted that the records do not indicate in all cases whether resident or visitor, hence any study of the reports looking to the correct estimate of the number infected in this city cannot be accepted as reliable, and in no case it is stated how long the individual was in the city previous to being stricken with the disease. That quite a number of the visitors with the "imported help" (which I desire to emphasize later) are included in a number that should be exempt from the records must be admitted without question. For instance, no subject developing the disease within ten to twelve days after arriving in the city should be accredited to causes prevalent here, and there is great reason for doubt as to whether, in many cases, the incubation period should not be more frequently placed at twenty rather than a less number of days. In support of the former statement I cite, as an incident in question, four cases attended personally this summer, each of which developed the disease respectively on the first, third, fifth and seventh days after their arrival in the city; and these were reported simply in the regular way. It is not only probable but an unquestionable fact that the same is true of cases attended by my colleagues and other physicians of our city. To return for a moment and briefly allude to the cases observed among "imported help," it may be stated without argument that these include a number of these hospital cases. If the total number of visitors who have been ill of typhoid fever in Atlantic City be added to the number of cases treated among the help, to which reference is above made, and this number deducted from the total number of cases reported to the Board of Health, there would be quite another and a different showing, and if one could only know how many of these cases brought the infection with them, and to this number add the number of cases among our own residents who became infected while visiting other cities where the disease was prevalent, we should have, I dare say, but a small percentage of the number recorded to Atlantic City's credit.

This brings me to the year 1902, when the circumstances are somewhat changed. Early in the month of August it became quite apparent to members of the profession that the typhoid bacillus had found a nidus within our city and was propagating rapidly and effectively. Frequent discussions were had upon the subject, and much careful thought and patient search given the investigation. In the early part of September, at a meeting of the Atlantic City Academy of Medicine the subject was openly discussed and subsequently a committee was appointed by the Academy for the purpose of a thorough investigation. So careful and effective had been the work previously done by individuals that the committee's task was much lightened and resolved itself largely into a review and affirmation of that already done. After having considered the various sources of likely infection, as alluded to in the beginning of this paper, the committee, having exempted one source after another, finally found evidence which pointed strongly but circumstantially to the hapless and innocent oyster. It was sure of having located at least one source of infection, but before making the report Dr. A. C. Abbott, professor of bacteriology and hygiene, University of Pennsylvania, and Dr. Henry Leffmann, professor of chemistry in the Woman's Medical College of Pennsylvania, were asked, as experts, to examine the sources under investigation and pass upon the report before the same was
submitted. This they did and it now bears their approval and signatures. (For detailed report those who may be interested are referred to the Philadelphia Medical Journal of November 1, 1902.) It was easy for oysters, "freshened" and "fattened" at the junction of Penrose Canal and the Thoroughfare, to become sewage infected and polluted. "Fattening cribs" scarcely more than five hundred yards from the point at which the sewage was by accident being delivered into Penrose Canal were so situated as to receive the flood tide as it flowed through the canal to the Thoroughfare. Only ignorance could excuse men from so culpable a violation of sanitary law.

A similar, though much less dangerous, condition because of the small amount of sewage delivered was found to exist in Gardner's Canal, an artificial creek, which is a short distance west of the mouth of the inlet. The findings of the committee were at once presented to the Board of Health, with the recommendation that an ordinance be prepared to include all of the adjacent waters around and about the city, within a radius of three miles, and that any person or persons found planting, catching, "freshening" or "fattening" any shell fish whatsoever within these waters, or offering for sale any shell fish known to have been taken from these waters, shall be judged a violator of law and severely punished by fine and imprisonment; this to be passed by council and made active at once. It remains to be seen what knowledge exists of reasonable evidence of the transmission of typhoid bacilli to the oyster. This again is without direct proof, but a number of persons, quite a half dozen I should think, are known to have had typhoid fever for periods varying from one to six weeks and from whom all the excreta were permitted to enter the sewer without the least attempt at disinfection, these being unrecognized, it is only fair to infer that they did not represent the whole number who may have been treated by the same gentlemen without proper disinfection. And it was true of many cases that they did not consult a physician until several days after the beginning of their illness. And also, that simultaneously with the stopping the sale of oysters "freshened" and clams caught in the sewage polluted waters, with few exceptions, the further development of cases of typhoid ceased.

It would be easy further to multiply evidence quite as probable as the foregoing, but it is unnecessary; that the infection was there is not disputed. The question is, from where did it come?

In accordance with statements and inferences already before you the way to a probable explanation readily opens. Having recently addressed the following letter to the Health Boards of the large cities on and adjacent to the Atlantic seaboard, I am in possession of information bearing upon the subject of typhoid fever in these cities which enables me to show the possibility that not only did the typhoid infection come from these sources, but also that a number of cases attributed to Atlantic City (some of which developed there and others after their arrival home) are probably wrongly placed at the city's door. Not having stated in my communications to the several boards that I desired the information for public print, I reserve the privilege of withholding the names of the cities addressed and the numbers individually reported, but may state that the aggregate number of cases enumerated in the reports received numbered nearly 10,000, which have already been reported in these cities.
this year, from all of which, to my personal knowledge, Atlantic City's past summer's population was materially increased. The following is a copy of the letter:

"To the Secretary of the Board of Health of ———:

"Dear Sir—I am endeavoring to ascertain whether typhoid fever has materially increased the past three years in the Atlantic seacoast cities, and the cause of the same, when known. To assist me in obtaining this information I am taking the liberty of addressing to the various Boards of Health the following questions relative to it, and in so doing may I enlist your co-operation to the extent of answering the following, viz.:

The number of typhoid fever cases reported monthly for years 1900, 1901 and 1902, and what was the source of infection, if known?

"Thanking you in advance for your trouble and the courtesy I am asking, I am yours very truly,

PHILIP MARVEL."

I hope I have not been misunderstood in the foregoing, and certain it is it has not been my intention in any way to mystify the subject or exempt Atlantic City from any part of a relation in the recent development and distribution of typhoid fever infection within its boundaries; therefore, in concluding permit me to recapitulate briefly:

(1) The existence of typhoid fever, as was evidenced by the greater number of cases observed, was known to the profession in August.

(2) Though unofficially, the profession used its earnest and early endeavor to apprehend the source.

(3) The Atlantic City Academy of Medicine officially appointed a committee on September 19, with full authority to investigate and, if possible, to determine the source of the infection.

(4) The said investigation was successfully made, committee's deliberations examined and approved by two experts, and the reports accepted by the Academy.

(5) A copy of the report was furnished the Board of Health with the committee's recommendations and was favorably received.

(6) Said recommendations were duly prepared, presented and acted upon by the Board of Health and to-day are an operative law.

(7) The knowledge acquired by the committee, within and without the city, was positively to exempt the water and milk supply from contributing in any way to the source of infection.

(8) The knowledge obtained through the courtesy of the various Boards of Health, and the peculiar relation of the sanitation of Atlantic City to that of the larger cities of the country, makes it more than probable that Atlantic City was the victim rather than the source of the disease.*

1616 Pacific Ave.

*Read by invitation before the Philadelphia County Medical Society.
THE FIRST STATE MEDICAL SOCIETY.

By WILLIAM JESSUP CHANDLER, M.D., of South Orange, N. J.

In 1664 New Jersey was a province belonging to the Duke of York under the royal charter granted by Charles II. Sir George Cartaret and Lord Berkeley subsequently obtained title to the province, and under their supervision the State was formally opened for settlement. In those early days the practice of medicine was largely in the hands of the clergy. They were the scholars—the leaders in the political and social as well as the religious affairs of the community. There were among the settlers in the southern part of the State some educated physicians, but most of the so-called "doctors" were quacks or empirics or men who practiced medicine in conjunction with some other vocation.* How they were regarded by one observer in 1685 we discover from a letter from Charles Gordon to his brother, Dr. John Gordon, dated Woodbridge, in East Jersey, March 7, 1685. After describing the salubrity of the climate he says: "If you design to come hither yourself, you may come as a planter, or a merchant, or as a doctor of medicine. I cannot advise you, as I hear of no diseases here to cure, but some agues and some cutted fingers and legs, but there are no want of empiricks for these already." The first contribution to medical literature in America is said to be a paper published in 1677 by Dr. Thomas Thatcher, also a clergyman, with the title, "Brief Rule to Guide the Common People of New England How to Order Themselves and Theirs in the Small Pocks or Measles." One of the earliest printed writings of a New Jersey physician is that of Rev. Jonathan Dickinson, a practitioner of Elizabethtown, in 1735. It treats of "the throat distemper." The pamphlet containing this article can be found in the library of the Historical Society of Massachusetts. The careful reader will discover that this "throat distemper" is identical with our present day diphtheria. No medical colleges existed in this country at that time, and physicians obtained their education in the offices of their preceptors. As population and wealth increased young men sought the advantages of European institutions of learning, and, settling here and there in the country, formed centers from which medical knowledge was dispensed. In the larger cities local societies were formed, some of which later developed into State societies. The earliest to form such a society was the State of New Jersey. The original book of minutes of the Medical Society of New Jersey is still in existence and in a good state of preservation. From this book we learn that "the low state of medicine in New Jersey, and the many difficulties and discouragements under which it has hitherto labored and which still continue to oppose its improvement in utility to the public, and its advancement to its native dignity, having engaged the attention of some gentlemen of the profession; it was determined to attempt some measures of rescuing the art from that abject condition into which it seemed too fast to decline." Legislative aid seemed necessary, but this required the active assistance of the principal practitioners of the State, as well as of other persons of weight and influence. A voluntary association, therefore, of such gentle-

*History of Medicine and Medical Men in New Jersey, by Dr. Wickes.
men of the faculty as might approve of the design was next projected. A society of this kind could consider the proper mode of application to the legislature and meanwhile take such measures as would conduce to the usefulness and honor of medicine and in a great degree answer the purpose of a more authoritative establishment. With these good views the annexed advertisement was inserted in the New York Mercury:

"A considerable number of the Practitioners of Physic and Surgery, in East New Jersey, having agreed to form a Society for their mutual improvement, the advancement of the profession and promotion of the public good, and desirous of extending as much as possible the usefulness of their scheme, and of cultivating the utmost harmony and friendship with their brethren, hereby request and invite every gentleman of the profession in the province, that may approve of their design, to attend their first meeting, which will be held at Mr. Duff's, in the city of New Brunswick, on Wednesday, the 23d of July, at which time and place the Constitution and Regulations of the Society are to be settled and subscribed.

"East New Jersey, June 27, 1766."

In consequence of this a large body of the most respectable practitioners in the eastern division of the province met on the day appointed at New Brunswick, where they formed themselves into a Standing Society and Voluntary Incorporation. Then follow the instruments of association and constitution of the New Jersey Medical Society.

This document resembled very much constitutions and by-laws of the present day, except that it contained also a brief code of ethics.

From the minute book of that same date we read as follows:

New Brunswick, July 23, 1766.

The Jersey Medical Society, being formed agreeable to the foregoing instrument, immediately determined to hold their first session for the dispatch of business this afternoon, and in order thereto choose the Rev. Mr. McKean, president; Dr. Chris. Manlove, secretary, and Dr. John Cochran, treasurer, for the ensuing year. At this meeting a table of fees was adopted. The charges ranged from 1s. to £5—this latter maximum charge being put on the operation of "cutting for the stone in the bladder." The extraction of a tooth cost 1s. 6d., a consultation charge was 15s., an ordinary confinement case was rated at £1 10s., amputations ranged from 15s. to £3. At this same session the society agreed to subdivide themselves into four inferior (county) societies, which were to meet every two months. Thus was organized the first of the State medical societies in this country. Sixteen physicians were present at this first meeting, the records show that semi-annual sessions were held regularly until 1775, when the war rendered it "impracticable and unsafe to attend the usual State meetings." They reassembled in November, 1781, "agreeable to advertisement," and the meetings were sustained with great regularity until 1795. Then occurred a diversion in the form of a rival society, organized by a Dr. Micheau, an educated physician of Elizabeth-town. This society attracted so large a number of the members that the sessions of the original society were practically suspended until 1807, when the rival society died, and the New Jersey Medical Society resumed its functions. An act to ratify and confirm its proceedings was passed by
the legislature in 1807. It received its first charter by an act passed June 2, 1790: "For incorporating a certain number (fifty-two) of physicians and surgeons of this State by the style and title of the Medical Society of New Jersey." This act expired by its own limitation in 1815, and a new act of 1816 provided for a district society in each county, to make its own laws and regulate its own concerns, provided they were not contrary to the constitution of the State society. This act of 1816 placed the control of the society in the hands of fifteen managers, to be elected annually by a plurality of votes. This board was empowered to choose its own officers and make such by-laws and regulations for the due management of its concerns as might be deemed necessary. At the annual meeting of the society in May of the same year, it constituted district societies in the counties of Middlesex, Somerset, Essex, Monmouth and Morris. The terms of this charter, placing the control of the society in the hands of a board of managers, "an imperium in imperio," was not acceptable to the profession, and in 1818 a supplement was passed providing that the society should be composed of four delegates from each district society which was or might hereafter be formed, who, with the officers for the time being, should constitute the society. This supplementary act, constituting the society by delegates of the local societies, placed it on a new basis and secured the cordial sympathy and co-operation of the physicians of the State. The State society was thus made the creature of the local societies, and derived its life from their delegates annually elected. This mode of constituting the State society has undergone no substantial change since 1818. In the act of 1823 it was decreed that the presidents of the society "shall rank as fellows and be entitled to all the rights and privileges of delegated members."

In 1864 the society, desirous of surrendering "all its special privileges and pecuniary immunities, and to reorganize as nearly as possible, upon the voluntary basis," applied for and obtained its present charter, which went into effect on its centennial year. After an existence of a century the Medical Society of New Jersey found itself with a membership of only three hundred. Since then growth has been more rapid, and it now numbers nearly eleven hundred active members. There are still many regular physicians practicing in the State, who are not associated with any county society, but as a result of the efforts now being put forth to unite all regularly educated and legally qualified medical men into a compact organization, it is to be hoped that all these men will be enrolled as members, and that the society will, ere many years have passed, have more than double its membership.

We have thus briefly traced the rise and development of the parent of the State medical societies of this country. Several of her children have already outstripped her in point of numbers, but not one has excelled her in constancy of purpose, nor in the healthy conservatism of her procedures, nor in the quiet dignity with which she has met and surmounted the various obstacles and difficulties inherent to the lot of the pioneer.—Medical Standard.
THE PRESENT-DAY MORTALITY OF PNEUMONIA.

By ALEX. G. BROWN, Jr., M.D., Richmond, Va. Adjunct Professor Practice of Medicine, University College of Medicine.

In the ancient history of disease, no subject has received more careful attention than pneumonia. The physicians of antiquity, set forth their knowledge of the pneumonia of that day in descriptions filled with many interesting conceits and queer observations. In the writings attributed to Hippocrates and Aretaeus, among the symptoms mentioned, we find these: “the tip of the nose is turned up,” “the white of the eye has a greasy luster;” and others as curious—while “the diagnosis is made by the coating of the tongue.”

For many decades greatest confusion reigned with reference to pneumonia. Pleurisy and pneumonia were not differentiated until 1819, when Laennec pointed out these as distinct and separate diseases; to him is due the present classification of the stages of pneumonia.

In casting about for a subject, I have settled on the present day mortality of pneumonia and its prophylaxis. At the outset, I wish to comment upon two facts which have a direct bearing on the question of pneumonia mortality; first, the advances of science have, during the last decade, raised the average life in the United States 4.1 years: in the decade ending with 1890, the average life length was 31.1 years, while in the decade ending with 1900, the average life-length was 35.2 years; second, tuberculosis, which, up to recent date, has caused one-seventh of the world’s mortality, is considered now to be on the decline. This may be explained by the world-wide fight, which has been made recently against its progress. According to the vital statistical report of the registered area of the United States, in the Twelfth Census Bulletin, of August 20, 1901, pneumonia holds leading place in the death column, having been the cause of death in 1900 in 55,296 instances, or 191.9 persons in 100,000 population. This fact is borne out by various particular localities, which I will cite to establish this point. In the report of the Department of Health of Chicago, we find that between 1851-1890, there were 25,719 deaths from consumption and 16,577 deaths from pneumonia, or more than 35 per cent. excess of deaths from consumption. Between 1891 and 1901, there were 22,957 deaths from consumption and 25,228 from pneumonia, making an excess during this last decade of 9 per cent. of the latter. From the same report we find in the decade 1861-1871, deaths from pneumonia formed 3 per cent. of the total deaths from all causes; in the two succeeding decades they were respectively 5 per cent. and 6.70 per cent. of the total deaths. In the last decade, 1891-1901, the proportion rose to more than 10 per cent. (10.2) of the total deaths from all causes.

In Massachusetts we find a great increase in death rate from pneumonia, it having risen from 7 to 8 per cent. in the late ’70s, to 9 and 10 per cent. in the last decade. Also in Rhode Island and Connecticut we find a similar increase of pneumonia death-rate, and, doubtless, were the figures available we would probably find a corresponding increase throughout the Northern Atlantic and Lake States. In Virginia, we find for the year ending May 31, 1900 there were 25,252 deaths from
MORTALITY OF PNEUMONIA—BROWN.

all causes; of this number 2,429 died from pneumonia, or about 10 per cent. In Richmond, Va., we find there were 2,523 deaths from all causes during the year ending May 31, 1900, and of that number 239 were deaths from pneumonia, or 9.4 per cent.

In order to explain this state of the mortality table, let us briefly set forth some of the influences which seem to tend to aid the occurrence of pneumonia. One of the chief factors, operating as a recent causal agent, may be the great fourth pandemic of influenza. It began as Osler says, October, 1889, "in some of the distant provinces of Russia, and by the following November Berlin was attacked. By the middle of December it was in London, and by the end of the month it had invaded New York, and was rapidly distributed over the entire continent." Accordingly, in the following year, pneumonia death-rate in Chicago doubled its former rate, and throughout the entire country there was a marked increase in the death-rate. Another factor in this increase of pneumonia deaths, may be the lessened death-rate of the new-born and infants from intestinal disease. Many infants kept alive in delicate health, may readily succumb before childhood is over to pneumonia. At the other end of life the years have been increased, and a greater number of aged lungs, in the sudden change of weather, and in exposure to atmospheric and microbial dangers, may become ready victims of pneumonia. The common use of alcohol to excess, the rheumatic and gouty diathesis of modern day life, the concentration and overcrowding of city living, the dusty and filth-laden air of the city streets, all may tend to increase the rate of death from pneumonia.

In any discussion of the present day mortality of pneumonia, to omit to mention its communicability and to discuss its prophylaxis, would be to omit a most essential part. According to the latest authorities, pneumonia is classified as an infectious disease, due to the germ pneumococcus of Fraenkel, in at least 95 per cent. of cases, the remaining 5 per cent. being accredited to other germs, namely, streptococci, Pfeiffer bacilli, pneumococcus of Friedlander. The germ is non-motile; occurs in pairs, oval or lancet-shaped, surrounded by a substance like mucin. It grows in alkaline culture media, with or without oxygen, at 35° to 38°C. It possesses in the dry state great latent virulence for a long time, especially when fostered in dessicated sputum.

To establish the communicability of this germ, it is only necessary to cite a few instances of notable epidemics. Tyson mentions the case of a ship's crew of 815, of which 410 were attacked by pneumonia in rapid succession, and before the epidemic had subsided, 720 had the disease, of whom 208 perished. In 1886, Darlington treated 105 cases among laborers living in adjoining huts. In 1888, in Middleborough, England there occurred 367 cases of pneumonia in a population of 40,000. The history of epidemics in foreign prisons, garrisons and armies, and in native asylums, institutions and boarding schools, is so extensive that it suffices to say that pneumonia is an infectious and communicable disease, modified and influenced by such predisposing factors as age, sex, race, former attacks, unsanitary living, exposure to cold, occupation, rheumatic diathesis, anaesthetization by chloroform and ether and surgical operations.

Passing through the history of the treatment of pneumonia by blood
letting, by tartar emetic, by blistering, by veratrum viride, by calomel in large doses, by elimination of the toxins, by use of oxygen and care of the heart with diffusible stimulants, and antipyretics, we take up that neglected phase of the question—prophylaxis.

Dr. N. S. Davis, Jr., in a recent article makes this pertinent inquiry, in discussing this subject: "But is the medical profession altogether free from blame for its (pneumonia) prevalence?" and later he says, "prophylactic measures have not been enforced as they should have been." Public education and professional tutelage of the masses, followed in the masterly fight of these latter years against the increase of tuberculosis, may be well repeated in the fight that should be made against the further increase of pneumonia. As in consumption, it must be, not so much in the remedial measures, as in the prophylactic agencies, that we shall find the greatest results.

In the sick room the physician must intelligently teach its dangers and the preventive measures to the attendants. In the training school for nurses, he must expound the truth of its deadly communicability and its successful prevention. He must advocate such laws of public sanitation, in regard to location, ventilation and disinfection of dwellings, as will best prevent the spread of this general disease. It should be the especial care of the profession to guard the aged and protect the infants from becoming victims of the prevailing evil conditions that so quickly cause them to succumb to pneumonia. With professional forethought in the treatment of influenza to avoid any complication of the lung; with wise precaution in the administration of anaesthetics and in the performance of surgical operations; and with the most careful sanitary and aseptic measures in the treatment of pneumonia cases, much will have been done toward lessening the mortality.

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EDITORIAL.

THE NEW GAILLARD'S.

The present issue of GAillard's MEDICAL JOURNAL is the first under its new management. The current number should not be taken as a criterion, for it does not in an way reach the ultimate expectations of the publishers.

It has many faults, which experience and time will eliminate, and it lacks many features, which will be added at some later period.

The intention is to publish a high-grade, ethical journal, one which will be a welcome visitor to the hundreds of physicians who now make up its subscription lists. If this can be accomplished, the future of GAillard's will eclipse its past.

The reduction in the price from $5 to $1 a year has had the desired effect of bringing into the JOURNAL family a large number of new readers.
An effort will be made to cover the general medical field. Owing to
the limited amount of space in a monthly it will be impossible to publish
a large number of original articles, besides the usual amount of medical
news and society proceedings. It will, therefore, be the custom to present
from four to six articles on topics of clinical or scientific interest. The
many excellent papers appearing in the American and foreign journals
will be epitomized, so that the reader may abstract the meat of each arti-
cle without reading unnecessary matter. Thus the busy doctor will be
able to cover a large amount of ground in a comparatively brief space of
time.

The editor will be glad at all times to receive original articles on sub-
jects which appeal to the physician, but it becomes necessary to remind all
contributors that every paper must present facts which will be of benefit
to the readers. GAILLARD'S does not care for rehashes from text-books
or laudations of various remedies of uncertain value.

It will be the constant endeavor of the Journal to fill its pages with
only such matter as may enlighten the physician, who is open to enlighten-
ment. If contributors will bear this in mind, much time and trouble will
be saved.

A hearty co-operation between the publishers and readers of GAII-
LARD'S will result in the issuance of a journal which will give satisfaction
to a large body of medical men.

PROF. LORENZ.

The triumphant tour of Prof. Adolph Lorenz, the Viennese ortho-
pedist, has ended and he has departed these shores, carrying with him the
gratitude of every American physician. A man, whose name was com-
paratively unknown to the rank and file of the profession of this country
six months ago, has, by the merit of his work, suddenly sprung into fame.
And such fame! It will last long after Lorenz has been gathered to his
fathers. It will be a monument to his memory such as has been accorded
to very few in the medical field.

Congenital dislocation of the head of the femur has always been looked
upon as practically incurable. The trouble is caused by a general laxity
of the capsular and ligamentous structures, to which is added in many cases during fetal life, an absence of conformity between the head of the femur and the depression of the acetabulum. Lorenz's operation is simply the replacement of the head of the femur in the acetabulum by traction and the holding of the parts in place for six months by means of plaster casts.

Lorenz is of the opinion that his so-called "bloodless" treatment will do away with the cutting operations. It is, however, much too early to make an unqualified statement of fact in this regard. A contemporary well says:

"What are we to gain by Professor Lorenz's visit to us? In the first place, a comparatively large number of our orthopedists will have grasped a greater mastery over the Lorenz operation than they had before supposed to be possible. They will consequently be able to render more efficient aid to a particular class of cripples. In the second place, the general practitioner will be more keenly on the lookout for cases of congenital dislocation of the thigh bone and more mindful of the need of submitting them early to the specialist's treatment, when the prospect of lasting benefit is greatest. Finally, orthopedic surgery will be elevated in the public esteem, and, as has already been shown, wealthy men will be all the readier to endow orthopedic hospitals and dispensaries and to provide liberally for the teaching of orthopedics."

While in this country Prof. Lorenz traveled from Boston to San Francisco, and during his itinerary successfully performed 124 operations. His largest clinics were held in Chicago, where he operated 32 times. New York and San Francisco were not far behind in the number of operations done. The itinerary Lorenz followed took him to these cities: Chicago, Denver, Pueblo, San Francisco, Los Angeles, St. Louis, Washington, Philadelphia, Baltimore, New York and Boston, and the fees he earned approximated $60,000.

Lorenz intends to return to this country at a later period to remain several months, which he will spend in sightseeing and operating. Dr. Mueller, his assistant, will, according to the newspapers, eventually locate in Chicago for the practice of orthopedic surgery.
Tetanus Treated by the Baccelli Method.—Claude and d’Heuqueville report the case-history of a man of 46, who had tetanus following a wound in the finger. Venesection was performed frequently, followed by the subcutaneous injection of a carbolic acid solution, with chloral and normal salt solution. In 2 months the patient left the hospital, well. Examination of the urine throughout the illness demonstrated its high toxicity. The finger which had been wounded suppurated and was amputated. The disease was exceptionally severe in all its symptoms. Renal permeability persisted throughout the attack. (Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, October 30, 1902).

Tetanus Following Typhoid Fever.—Rouget reports the case of a soldier, aged 23, who had typhoid fever with myocarditis and intestinal hemorrhage on the seventeenth day. Convalescence began on the twenty-ninth day. But in the sacral region were 3 ulcers and a small abscess, which was incised. The next day there was local pain, followed by tetanic convulsions 4 days later. Death followed from asphyxia due to tetanus infection, 39 days after the attack of typhoid fever had begun. Rouget supposes that the infection of the ulcer may have been due to the wafer used for the baths. (Archives de Médecine et de Pharmacie Militaires, November, 1902).

The Treatment of Tetanus.—At the recent meeting of the French Surgical Association, Vallas, of Lyons, presented a thorough review of the treatment of tetanus. (La Médecine Moderne, October 22, 1902.) Though Nicolaier discovered the tetanus bacillus in 1884, it was not cultivated successfully until 1889, by Kitasato. The old-fashioned treatment consisted in rest, quiet, darkness and antispasmodics. Surgical treatment, such as amputation, had some vogue at one time, but more than antiseptic disinfection of the wound is now considered useless. Serumtherapy is now the best method, both for preventing and treating tetanus. Antitoxin may be injected by the subcutaneous, intravenous, intracerebral or subarachnoid method. Of these the subcutaneous method is the best, because it is innocent. Baccelli has employed subcutaneous injections of carbolic acid, in 2% or 3% solution. Though but little used, this method has given by far the best statistical results. Besides, opotherapy has been suggested, since it has given some good experimental results. Vallas concludes that tetanus may be prevented by serum injections: and it may be well treated with antitoxin, given in subcutaneous, or exceptionally, in intravenous injections. Chloral and carbolic acid are both useful in treating contractures, but chloral is to be preferred on account of its being less toxic. Other methods have not yet been proved efficacious.

A New Conception of Hysteria.—According to Bernheim, of Nancy, hysteria is not a disease in itself, but is simply a development of the hysterogenic apparatus which every human being possesses. This may develop with any disease, especially nervous diseases; and frequently, when hysteria has been cured by suggestion, the original cause of the hysterogenic condition is first noticed. Epilepsy, trauma, adolescence, old age, lead poisoning, alcoholism, the infectious diseases, all play important roles. The condition is always caused and overcome by suggestion and is, therefore, of psychical origin. (Le Bulletin Médical, November 8, 1902).

A Curious Case of Aphasia.—The case of a patient affected with right hemiplegia, paralysis of the left side of the face and aphasia resulting from cerebral hemorrhage, is reported by de Velasco (Revista Médica Cubana, October 1, 1902), who calls attention to a peculiar feature of the aphasia, consisting in inability to understand or speak the native language—Spanish—while English was spoken and comprehended with considerable ease. The author makes this case the basis of an argument tending to prove the origin of such aphasias in the partial destruction of a common cortical center, in which are supposed to be grouped the visual and auditory impressions of various lan-
guages in those familiar with more than one tongue. In the case described, the patient's aphasia in respect to his own language depending, it is thought, upon the destruction of the special group presiding over the impressions of that language.

**Hereditary Tabes.**—Babinski reports 2 cases in young girls whose fathers were both syphilitic. Only 21 similar cases were found in the literature. These young girls had typical symptoms of locomotor ataxia, beginning in one at 15, in the other at 18 years of age. The condition is often overlooked, because nothing is known of the previous history of the parents. He advised mercurial injections in both cases. *(Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, October 30, 1902)*.

**Verbal Deafness With General Paralysis.**—Joffroy describes in full a case of general paralysis of the insane in a man who died at the age of 49, after an illness of 15 months. He had marked verbal deafness. The autopsy showed an ulcerative lesion covering the middle third of the first temporal convolution of the left side, among other lesions. The verbal deafness was so pronounced that it suggested aphasia. The diagnosis was made from this, the presence of Argyll-Robertson pupils, and diminished intelligence. *(Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, October 23, 1902)*.

**Gout and the Neuroses.**—Kovalevsky, of St. Petersburg, discusses the relation of gout to angina pectoris, epilepsy and migraine, in the *Bulletin de l'Académie Royale de Médecine de Belgique*, (September 27, 1902). He reports several case-histories and finds that gout may produce angina pectoris, epileptic attacks and migraine, especially at the menopause, with changes in the arteries. Some other intoxication is often present besides, such as syphilis, alcoholism, uremia, etc., and there is usually some grade of arteriosclerosis. When a tendency to epilepsy or migraine exists, gout may cause new outbreaks, and both conditions will need treatment. But as long as the gout is left untreated, no improvement in the migraine or epilepsy is noted.

**Exophthalmic Goiter and Alopecia.**—Jacquet and Gaumerais report the case of a woman of 42, with alopecia areata and neuralgia, both on the left side. As her wisdom tooth on that side was painful and carious, it was extracted. The alopecia increased and gingivitis occurred, necessitating the extraction of another tooth. Then left-sided exophthalmos, tachycardia and swelling of the left lobe of the thyroid were noted. The loss of hair has become less and no ophthalmoplegia has occurred. Sodium salicylate is the present treatment. *(Bulletin et Mémoires de la Société Médicale des Hôpitaux de Paris, November 13, 1902)*.

**Nonsuppurative Thyroiditis Following Pneumonia in a Patient With Exophthalmic Goiter.**—A woman of 37 developed exophthalmic goiter at the age of 30. While convalescent from a typical attack of pneumonia, she noticed pain in the thyroid, with dysphagia, headache, localized edema and exquisite tenderness over the thyroid upon the slightest touch or pressure. This lasted an entire week. Le Gendre considers this an acute congestive or exudative thyroiditis, probably due to the pneumococcus, since it occurred 48 hours after defervescence in pneumonia. Such cases are rare. *(Bulletin et Mémoires de la Société Médicale des Hôpitaux de Paris, October 23, 1902)*.

**Jacksonian Epilepsy and Hysteria.**—Ferrier reports a case of hysteria in a young soldier, aged 18 years, suddenly attacked by Jacksonian epilepsy. Between his twelfth and eighteenth years he had 18 hysterical attacks, due to fright, emotion, etc., generally during sleep. Examination showed a scar, due to forceps delivery, on his forehead, and left-sided hemianesthesia. Suddenly he had typical epileptic convulsions, repeated several times. His forehead was trephined and the depressed bone removed. Since
operation convulsions of less severity have occurred. Ferrier believes the convulsions to have been due to both hysteria and epilepsy. (Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, October 16, 1902).

Subcutaneous Emphysema With Chronic Pulmonary Tuberculosis.—Rénon and Géraudel report a case of subcutaneous emphysema occurring in a man of 45, with fibrous phthisis following pleurisy at 20 years of age. A severe paroxysm of coughing terminated with sudden pain in the left subclavicular region, which soon radiated over the chest and into both arms, especially the left. The pain persisted and was followed by swelling of the neck and face. The chest was only affected in its upper part. He complained of much dyspnea, for which heroin hydrochlorate was given, with rapid diminution of the swelling. Recovery from subcutaneous emphysema with phthisis is a rare occurrence. (Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, October 16, 1902).

Parotiditis With Auditory and Pulmonary Complications.—The course of this disease is so generally benign that a report of complicating infections, such as is given by F. Ocaranza (Cronica Médica Mexicana, November 1, 1902), comes as a somewhat startling though salutary disturbance of the optimistic mental attitude toward this condition. In the case described, when inflammation of the parotids was apparently subsiding, deafness, tinnitus and vertigo, accompanied by tonsillar inflammation, set in; the group of symptoms being ushered in by the irregularities of temperature characteristic of infectious processes. Barely was convalescence from these complications established, when pneumonia developed; from which, however, the patient made a good recovery. The case serves to put the physician on guard against the possible occurrence of such complications.

Incipient Tuberculosis and the Sulcus at the Lung's Apex.—R. Pianori (Gazzetta degli Ospedali, October 19, 1902) discusses Schmorl's theory that the presence of this sulcus, supposed to be due to constriction from an abnormally short first rib, induced functional and circulatory disturbances in the apex of the lung which render this area more predisposed to tuberculous infection. Cases for and against this argument are cited by the author, who found the costal impression, described by Schmorl, upon the lungs of 2 infants, aged 8 and 14 months, in whom there was no evidence of pulmonary tuberculosis. On the other hand, a well-defined sulcus was seen at the apices of the lungs in the case of a man, showing unmistakable tuberculous lesions in that area. The author draws the conclusion that such constriction of the lung's apex may be one of the many factors which go to make up its predisposition to tuberculous infection and advises, for those predisposed to this disease, the regular practice of such medical gymnastics as will tend to enlarge the upper part of the thorax; such as suspension by the arms from rings, trapeze or horizontal bars.

Traumatic Scarlatina.—F. Ocaranza (Cronica Médica Mexicana, November 1, 1902) gives the history of a patient whom he believes to have been affected with traumatic scarlatina: a condition first described by Paget and May in 1884, and since disputed by the various schools of medicine, foremost among which may be mentioned the Russian which has made it the subject of numerous arguments, pro and con. In the case reported, the patient suffered a slight traumatism of the scalp resulting later in abscess formation, accompanied by an eruption upon the skin which extended from the neck to the thorax, arms and abdomen, and subsequently to the lower extremities. The eruption disappeared on pressure, and coincident with it fever and angina set in. Furfuraceous desquamation commenced within 8 days, and this marked the beginning of improvement in the abscess, which had up to this time remained stationary.

Mucous Polypi of the Posterior Nasopharyngeal Wall.—Lavrand reports the case of a girl of 16, operated upon for the removal of adenoids. The
ABSTRACTS.

small amount of adenoid tissue removed led to further examination, with the discovery that there was a mass of mucous polypi hanging from the upper part of the posterior nasopharynx. These were removed one by one. Such a condition is rare, no cases having ever been reported. Such polypi may easily be mistaken for adenoids, or for fibromucous polypi of the posterior nares. The differential diagnosis follows in full. (Journal des Sciences Médicales de Lille, October 18, 1902).

Two Cesarean Sections Upon a Woman with Achondroplasia.—Herrgott reports in detail the history of a woman of 27, pregnant for the fourth time, whose father was living and well, but whose mother died at the age of 44 years, at the birth of her twentieth child. She was small, with very long arms and very short legs. The femora were short and curved. Her hands and feet were large for her body. The external conjugate measured 14½ cm. Her first child had been born at term; embryotomy was performed upon the second fetus; and to deliver her third, Schul performed Cesarean section. The first child died young; the third was living and well. Herrgott did Cesarean section again: the fourth child is living and well. It is most probable that she will again become pregnant in the near future, and Cesarean section will then be attempted once more. (Revue Médical de l’Est, October 1, 1902).

A Case of Primary Absolute Amenorrhea.—Feinberg (Praktitcheski Vrach, September 28, 1902) reports a case of absolute amenorrhea in a healthy married woman, 31 years old, who has never menstruated. The family history is good, her sisters menstruating normally. The patient is well developed, possessing perfect sexual organs as far as could be ascertained by repeated examinations. She has never experienced the slightest indications of menstruation, nor did she ever suffer any ill effects. Sexual desire is normal. The author explains this amenorrhea as probably due to insufficient excitability of the nerves supplying the uterus.

Congenital Absence of the Pectoralis Minor and of Part of the Pectoralis Major.—Widal and Lemierre report the case of a man of 41, with that rather rare anomaly, congenital absence of the lower part of the pectoralis major and of the entire pectoralis minor on the right side. Photographs show the condition plainly. He was able to perform his military service satisfactorily, in spite of the deformity. In these cases the patients generally soon adapt themselves to the condition and learn to make all motions well in spite of the congenital defect. (Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, October 30, 1902).

Cancer of the Stomach, Thoracic Duct and Left Supraclavicular Lymph-glands, with Chylothorax and Chylous Ascites.—Menetrier and Gauckler report a case of widespread cancer in a woman of 53, who, though ill 10 years, had left-sided pleurisy 2 years ago. She coughed ever since. Then she had dyspnea and swelling in the neck and left arm, with edema and general anasarca. Examination showed enlarged supraclavicular glands on the left side, ascites, albuminuria, etc. The symptoms grew worse and death occurred. The autopsy showed double chylothorax, edema of the lungs, chylous ascites, cancer of the pylorus, intestinal lymphglands, thoracic duct and left supraclavicular glands. Enterococci alone were found in the cultures. The infection from the stomach spread through the lymphvessels to the glands and so on to the thoracic duct, jugular veins and left supraclavicular glands. Lymph stasis followed, with chylous effusion into the serous sacs. (Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, November 6, 1902).
MEDICAL HAPPENINGS IN NEW JERSEY.

There were several changes in the staff at Christ Hospital, Jersey City, January 1. House Surgeon Smith resigned and his assistant, Dr. Mears, was appointed to the vacancy. Dr. Kirk became assistant house surgeon and Dr. Woelffe ambulance surgeon. A new horse for the ambulance has been purchased.

The corner-stone of the new Muhlenberg Hospital, to be erected in Plainfield, was laid recently. The new buildings will cost $125,000. At a recent meeting of the governors Dr. Peter J. Zeglio was appointed to take the place of Dr. J. B. Probasco on the hospital staff, and Drs. J. Hervey Buchanan, Marcus L. Clawson, Albert Pittis and A. F. VanHorn were appointed assistants to the regular hospital staff. Dr. VanHorn will be the assistant in the eye and ear department. The number of patients treated in the hospital for the month ending December 23 was sixty-five, and there were twenty remaining on that date. There were sixty-three dispensary patients and 217 visits of dispensary patients. This was a record month.

There were several changes in the house staff of physicians and surgeons of the Newark City Hospital on New Year's Day. Dr. Frank Pinneo, who has been house surgeon for the past year, has completed his term of service, and was succeeded by Dr. Charles B. Piper, the present house physician. Dr. William S. Sandy was advanced from assistant house surgeon to house physician. Former ambulance surgeon, S. W. B. Leyenberger, was made assistant house surgeon, while Pharmacist Charles F. Baker was placed on the ambulance. Dr. Robert Lowry, recently appointed by the hospital committee, took Dr. Baker's place in the pharmacy.

Dr. Smith, who resigned January 1 as house surgeon at Christ Hospital, Jersey City, was given a reception before his departure.

A grave situation in the form of an imminent epidemic of glanders confronts the Newark Board of Health, and the board's veterinarian, Dr. Werner Runge, is taking vigorous steps to combat the disease. It is said that there are over twenty-five cases of horses ill with this highly contagious disorder in Newark, with almost as many in other sections of Essex county.

Dr. Henry Spence, of Jersey City, has been elected senior warden of Bergen Lodge, F. and A. M., and Dr. James R. English is the new treasurer of Franklin Lodge, F. and A. M., of Irvington.

Vineland has an epidemic of smallpox and the newspapers claim it gained headway owing to the mistake of physicians in diagnosing the cases as chickenpox. The disease has spread to nearby villages. Schools and factories have been closed.

At a special election in Lebanon township, Hunterdon county, it was voted to sell the township poor home and farm to the State as a part of the Home for Consumptives. The tract contains eighty-three acres, and adjoins the site selected by the commissioners.

Dr. C. R. Neare, of East Orange, entertained the Practitioners' Society at his home. A discussion followed the reading of Dr. F. B. Lane's paper on "Dysentery."

Dr. T. R. Chambers, of 400 Jersey avenue, will entertain the Practitioners' Club, of Jersey City, January 13. Dr. Myer, of New York, will be the essayist.

New Brunswick reports several cases of smallpox.

Dr. J. C. Æróelich, of 12 Somerset street, Newark, was thrown from his carriage December 30 in a collision with a trolley car, but was not badly hurt.

Miss Belle Felsenheld, East Orange, was married December 18 to Dr. David H. Keller, of Chicago.
The following New Jersey physicians have become members of the American Medical Association: Gustav A. Schoe ning, Trenton; G. N. Terriberry, Paterson; Adolph G. Brown, Redbank; Floy McEwen, Newark; Isaac Surnamer, Paterson; Charles H. Thompson, Belmar; Arthur J. Walsheid, Union; Hamilton Vreeland, Jersey City.

The marriage is announced of William Sims Boyd, M.D., of Jersey City, and Miss Florence Augusta Evans, of Orangeburg County, S. C., at Columbia, S. C.

Dr. Lucy S. Evarts, of Newark, died at her home, No. 194 North Sixth street, on December 15. She was 60 years old. She had practiced in Newark for 15 years, having had offices in Lombardy and Fulton streets.

Dr. Wesh, for 16 years a resident of Bernardsville, has taken up his winter residence in Morristown.

Dr. Thompson, of Bridgeton, has won his suit against the Downe Township Board of Health, for $2,000 charged for attending a case of smallpox there last year. Members of the Health Board agreed with the doctor on the size of the fee, but when the case was pronounced cured they repudiated the bargain because it was not made at a legal meeting. The jury thought the physician was entitled to his money, because he went into the country where he had not practiced. Interest to the amount of $100 was also allowed.

The freeholders' hospital committee, accompanied by Dr. D. M. Dill, superintendent of the county hospitals for the insane, inspected the State hospital at Morris Plains, December 17. Dr. Dill introduced the new freeholders to Dr. J. Britton Evans, who is in charge of the institution. The members of the committee discussed the erection of a new wing and reception hall at the branch hospital at Overbrook and will take action later.

Dr. William J. Andrews, of 4 West Park street, Newark, has resumed his practice after an absence.

Dr. Philander A. Harris, of Paterson, lost his suit to recover $400 from Paul A. Wagner, of Carlstadt, for performing an operation for appendicitis on Mrs. Wagner and for other services. Mrs. Wagner jumped through a window in the Passaic General Hospital four days after the operation and died from her injuries. The defense contended that Dr. Harris was negligent in not instructing the nurses to guard the patient, and that Mr. Wagner's loss of his wife offset the doctor's claim for $400. Many physicians and nurses testified in Dr. Harris' favor.

Miss Florence R. Corbett, for three years in charge of the dietary department in the Elizabeth General Hospital, and now chief dietitian in Kings County Hospital, N. Y., has been appointed assistant and chief adviser to Commissioner of Public Charities Folks of New York.

Attention is called to the overcrowded condition of the State Hospital for the Insane in Trenton, in the annual report of the Board of Managers just submitted to Governor Murphy.

It is shown that there are now 1,137 inmates of the asylum as against 1,064 a year ago and this too, despite the fact that six of the counties in the district have established county asylums and the State Village for Epileptics is supposed to have relieved the congestion somewhat.

The hospital buildings now in use at the State institution here were designed and intended for 840 patients, so that accommodation is being provided for 300 patients in excess of the normal capacity of the institution.

Dr. Ward, in his report as medical director, reiterates the recommendation for a separate hospital for the convict and criminal insane and urges that a more liberal appropriation be made for the epileptic colony, in order that this class of unfortunate may be removed from the insane hospitals. There are 98 epileptics at the asylum here.
Supreme Court Justice Garrison announced the appointment of Dr. J. W. Donges, of Camden, as a member of the Sewer Commission, to succeed former Mayor Jesse Pratt.

Dr. J. Minor Maghee, of West Orange, entertained the Orange Mountain Medical Society in the Free Library building. Dr. William B. Graves, of East Orange, read a paper on “The Surgery of the Thyroid Gland,” and Thomas W. Harvey opened the discussion.

The Royal Arcanum Council in Belleville recently presented Dr. E. O. Cyphers with a past regent’s jewel in appreciation of his efforts for extending the work of the order.

The principal subject of a recent discussion of the Bloomfield Board of Health was the establishing of an isolation hospital to be maintained by Glen Ridge, Bloomfield, Montclair, East Orange, Belleville and Franklin, for all infectious diseases. Dr. E. M. Ward, president of the board, said the plan was an excellent one and deserved careful consideration. All the other members of the board expressed themselves as in favor of the plan. The question of an outlet sanitary sewer for that territory south of the Watchung branch of the Erie Railroad was discussed at length.

If a plan broached by Dr. Charles A. Meeker, at a recent meeting of the Central Dental Association of New Jersey, held in Newark, is carried out, a sort of “black list” for patients who fail to carry out the financial obligations they incur by having their teeth treated, will be formulated. A committee was appointed to complete the details of the plan. There are 125 members in the society and each of them will furnish to the committee a list of those from whom he has failed to collect money due. These names will be tabulated and furnished to all members for reference. Dr. H. Parker Marshall and Dr. W. L. Fish, of Newark, and Dr. Alfred Hane, of Jersey City, were appointed on the committee.

The coming session of the New Jersey State Legislature will receive a bill which has been drawn up by the Journeymen Barbers’ Association of the State. The Legislature will be petitioned to pass the bill, which asks for a State inspector to be appointed to visit all barber shops and see that the laws regulating them are enforced. They ask for stringent sanitary laws, one feature being the compulsory sterilization daily of all instruments used.

Dr. H. Melville Smith, of South Orange, is dead at the age of 50. He was graduated from the New York College of Physicians and Surgeons in 1871. He had practised medicine in Jersey City for 17 years and most of the time he was on the staff of physicians connected with Christ Hospital.

Patrick Flanagan, of Perth Amboy, has bequeathed $7,000 to St. Michael’s Hospital, Newark.

The report of a committee of South Orange, N. J., states that by the use of oil and drainage for two years fully 75 per cent. of the mosquitoes of the region have been exterminated. Next year they expect to exterminate 10 per cent. more, but further than that they cannot hope to go until the surrounding communities take up the fight.

Dr. Frank C. Katherman, of Atlantic City, has been appointed surgeon for the Pennsylvania system at Altoona, Pa.

Dr. Frank Devlin, of Newark, has been appointed visiting surgeon to St. James’ Hospital.

An epidemic of typhoid fever in Trenton is feared. The health officials are said thus far to have found no specific source of infection. Many cases are in hospital and many more suspected individuals are under observation.

E. M. Herring, of Asbury Park, an osteopath, has been fined $100 and costs, for unlawful practice of medicine. The judge held that the application of hands in the treatment of disease was a remedy in the same sense as the use of drugs.
A complimentary banquet will be tendered Dr. Charles S. Stockton, of East Orange, who on January 12 will have completed forty-five years of continuous practice in New Jersey. The dinner will be held in the hall of the New York Athletic Club on January 21, 1903, the night succeeding the annual meeting of the Odontological Association. Dr. W. W. Walker will preside and addresses will be delivered by James B. Dill, of East Orange, the corporation lawyer, and Dr. J. M. Buckley, of East Orange.

The report of the Society of the Day Nursery of the Oranges, just issued, shows that during the year 5,652 children were cared for, and on occasions as many as fifty-three children were cared for in a single day. This work was carried on at an expense of $1,463.90.

At the annual meeting of William Pier son Medical Library Association of the Oranges, the following officers were elected: Dr. Thomas W. Harvey, Orange, president; Drs. Richard C. Newton, Montclair, and Joseph C. Young, Newark, vice-presidents; Dr. Richard D. Freeman, South Orange, secretary; Dr. J. Hammond Bradshaw, treasurer, and Dr. Henry A. Pulsford, South Orange, librarian.

Dr. C. M. Gray, of Salem, N. J., has located in Onalaska, Wis., for the practice of medicine.

The marriage is announced of Miss Beatrice Manners, daughter of Dr. W. S. Manners, of Orange road, Montclair, and Raymond D. Weeks, of Ridgewood.

Several cases of typhoid fever have been reported in Bloomfield, and the Board of Health officers inspected the milk supply.

Dr. Charles Dippolt, for years one of New Jersey's prominent dentists, is dead in Trenton after a lingering illness. He was born in that city in 1833.

Dr. J. A. Browne, of Paterson, has been elected Chief of Progress Court. Tribe of Ben Hur.

Dr. W. F. Harrison, of Bloomfield, has been re-elected a member of the Democratic county committee.

Dr. J. Walter Gray has been elected city physician of Summit in place of Dr. William H. Lawrence, resigned. Dr. William H. Risk has been confirmed as one of the Health Commissioners of Summit for three years.

The trustees of the Crescent Avenue Presbyterian Church, of Plainfield, have endowed a bed in the Muhlenberg Hospital. It will probably be named for the Rev. Dr. W. R. Richards, pastor of the Brick Church, New York, who was formerly in charge of the Crescent Avenue Church.

Dr. H. H. Davis is the new chairman of the Camden Health Board.

Dr. B. S. Keator has been elected president of the Asbury Park City Council.

Dr. James T. Wrightson is one of the recently appointed Health Commissioners of Newark. He was Democratic candidate for Mayor, but ill health caused his absence in Bermuda and prevented him from making a canvass.

County Physician Charles B. Converse, who is a patient at St. Mary's Hospital, Hoboken, was operated upon December 24, and several foreign growths were removed from the roof of his mouth. Of late he has suffered from severe attacks of neuralgia and lumbago. The operation was performed by Professor Hasbrouck, of New York, and Dr. M. F. Foley.

Dr. J. Meigh, of Bernardsville, has been appointed on the medical staff of All Souls' Hospital, Morristown.

Dr. Bernard A. Daly, president of the Harrison Board of Health, has resigned from the board, the resignation taking effect January 1. He gives as his reasons the pressure of private duties.

The courts have finally decided that James D. Fish was elected Mayor of Beverly at the last election by one vote over Dr. E. S. Adams, the present incumbent. Mayor Adams may appeal.

Dr. Joseph Leidy, of Philadelphia, has presented the death mask of his father,
Professor Joseph Leidy, the naturalist, to Princeton.

A daily paper says: There is a tinge of romance connected with the marriage of Dr. Herbert L. Cooper and Miss Rae Marie Loper at Bridgeton, December 11. Dr. Cooper's bride was one of his first patients when he began practicing at Vineland. While on a visit to Vineland Miss Loper became very ill and her relatives summoned Dr. Cooper. The young physician cured Miss Loper's affliction, and subsequently won her heart.

At the recent meeting of the American Public Health Association Dr. John L. Leal, of Paterson, was chosen second vice-president.

Dr. St. John, of Hackensack, declares that the supply of the Hackensack Water Company, taken from the Hackensack river north of New Milford, is polluted, and that persons who drink it should first boil it. Prosecutor Koester was given a copy of the analysis and it found its way before the grand jury a few moments later. The jury will investigate.

Dr. Stephen J. Quinn, of Elizabeth, has been elected a member of the Board of Health in place of Dr. Mravlag, resigned.

Dr. William H. Allen, secretary of the State Charities Aid Association, has caused some talk by his condemnation of the State penal and charitable institutions, appearing in his recent annual report to the governor. Jailers and other officials are denying vehemently that such abuses exist as he claims. The Governor has ordered a suspension in the printing of the report, and has asked that Dr. Allen shall produce proof of the charges he has made.

The following officers of Somerset Hospital, Somerville, have been elected: President, Charles Schwed; vice-president, Rev. Dr. William H. DeHart; secretary, George A. West; treasurer, James Q. TenEyck. The hospital is in a most excellent financial condition. Recently a play, "For One Night Only," was presented for its benefit and a couple hundred dollars cleared.

Dr. L. M. Halsey, of Williamstown, has a certificate of membership of the Society of the Cincinnati bearing date of May 24, 1784, which was given to his great-grandfather. The certificate was signed at Mt. Vernon by George Washington.

Dr. William B. Graves, of East Orange, has presented a well equipped bacteriological and pathological laboratory to the Orange Memorial Hospital. It will be known as the Graves Laboratory. A large room in the dispensary building on the Henry street side of the hospital grounds is being fitted up for its accommodation. The department will not only be at the disposal of the hospital and its surgeons, but of all surgeons and physicians in the Oranges.

The need of such a laboratory has long been felt by the physicians of the Oranges, so examinations and researches can be conducted satisfactorily. Heretofore the medical men of the Oranges have had to send cultures and specimens to New York or Princeton laboratories to be tested.

The new laboratory will obviate much vexatious and often dangerous delay.

The annual report of the New Jersey State Board of Health, which has just appeared, reflects much credit upon the able secretary of the board. His personal report should be read by every physician in the State. The volume also contains much of interest to medical men.
Some of the Members of the New Jersey Committee on Revision of Constitution.
PROPOSED CONSTITUTION AND BY-LAWS OF THE MEDICAL
SOCIETY OF NEW JERSEY.

The following correspondence is self-explanatory:

Jersey City, Jan. 7, 1903.

Dr. William J. Chandler, Secretary of the Medical Society of New Jersey, South Orange, N. J.

Dear Dr. Chandler: In reply to your communication of January 6, I would state that we will be happy to publish the Constitution and By-Laws of your Society and to distribute copies to each of your members, and in so doing, permit me to tell you something of our plans for Gaillard's.

As a resident of New Jersey, the fact has been prominently brought to the attention of the Editor that the physicians of the State are entirely without representation in medical journalism, and many of the medical men have seen fit to deplore such a condition.

This determined the new management of Gaillard's to set aside a certain amount of space each month for the interests of New Jersey medicine.

For nearly 40 years the field of Gaillard's has not been bounded by geographical lines and on its subscription list may be found names of men in every section of the country. The publishers do not intend to change the policy, but, catering to the needs of an uncultivated field, are willing to devote some of their pages each month to New Jersey, so that the physicians of the State may feel there is one journal which is particularly interested in their welfare and which will gladly publish the results of their research and the proceedings of their societies.

You may rest assured that any courtesies or suggestions extended to Gaillard's by you will be greatly appreciated.

Yours with sincere regard,

H. S. Baketel, Editor.
Dear Dr. Bakctel: Allow me to express the thanks of our committee for your generous offer to publish and distribute copies of the proposed new Constitution and By-Laws. I have no doubt that your liberality will be appreciated by all of our members, and that with the intrinsic merits of your journal and its especial interest in New Jersey medical news, a host of new subscribers will be added to your lists.

Very truly yours,

Wm. J. Chandler, Sec'y.

INTRODUCTORY NOTE BY THE SECRETARY.

Whatever may have been the sins of our medical forefathers, Constitution-changing was not one of them. When, on that memorable day, July 23, 1766, some of the physicians of New Jersey met and organized the first State Medical Society in this country, they also presented for their government a Constitution which remained in force for nearly thirty years. In 1791, being for the first time an incorporated society, they adopted a new Constitution. In 1816, having changed their charter, they made another Constitution, which remained practically unchanged down to 1865, when the present charter was granted, and a new Constitution, conformable therewith, adopted in 1866. This Constitution was revised in 1873 and '74, and in 1892 the important section on Permanent Delegates was inserted.

The reorganization of the American Medical Association two years ago made it necessary for all affiliating State societies to adopt a Constitution and By-Laws in harmony therewith. This requires in our case but one important change, viz.: to make all members of County Societies in some way also members of the State Society. It was deemed best to correct some of the defects in our present By-Laws, to incorporate the various amendments and resolutions which have been adopted in recent years and to use the nomenclature recommended by the A. M. A. and accepted by most of the sister State Societies.

With this end in view a revision committee was appointed and the following draft of a Constitution and By-Laws is submitted for the careful consideration of each member of the Society.
CONSTITUTION.

ARTICLE I.

CONSTITUTION.

Name.—The name and title of this organization shall be "The Medical Society of New Jersey."

ARTICLE II.

PURPOSE OF THE SOCIETY.

Object.—The purpose of this Society shall be: First—To federate and organize the medical profession of the State of New Jersey. Second—To unite with similar organizations of other States, to compose the American Medical Association. Third—To advance medical science and elevate professional character. To safeguard the material interests of the profession and promote friendly relations among its members. To educate the public in preventive medicine and hygiene; and in all, to render the medical profession most capable in its service to humanity.

ARTICLE III.

COMPONENT SOCIETIES.

The Component Societies shall consist of the affiliating County Medical Societies of the State of New Jersey.

ARTICLE IV.

COMPOSITION OF THE SOCIETY.

Section 1. The Medical Society of New Jersey shall be composed of the members in good standing of the Component Societies, and shall be designated as Fellows, Officers, Delegates and Delegates ex-Officio.

Sec. 2. Members.—All members of Component Societies who are not delinquents and whose credentials are acceptable to the Medical Society of New Jersey shall be eligible to membership.

(a.) Fellows.—Fellows of the Medical Society of New Jersey shall consist of the ex-Presidents who have faithfully and acceptably discharged the duties of their office.

(b.) Officers.—The officers of the Medical Society of New Jersey shall be members of the Component Societies in good standing, and shall be duly elected and installed.

(c.) Delegates.—The delegates shall be permanent, annual and ex-officio.
SECTION 4. At the annual meeting of each Component Society in 1906, and at every third annual meeting thereafter, and at no other time, except in cases where vacancies occur as specified in the last paragraph of this section, each Component Society may, by individual ballot, by a three-fourths vote of the members present, select one nominee for Permanent Delegate to the Medical Society of New Jersey, and Component Societies having thirty or more members may also, every third year, select in the same manner one additional nominee for every thirty members or major fraction thereof, provided, that every such nominee shall have been a member in good standing of a Component Society for five years; and provided, that no Component Society shall be entitled to more Permanent Delegates than one-tenth of its regularly certified membership; and when, from any cause, this number is exceeded, the Component Society having such excess shall not be privileged to select nominees for Permanent Delegates until this disproportionate representation shall have ceased to exist; provided, further, that each nominee shall present a certificate signed by the President and Secretary of his (or her) Component Society in the following form:


This is to certify that , M.D., was nominated for Permanent Delegate to the Medical Society of New Jersey, on the day of , 19, by the Component Society of the County of , according to the requirements of the Constitution and By-Laws of the Medical Society of New Jersey.

The House of Delegates shall have the power to elect or reject any nominee for Permanent Delegate and a three-fourths vote by ballot of all members present shall be necessary to the election of a Permanent Delegate to the Medical Society of New Jersey.

The following classes of Permanent Delegates shall be deprived of their privileges as Permanent Delegates, and their names, after having been announced to the Society by the Secretary, and without any accompanying defense or satisfactory excuse, shall be stricken from the roll:

1st. Those who lose their membership in their respective Component Societies.

2d. Those who shall have failed to attend two consecutive annual meetings of the Medical Society of New Jersey. All excuses for absence shall be made in writing to the Judicial Council, and its decision shall be final.

All Permanent Delegates whose Component Societies are in arrears for dues to the Medical Society of New Jersey shall be suspended from all the privileges of this Society until such arrears are paid.
After the death of a Permanent Delegate or of a nominee for Permanent Delegate the Secretary of the Component Society of which said Delegate or nominee was a member shall send formal notice of such death to the Recording Secretary of the Medical Society of New Jersey, and said Recording Secretary shall thereupon notify said Component Society, through its Secretary, that it may select at its next Annual Meeting (or at a meeting specially called for this purpose) a nominee to fill the vacancy. The names of all Permanent Delegates stricken from the roll shall be reported by the Recording Secretary of the Medical Society of New Jersey to the Secretaries of the Component Societies which they respectively represented and said Component Societies may select at their next Annual Meeting nominees to fill vacancies.

ANNUAL DELEGATES.

SECTION 5. The Annual Delegates of the Medical Society of New Jersey shall be elected at the Annual Meeting of the Component Societies in accordance with requirements of the Constitution of the Society, and shall with the Permanent Delegates and Reporters, represent their respective Component Societies in the House of Delegates.

DELEGATES EX-OFFICIO.

SECTION 6. All members of Component Societies in good standing, not otherwise included in the foregoing offices, viz.: Permanent Delegates, Annual Delegates and Reporters, are Delegates Ex-officio to the Medical Society of New Jersey, and may participate in all the privileges of the general or scientific sessions.

PRIVILEGED MEMBERS.

HONORARY MEMBERS.

SECTION 7. Honorary Members shall be practicers of medicine who have risen to pre-eminence in the profession, and shall be elected by a two-thirds vote of the House of Delegates present.

ASSOCIATE MEMBERS.

SECTION 8. Associate Members shall be representative teachers and students in allied science, not physicians, and may become Associate Members of the Medical Society of New Jersey by a two-thirds vote of the House of Delegates present, and the payment of Two Dollars per annum, which will entitle them to the transactions.
GUESTS.

Section 9. Any distinguished regular physician, resident or non-resident of this State may become a guest during the Annual Session upon invitation of the Society or House of Delegates, and shall be accorded the privilege of participating in the scientific work of the session. Guests may also be elected by a majority vote for the day only.

ARTICLE V.

HOUSE OF DELEGATES.

Section 1. The House of Delegates shall be the legislative body of the Medical Society of New Jersey.

Sec. 2. Members of the House of Delegates may be Fellows, Officers of the General Session, Permanent and Annual Delegates, Reporters, Councillors and Members of the Standing Committees; also the ex-Chairmen of the different sections when created.

ARTICLE VI.

BOARD OF TRUSTEES.

Section 1. The Board of Trustees shall be composed of the Fellows, the President, the First Vice-President and Recording Secretary.

ARTICLE VII.

SECTIONS.

Section 1. The House of Delegates may provide for the division of the scientific work of the Medical Society of New Jersey into appropriate sections, when the necessity for such division arises, subject to the approval of the Board of Trustees.

Sec. 2. The House of Delegates shall have power to organize Councillor districts within the State, when the best interest of the Society is to be promoted thereby, provided, said districts shall be composed of three or more Component Societies, and approved by the Board of Trustees. When approved, a Councillor shall be elected from each district, which Councillors collectively shall constitute the Judicial Council.

ARTICLE VIII.

SESSION AND MEETINGS.

Section 1. The Medical Society of New Jersey shall hold an Annual Session, during which there shall be held daily not less than one General Meeting which shall be open to all registered members.

Sec. 2. The time and place for holding each Annual Session shall be fixed by the House of Delegates for each succeeding year.

ARTICLE IX.

OFFICERS.

Section 1. The officers of the Medical Society of New Jersey shall be a President, three Vice-Presidents, Corresponding Secretary, Recording Secretary, Treasurer and Board of Trustees.
ARTICLE X.

Funds and Expenses.

Funds for meeting the current expenses of the Medical Society of New Jersey shall be provided for by the House of Delegates by an equal per capita assessment upon each Component Society, donations, licensed privileges to exhibitors and profits of its publications. During the Annual Session funds may be appropriated by the House of Delegates subject to approval by the Board of Trustees for the expenses of the Annual Session, for publications, for expenses of officers and committees, and for such other purposes as will promote the best interests of this Society; but the Board of Trustees may incur any necessary expense ad interim.

ARTICLE XI.

Referendum.

The General Meeting of the Medical Society of New Jersey may, by a two-thirds vote, order a General Referendum upon any question pending before the House of Delegates, and the House of Delegates may by a similar vote of its members or after a like vote of the General Session, submit any such question to the membership of this Society for a final vote, and if the persons voting shall comprise a majority of all the members, a majority of such vote shall determine the question, and be binding upon the House of Delegates.

ARTICLE XII.

The Seal.

The Medical Society of New Jersey shall have seal with power to break, change or renew the same at its pleasure.

ARTICLE XIII.

Amendments.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the members present at any Annual Session, pro-
vided, that such amendment shall have been submitted in open meeting, at a previous Annual Session, and that it shall have been officially sent to each Component Society at least one month before the Annual Session at which final action is to be taken. And provided, further, that when an amendment properly under consideration is amended, which amendment is germane to the subject, it shall be in order, and if adopted, shall have the same standing and force as if proposed at a preceding meeting of the Society.

BY-LAWS.

CHAPTER I.

MEMBERSHIP.

SECTION 1. The Fellows and officers of, the Delegates (Permanent, Annual and Ex-officio) to, the Medical Society of New Jersey, are members, by act of incorporation; honorary and associate members, and guests, by privilege of this Constitution.

SEC. 2. The Component Societies shall furnish to the Recording Secretary of the Medical Society of New Jersey, thirty days before the Annual Session, a certified roster of its members in good standing together with a list of its Delegates and Reporters, with names of members in good standing properly certified thereon, shall be prima facie evidence of their right to register at the Annual Session.

SEC. 3. No person who is under sentence of suspension or expulsion from any Component Society of the Medical Society of New Jersey, or whose name has been dropped from its roll of members shall be entitled to any of the rights or privileges of this Society, nor shall the said member be permitted to take part in any of its proceedings, until such time as said member shall have been relieved of such disability.

SEC. 4. Permanent Delegates shall register as such designating the Component Society which they represent.

SEC. 5. All Annual Delegates of the Medical Society of New Jersey shall produce a certificate of election at each annual meeting, signed by the President and Secretary of the Component Society which they respectively represent; and no Annual Delegate will be permitted to sit as a member of the House of Delegates without said certificate, nor unless the Component Society from which he is a delegate shall have paid its annual assessment.

SEC. 6. Each member in attendance at the Annual Session of the Medical Society of New Jersey shall enter his name and address on the registration book indicating the Component Society of which he is a member. When the said member’s right to membership has been verified by reference to the roster of the said member’s society, the said member shall receive a certificate which certificate shall be evidence of said member’s right to all the privileges of membership at that session. No member or delegate shall be permitted to take part in any of the proceedings of an Annual or Special Session until said member or delegate has complied with the provisions of this section by registering.
CHAPTER II.

ANNUAL AND SPECIAL SESSIONS OF THE MEDICAL SOCIETY OF NEW JERSEY.

SECTION I. The Medical Society of New Jersey shall hold an Annual Session at such time and place as has been fixed at the preceding Annual Session by the House of Delegates.

SEC. 2. Special sessions of the Medical Society of New Jersey or the House of Delegates shall be called by the President upon the petition of twenty or more Fellows and Delegates representing four or more Component Societies.

CHAPTER III.

GENERAL MEETING.

SECTION I. A General Meeting shall include all registered members, honorary and associate members, and guests, who shall have equal rights to participate in all proceedings and discussions. The President shall preside over all meetings, or, in his absence, or disability, or by request, the Vice-President in the order of seniority shall preside. The President's address and annual oration shall be delivered before the General Meeting at such time and place as shall be arranged for in the official program.

SEC. 2. The General Meeting shall have authority to create committees for scientific investigations of special interest or importance to the profession and public, and to receive and dispose of reports of the same, but any expense incurred in connection therewith must be referred to, and concurred in, by the House of Delegates, and approved by the Board of Trustees.

SEC. 3. The order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until completed, except by special vote.

SEC. 4. No address delivered or paper read before the Medical Society of New Jersey, with the exception of those delivered by the President and invited orators, shall occupy more than twenty minutes in its delivery or reading, and no member shall speak longer than five minutes, nor more than once on any subject, unless by permission of the house.

SEC. 5. All papers read before the Society shall be its property, and any author failing to deposit the same with his name, with the Secretary when read may be debarred from having his paper published in the transaction.

CHAPTER IV.

HOUSE OF DELEGATES.

SECTION I. The House of Delegates shall meet annually at the time and place of the annual session of the Medical Society of New Jersey and shall fix its hours of meeting so as not to conflict with the general meetings of the Society, or with the meetings held for the President's address, or annual orations; it being provided hereby that should the interests of the Society require, the House of Delegates may meet in advance of, with, or remain in session after the final adjournment of the Annual Session.

SEC. 2. Each Component Society shall be entitled to send each year to the House of Delegates of the Medical Society of New Jersey, one an-
nual delegate for every twenty-five members, and one additional annual delegate for a major fraction thereof; provided, the said Component Society shall have made its annual report and paid its annual assessment as provided in this Constitution and By-Laws.

SEC. 3. In the absence of a delegate or delegates from a Component Society, in good standing, on presentation of the proper credentials, an alternate or alternates elected shall have the right to sit as members of the House of Delegates.

SEC. 4. Twenty annual delegates, representing at least four Component Societies in good standing, shall constitute a quorum, and all of the meetings of the House of Delegates shall be opened to the members of the Medical Society of New Jersey, but only members of the House of Delegates shall have a right to vote.

SEC. 5. The House of Delegates shall carefully consider the reports of all Component Societies and shall have authority to make such recommendations and adopt such measures as may be deemed most efficient for the building up and increasing the interest in said Component Societies already existing, and also, to organize the profession and issue charters in the Counties where affiliated Societies do not exist and shall also have authority to encourage special study and research through post-graduate work in medical centers as is deemed advisable for the public health.

SEC. 6. The House of Delegates shall have authority to elect standing committees for special purposes from among the members of the Medical Society of New Jersey, and such committees may report to the House of Delegates in person and participate in the debates thereon.

SEC. 7. The House of Delegates shall approve all memorials and resolutions issued in the name of the Medical Society of New Jersey before the same shall become effective.

SEC. 8. The House of Delegates shall have power to elect a committee to confer with a similar committee from other State Medical Organizations, when, in its judgment, the interests of the profession will be advanced thereby.

CHAPTER V.

ELECTION OF OFFICERS.

SECTION 1. All elections shall be by ballot and a majority of the votes cast shall be necessary to elect.

SEC. 2. On the first day of the Annual Session the President shall ask the annual delegates present from each Component Society to meet immediately after the adjournment and regularly nominate and elect a member to the nominating committee, and these members together with the Fellows shall constitute the nominating committee. It shall be the duty of this committee to consult with the members of the Medical Society of New Jersey and to hold one or more meetings for the purpose of considering the best interests of the Society and the profession of the State for the ensuing year; the committee shall report the result of its deliberations to the House of Delegates in the form of a ticket containing the names of one or more members for each of the offices to be filled at that annual session, also nominees for standing committees, councillors for the different districts, delegates to the American Medical Association and to corresponding State Medical Organizations. Members elect of the nomi-
nating committee must present a certificate signed by the authorized chairman and secretary of their County delegation to the Recording Secretary of this Society, within twenty minutes after the adjournment of the session.

Sec. 3. The report of the nominating committee, and the election of officers, standing committees, Councillors, delegates to the American Medical Association, and the corresponding State Medical Organizations, for the ensuing year shall be the first order of business of the House of Delegates in the afternoon of the second day of the Annual Session.

Sec. 4. Nothing in this chapter shall be construed to prevent additional nominations being made by members of the House of Delegates, or of nominations made by the Board of Trustees to fill ad interim appointments as provided for in Article IX, Section 3, of this Constitution.

Sec. 5. In balloting for the election of the nominees to office, if on the first ballot no one receives a majority of the votes cast, the name of the one receiving the smallest number of votes shall be dropped and the balloting shall proceed in this manner until an election is had.

Sec. 6. No member may solicit votes in his own behalf or otherwise electioneer for office in this Society. Any member violating this section shall be disqualified for office, and evidence of the same will be sufficient reason for suspension during the remainder of the Annual Session.

CHAPTER VI.

DUTIES OF OFFICERS.

Section 1. The President shall preside at all meetings of the Medical Society of New Jersey and the House of Delegates, preserve order and decorum in debate, give a casting vote when necessary, appoint all committees not otherwise provided for, order reports, force the observance of the By-Laws, and perform such other duties as custom and parliamentary usage may require. He shall also deliver an annual address at such time and place as may be arranged for by the program committee; shall fill all vacancies made in the offices of the Society during the interim by reason of death, resignation, or removal from the State (except that of Treasurer), and all persons so appointed shall serve until the next Annual Session, when all vacancies so filled by ad interim appointments shall be regularly filled by the House of Delegates as provided for in Article IX, Section 3, of this Constitution, and in Section 2, Chapter V, of these By-Laws. The President shall not be eligible for re-election.

Sec. 2. The Vice-Presidents shall assist the President in the discharge of his duties, and in the absence or disability of the President the Vice-President in order of seniority, when present, shall preside at all meetings of the Medical Society of New Jersey and House of Delegates and perform all of the duties pertaining thereto. In case of vacancy in the office of the President during the interim by death, resignation, or removal, the Vice-President in order of seniority shall perform all the duties pertaining to the office of President during the interim until the first succeeding Annual Session thereafter when the vacancies shall be filled as provided for in Section 2, Chapter V, of these By-Laws.

Sec. 3. The Third Vice-President shall prepare and read an essay upon some medical or allied subject at the first Annual Meeting, subsequent to his election.
Sec. 4. The Treasurer shall give bond for the trust reposed in him as required by the Board of Trustees. He shall demand, receive and preserve all funds due the Medical Society of New Jersey, together with bequests, donations, etc.; keep a correct list of the same, together with the name of the respective donors, and shall have charge of the general management of the fiscal affairs of this Society, subject to the approval of the Board of Trustees. He shall not pay any moneys out of the treasury except by the written order of the President, approved by the Board of Trustees. His accounts shall be subject to an examination by an auditing committee appointed from the Board of Trustees at such times as they or the House of Delegates may order, and he shall annually render a full statement of all the transactions of his office at the Annual Session of this Society. He shall charge upon his books the assessment against each Component Society at the end of the fiscal year, collect and make proper credits for the same, and perform such other duties as may be assigned to him.

Sec. 5. The Board of Trustees shall consist of the President, First Vice-President, Recording Secretary and the Fellows of this Society. Each Fellow shall be a member of the said Board so long as he shall remain a member in good standing of this Society. It shall be the duty of the Board of Trustees to annually organize, by electing a President and Secretary and to have a general supervision over the affairs of the Society, to recommend and advise for its betterment whenever opportunity offers, to advise in the deliberations of the several standing committees, and to especially supervise the duties and labors of the Publication Committee, and such other committees as to have to do with the publication and distribution of the transactions, when necessary, to appoint an Editor and other assistance as the demand of the Society may require; to refer and otherwise dispose of all business properly arranged for its disposition; the Board of Trustees shall have power to lease, sell or otherwise convey or dispose of any or all property of the New Jersey Medical Society both personal and real, and execute therefor good and sufficient lease, deed or other conveyance; determine all salaries, pass upon all recommendations, and order all necessary expenditures for the Society; keep full minutes of all meetings, and give to the House of Delegates a summarized brief of its proceedings and recommendations, and yearly publish in the transactions a full report of the same. To require and hold the official bond of the Treasurer for the faithful execution of his office, to annually audit and authenticate his accounts and include a report of the same in the general report.

In the event of a vacancy in the office of the Treasurer by death, or otherwise, the Board of Trustees shall fill the vacancy by one of its members ad interim.

Sec. 6. The Recording Secretary shall have charge of the Constitution and By-Laws and the records of this Society and of the House of Delegates, shall attend the meetings, record the proceedings, and give notice of all the regular and special meetings of this Society and of the House of Delegates. He shall present to the Society all recommendations received and applications made not connected with the duties of the Corresponding Secretary when directed by the President. He shall notify the Chairman of each committee of his election or appointment with the names
of his associates, together with the subject referred to the Committee, furnish delegates to the American Medical Association and corresponding State Medical Organizations, with proper credentials, demand and receive from the Component Societies a copy of the proceedings of their first meeting, file the same among the archives of this Society, and perform such other duties as may be assigned him by the House of Delegates. He shall keep a record of the election of all Permanent Delegates, and report to the State Society each year which Component Societies are entitled to additional Permanent Delegates, and the number, and also all such delegates as shall have forfeited their membership. He may employ assistance when authorized by the House of Delegates and approved by the Board of Trustees.

Sec. 7. The Corresponding Secretary shall have charge of, and custody over, all letters and communications transmitted to this Society, and shall transcribe the same in a book provided for that purpose, such of them as shall be directed by the Society. It shall be his duty, agreeable to the directions of the Society, to write and answer letters, and in general to manage all matters of correspondence properly referred to the Medical Society of New Jersey. He shall keep copies of all the correspondence together with the answers thereto and place them before the Society at its next succeeding Annual Session. He shall transmit to the Secretaries of the several Component Societies, information upon such subjects as have been acted upon in this Society relative to their respective interests, and notify the honorary and associate members of their election to this Society; transmit to them a copy of the Constitution and By-Laws; provide for and take temporary charge of the registration of all members and delegates, honorary and associate members, and guests to the Annual Session. Preserve all records until relieved of the same by the Society, and perform such other duties as may be required by his office or assigned to him by the Society.

CHAPTER VII.
REPORTERS.

Section 5. It shall be required of each Component Society to elect one of its members whose duty it will be to furnish to the Committee on Scientific Work a brief and intelligent report of important transactions of the Society, of special extracts from papers read, of interesting cases reported, and of the prevalence of contagious and other diseases in the County, of the removal of any member from the Society by death or otherwise, and of the members elected during the year; also general information of importance to this Society. This report must be made at least thirty days prior to the Annual Session of the Medical Society of New Jersey, or no credit will be given it in the report of the Committee on Scientific Work, and neglect to do so will be considered equivalent to a delinquency and will be so treated by the Committee on Credentials, which neglect will prohibit the said delinquent Reporter from a seat in the House of Delegates at that session and reappointment for the next ensuing year.

CHAPTER VIII.
COUNCILLORS.

Section 1. The Councillors shall be regularly nominated by the Nominating Committee, and elected by the House of Delegates.
SEC. 2. Collectively the Council shall be composed of the Councillors of the Medical Society of New Jersey, and constitute a Board of Censors of this Society known as the Judicial Council. The Council shall consider all question involving the rights of members whether in relation to each other, to members of other Societies, or to the members of this Society. All questions of an ethical nature and disputed excuses from Permanent Delegates shall be referred to this Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members, or of members of Component Societies upon which an appeal is taken from an individual Councillor. Its decision in all such cases shall be final.

SEC. 3. The Judicial Council of the Medical Society of New Jersey may hold daily meetings during the Annual Session of the Society and at such other times as necessity may require, subject to the call of the Chairman, or upon the petition of three Councillors. It shall meet on the last day of the Annual Session of the Society for reorganization and for the outlining of the work for the ensuing year. At this meeting it shall elect a Chairman and Secretary, and shall keep a permanent record of its proceedings, and through its Chairman make an annual report to the House of Delegates at such time as may be provided therefor.

SEC. 4. Each Councillor shall be properly a peacemaker and censor for his District; he shall visit each Component Society in his District at least once a year, for the purpose on inquiring into the condition of the profession and for improving and increasing the zeal of the Society in its scientific work. He shall make an annual report to the House of Delegates of the condition of the profession in each Component Society in his District. The necessary traveling expenses incurred by said Councillors in the line of the duties herein imposed, may be allowed by the House of Delegates upon the presentation of the proper itemized statement.

CHAPTER IX.

COMMITTEES.

SECTION I. The Standing Committees shall be as follows:

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(b) TO BE APPOINTED,

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COMMITTEE ON ARRANGEMENTS.

The Committee on Arrangements shall consist of five members who shall be regularly nominated and elected, three of whom may be named
from the Component Society of the County in which the next Annual Session is to be held. The President and Recording Secretary are Ex-officio members of this Committee.

It shall be the duty of this Committee to provide suitable accommodations for the meeting places of the Society, viz.: The General Session, House of Delegates, Board of Trustees, the various Committees and Exhibits. This Committee shall have charge of all matters and details pertaining to the General Arrangements, and shall have power to enlarge by creating sub-committees as necessity or urgency may require.

The Chairman shall report in writing an outline of the arrangements, to the President for his approval, and subsequently to the Chairman of the Program Committee for publication and shall make announcements during the Session as occasion requires.

PROGRAM COMMITTEE.

Sec. 3. The Program Committee shall consist of the Recording Secretary and two additional members (one of whom, after the first year, shall be elected annually) for two years. It shall be the duty of this Committee, after receiving the titles, together with brief abstracts of the papers to be read, with authors' names attached, to prepare and issue a program announcing the order in which the papers, discussions and all matters of business are to be presented, which order shall be followed by the Session as nearly as practicable. All papers must be announced to the Chairman of the Committee thirty or more days before the next succeeding session.

NOMINATING COMMITTEE.

Sec. 4. The Nominating Committee shall be elected on the first day of the Session, as provided for in Chapter V, Section 2 of these By-Laws and, when approved by the House of Delegates, shall perform the duties therein assigned, and such others as may be referred to it by the House of Delegates.

COMMITTEE ON SCIENTIFIC WORK.

Sec. 5. The Committee on Scientific Work shall consist of three members, one of whom after the first year shall be annually elected for three years.

This Committee shall present at each annual session a summary report of the proceedings and recommendations of the respective Component Societies, together with the incidents and legal decisions of professional interest, and of special progress made. It shall arrange symposiums upon subjects of its own selection; invite special orators to read essays or deliver orations from time to time, and otherwise extend the interests and scientific work of the Society as it may elect.

COMMITTEE ON PUBLIC HYGIENE AND LEGISLATION.

Section 6. The Committee on Public Hygiene and Legislation shall be composed of six members, three members each from the House of Delegates and General Session. After the first year, one member from each body shall be annually elected for three years. It shall be the duty of this Committee to hold annually at least one meeting, preferably during the General Session of the Medical Society of New Jersey, at which
meeting it shall be the privilege of each Component Society to make known its recommendations, both hygienic and legislative, through its Reporter and a summary of the same is to be formulated and presented with recommendations to the House of Delegates for approval. It shall be the further duty of this Committee to look after all questions of legislation and public hygiene as may be recommended by the House of Delegates. The President and Recording Secretary are members of this Committee.

COMMITTEE ON PUBLICATION.

Section 7. The Committee on Publication shall consist of three members, of which the Recording Secretary shall be a member and Chairman. All reports relating to scientific subjects and all papers and discussions heard before the Society shall be referred to this Committee. This Committee shall have the authority to curtail or abstract papers and discussions and any paper referred to it which is not considered proper for publication in the transactions, may be returned to the author with reason appended, for non-publication. This Committee shall also have authority to arrange for the publication and distribution of the transactions, and it is hereby understood that all papers read before the Medical Society of New Jersey shall be the property of this Society.

CHAPTER X.
COMMITTEES TO BE APPOINTED.

COMMITTEE ON CREDENTIALS.

Section 1. The Committee on Credentials shall consist of three members, viz.: Corresponding Secretary, Treasurer, and one member to be appointed by the President. It shall be the duty of this Committee to examine all credentials and certificates presented by members and delegates and when found in accordance with the requirements of Article IV, Section 1 to 17, and Chapter I, Sections 2 to 5, inclusive, of the Constitution and By-Laws of this Society, to issue to each, individually, a certificate or badge which, when regularly presented, shall be evidence of their right to membership. This Committee shall keep a record of all issues together with the names and addresses of the delegates and members and compare the same with the roster from the respective Component Societies.

THE BUSINESS COMMITTEE.

Section 2. The Business Committee shall be composed of five members of the House of Delegates, appointed by the President, and shall be in continuous session during the meetings of the same; any questions or business before the House of Delegates for consideration may be referred to the Business Committee for subsequent report or recommendation.

COMMITTEE ON HONORARY MEMBERSHIP.

Section 3. The Honorary Membership Committee shall be composed of three Fellows appointed annually by the President, whose duty it shall be to inquire into the standing and qualifications of all nominees to Honorary Membership in this Society, and report the same with their recommendations to the House of Delegates for final action.
CHAPTER XI.

Section 1. Any officer of this Society for sufficient reason may resign his office, or he may be removed therefrom by order of the House of Delegates when guilty of neglect of duty, improper conduct, or upon violation of the Constitution and By-Laws. In either, or all cases, the Society shall fill the vacancy so made as provided for in Article IX, Sections 1 to 3, inclusive, of the Constitution, and Chapter V, Sections 2 to 7, inclusive, of the By-Laws.

CHAPTER XII.

Assessments and Expenditures.

Section 1. An assessment of Two Dollars per capita on the membership of the Component Societies is hereby made the annual dues of this Society. The Secretary of each Component Society shall forward the amount of its assessment, also a roster of all its members; a list of its delegates and of all non-affiliating physicians of the County, to the Recording Secretary of this Society, at least sixty days in advance of each Annual Session.

Sec. 2. Any Component Society which fails to pay its assessments, or to make the reports required on or before the time or date above stated, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Society, unless the disability be removed by the House of Delegates, until said requirements have been satisfied.

Sec. 3. All motions or resolutions appropriating money not herein before provided for shall specify a definite amount, or so much thereof as may be necessary for the purposes indicated, and must be recommended by the House of Delegates and approved by the Board of Trustees.

CHAPTER XIII.

Rules of Conduct.

The principles set forth in the Code of Ethics of the American Medical Association shall govern the conduct of the members of this Society, their relations to each other and to the public.

CHAPTER XIV.

Rules of Order.

The deliberations of the Medical Society of New Jersey shall be governed by parliamentary usage as contained in Roberts' "Rule of Order" unless otherwise determined by a vote of its respective bodies.

CHAPTER XV.

Component Societies.

Section 1. All County Medical Societies of the State of New Jersey which have adopted the principles of organization in accord with this Constitution and By-Laws, may, upon application to the House of Delegates, receive a charter from and become a Component Society in affiliation with the Medical Society of New Jersey.
Sec. 2. Charters shall be issued only upon the order of the House of Delegates when approved by the Board of Trustees, and shall be signed under seal by the President and Secretary of this Society. Upon the recommendation of the House of Delegates, the Board of Trustees may revoke the charter of any Component Society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 3. Each Component Society shall judge of the qualifications of its own members, but as such Societies are the only portals to the Medical Society of New Jersey, and also to the American Medical Association, every reputable and legally registered physician who is practicing, or who will agree to practice non-sectarian medicine, shall be entitled to membership in this Society when regularly qualified.

Sec. 4. There can be but one Component Medical Society chartered in any County in this State.

Sec. 5. Any physician who may feel aggrieved by the action of the Component Society of his County in refusing him membership, or in suspending or expelling him, shall have the right to appeal through his District Councillor to the Board of Councillors.

Sec. 6. When hearing appeals, a Councillor or the Judicial Council may admit oral or written evidence, as in its judgment will best and most fairly present the facts; but in case of appeals either before individual Councillors or the Judicial Council from the decisions of Component Societies, efforts at conciliation should precede all such hearings.

Sec. 7. When a member in good standing in a Component Society moves to another County of this State, upon request, his name shall be transferred to the roster of the Component Society in whose jurisdiction he moves without cost to himself.

Sec. 8. Any physician living in or near a County line may hold his membership in the Component Society most convenient for him to attend, on permission from the Component Society in whose jurisdiction he resides.

Sec. 9. The Secretary of each Component Society, in addition to that of its own members, is recommended also to keep a list of non-affiliating, registered physicians of the County, with full name, address, college and date of graduation and date of license to practice in this State, together with such other information as may be deemed important to the Society. He shall furnish an official report containing such information upon blanks supplied him for the purpose, by the Secretary of this Society, when requested to do so. The roster kept should indicate any changes in the personnel of the profession by death, removal to, or from the County, or by withdrawal from the Society, and in making such a report he should endeavor to include an account of every physician who has lived, or is now living, in the County during the year.

CHAPTER XVI.

AMENDMENTS.

These By-Laws may be amended at any Annual Session by a two-thirds vote of the members of the House of Delegates present at that session—after the amendment has been twice read in open meeting and laid upon the table for one day.
BOOK REVIEWS.

A RECOMMENDATION.

It is the logical duty of the Medical Profession to enlighten the public as much as possible, upon questions of hygiene and special protection against disease. It therefore should be the endeavor of each Component Society, of the Medical Society of New Jersey, to liberally provide such information, and at least once a year hold a meeting to which the public are jointly invited, and for which a special orator should be procured to address the joint meeting upon a topic relative to the above subjects; and, furthermore, the members of the Component Societies, individually and collectively, should exert their influence with that of the Boards of Health for the adoption of sanitary laws, and the most helpful methods for the preservation of health, thereby minimizing the scourge of infectious and contagious diseases.

COMMITTEE ON RECONSTRUCTION OF THE CONSTITUTION AND BY-LAWS.

| JOHN W. WARD. |
| JOHN C. PARSONS. |
| AMBROSE TREGANOWAN. |
| HENRY W. ELMER. |
| HENRY MITCHELL. |
| DAVID C. ENGLISH. |
| PHILIP MARVEL, Chairman. |
| WM. J. CILANDLER, Secretary. |

BOOK REVIEWS.

MEDICAL MICROSCOPY: A Guide to Diagnosis, Elementary Laboratory Methods, and Microscopic Technic. By T. E. Oertel, M.D., Professor of Pathology and Clinical Microscopy, Medical Department, University of Georgia. 12mo, 120 illustrations. Cloth, $2.00 net. Published by P. Blakiston's Son & Co., Philadelphia.

It is often said that the busy physician has little time to read technical medical literature, and that he must of necessity leave this part of the work to the trained laboratory man. There is evidently some truth in the assertion that the physician has not the time or does not take time to acquaint himself with the technicalities of medicine, for a few days in the laboratory shows the microscopist and pathologist how wofully ignorant are many of the medical men who send in specimens. Only too often is material of great scientific worth wasted or rendered of little value on account of improper preparation. To obviate this, as well as to give a technical knowledge to those "who desire to do such microscopic investigation as will be helpful to them in their daily practice," Dr. Oertel has written this book, and, gleaning from the immense mass of scientific literature the necessary essentials, has put them in a concise and readable form.

The chapters on Blood, Urine, Sputum and other secretions should be read by every physician, for in this way he might be able to gather information which would clear up difficult points in the field of diagnosis.

The many illustrations are largely made up of photomicrographs and well adapted as adjuncts to the text.

Again it becomes a pleasure to call attention to another volume of this most excellent series. Probably no books are published which are so helpful to the busy practitioner as the International Clinics, on account of the clear-cut, concise and very practical epitomes of medicine and its various branches.

It would be impossible in the limited space here allowed to do justice to the various articles. But of the many there are three which especially commend themselves to the reader: A monograph on "The Blood in Health and Disease, with a Review of the Recent Important Work on the Subject," by Dr. Thomas R. Brown, of Johns Hopkins; "Some Clinical Aspects of Aneurisms of the Aorta," by Dr. A. O. J. Kelly, of the University of Pennsylvania, and "The Treatment of Chronic Gastric Catarrh," by Dr. Heinrich Stern, of the N. Y. School of Clinical Medicine.

The illustrations in the quarterly are better than usual.


While this is a book which should be read by every young physician, who is about to enter practice, it would not harm the older practitioners to give the contents of the volume careful pursuit. A man, following its precepts, would attain an ideality seldom seen in the medical profession. If the physicians of to-day were to take the advice of the Drs. Cathell, the profession would take on a new dignity, internecine strife would be done away with, and by presenting a united front to the public, the overworked and underpaid medical men would assume positions in the community commensurate with their ability.

The frequent lapses into poetry throughout the volume are out of taste, but with this exception, the book is one which commends itself to the thoughtful attention of every earnest physician.

FORMALIN IN SEPTICEMIA.

The attention of medical men has been attracted during the past few weeks to formalin as a cure for septicemia. Dr. C. C. Barrows, of Bellevue Hospital, used it on a negress suffering from puerperal septicemia with excellent results. When the temperature was 107°, Dr. Barrows made an intravenous injection of 500 cubic centimeters of a solution of
1 to 5,000 of formalin in the woman's right arm. It worked well, and the next day the temperature had dropped to 101°. As it rose later, a second injection was made and the after-results were most satisfactory.

It is as yet too early to make any definite statements as to the value of formalin, although its active principle, formaldehyde gas, has long been recognized as possessing great value along given lines. Should formalin stand the test, it will open up a new era in medicine, and Dr. Barrows' name will rank with the great medical discoverers.

ACUTE APPENDICITIS AND ITS TREATMENT.

By JOHN B. DEAVER, M.D., of Philadelphia, Surgeon-in-Chief of the German Hospital.

The diagnosis of acute appendicitis is not, as a rule, difficult to those who have had much experience with the disease. The greater number of affections which are commonly supposed to be liable to confusion with appendicitis are, as a rule, recognized without difficulty, if the character of the onset and the early symptoms are carefully elicited. Obtaining a reliable history I regard as most important. The differentiation between a terminal inflammation of an appendix which holds a northerly direction (which position necessarily brings the organ in relation with the gall-bladder) and an acute cholecystitis is difficult and at times impossible. In the female, tubo-ovarian inflammation of the right side, right-sided ovarian cyst twisted upon its pedicle, and a temporarily anchored movable kidney are conditions which may render the diagnosis difficult at times; but, to repeat, if a due regard is paid to the previous history and a most careful study made of the entire history, the differential diagnosis becomes very much easier.

The appendix from its dependent position, low vitality and lack of function, as far as we know, is very susceptible to an extension of an inflammatory lesion from the cecum. Unlike the bowel, the cleansing influence of the drainage is not attained, and the results of inflammation of the mucosa of the appendix are, from this lack of adequate drainage, likely to be more severe than that in the neighboring cecum; with the replacement of the destroyed mucous membrane by connective tissue the lumen at the cecal end will be still further decreased. The meagre bloodsupply of the appendix, usually a single vessel, is a direct factor in lowering the vitality of the tissues composing the appendix. It is to such factors that the increase in the virulence of the bacilli coli communis and other micro-organisms is due.

The presence of foreign bodies, including fecal calculi, is not necessary to produce the disease, and their presence merely hastens the process by the pressure which they exert upon the walls of the appendix.

Various digestive disorders and particularly "dyspepsia," are frequently named as etiological factors, but I believe that they are more often a result of recurring attacks of appendicitis, especially
when stricture of the appendix is present, adhesions have formed and the disease has become chronic in character, and not a direct cause.

*Mild attacks of enteritis are common in young adults during the summer months from the consumption of impure food or water, and from which the appendix does not recover as rapidly as the intestine.

With the history of previous more or less severe attacks of abdominal colic and not necessarily referred to the appendix, a patient previously well is suddenly seized with severe pain usually throughout the abdomen. Nausea follows and sometimes vomiting. The pain soon becomes more intense over the site of the appendix, and in a few hours this locality alone is involved. If the patient should be so fortunate as to send for his physician at this time, viz., within 24 hours of the onset of the attack, and if operation is advised and performed, recovery is practically assured.

An examination will detect an increase in the number of respirations and in the rapidity of the pulse. The temperature range is unreliable and inconstant, yet is usually above normal. The character of the pulse and its rate are to be carefully considered. Pain is referred to the right iliac fossa in the majority of cases, this corresponding to the most common position of the appendix. When the appendix occupies the pelvis, the pain is referred to near the median line or even to the left side, and bladder or rectal irritability may be complained of, while, if the appendix holds one of the northerly positions, the pain will be referred in the direction and to a point in advance of the organ. Palpation will detect a point of tenderness over the appendix and usually greatest at McBurney's point, which corresponds most commonly to the normal position of the appendix. If an attempt is made to depress the abdominal walls on the affected side, it will be found impossible, while upon the non-affected side the walls recede kindly and unhesitatingly in advance of the palpating hand. Often, in the case of a child, the diagnosis is made by the patient upon the entrance of the visiting physician to the sick room, when the child will cry out, "Mama! Mama, dear—don't let the doctor touch my right side," and yet I regret to say the doctor too often fails to interpret the meaning.

Often a patient is disposed to lie with the right leg drawn up and the shoulders raised. The flexion of the thigh seems to afford relief by relaxation of the ileopsoas muscle.

In addition to the rigidity of the overlying abdominal wall and of the right rectus muscle referred to, tenderness is elicited and is a point of great diagnostic importance. In the presence of pus the most reliable sign, to the writer's mind, is excruciating tenderness.

As the disease progresses, the tongue becomes coated and foul, anorexia and nausea may increase or subside when the pain becomes located over the appendix, and the abdomen may be noted to be distended. At first the distension is due to the accumulation of gas from the extension of the inflammation to the ileocecal valve, but later with the onset of peritonitis it is due to the paresis of the bowel.

The temperature may rise with the absorption of septic products,
and the face may become pinched and anxious. The local symptoms may increase in severity, or the pain may subside, and this frequently, denotes gangrene of the appendix. If sufficient adhesions have formed and an abscess develops, a mass will appear in the right iliac fossa, with evidences of sepsis and a high leukocyte count. Before the advent of pus the blood count is of no value as far as present methods have gone. A count of over 20,000 with an increase in the polymorphonuclear forms will indicate the presence of pus. Below this figure the count may mean anything.

When general septic peritonitis, with its well-known symptoms, advances, the case is too often hopeless, and the death of the patient is practically assured.

The symptoms of appendicitis will vary with the position of the appendix and the rapidity with which the disease destroys its walls and involves the surrounding structures; but in the earlier stages of the attack all of the symptoms are referable to the appendix, and by careful inquiry and examination the source of the symptoms can be located in nearly every instance. When once the diagnosis of appendicitis is made, there is no treatment to be discussed save operative interference. Whether the operation should be performed immediately will depend upon the extent of peritoneal involvement, but this question should be decided by the surgeon called into consultation and in whose hands the management of the case belongs.

The most conservative treatment in the early stages of appendicitis is certainly the immediate removal of the offending appendix. Why there should be any hesitancy in adopting this course, which must be certain, as far as anything can be certain in its results, as against dilly-dallying with medicine which can accomplish at best but little good in the presence of mechanical obstruction of the lumen of the appendix, either by a stricture or fecal calculus or infection by the colon bacillus or other equally vicious bacilli, the writer cannot and never has been able to understand. Granting that the patient will recover from the attack, he will be the subject of subsequent attacks, any one of which may place his life in jeopardy and result in a lesion often irremediable by any known means.

We must admit that deaths from appendicitis are numerous, and if the foregoing statement is correct, namely, that operation in the beginning of an attack, better still, before the attack has reached the inflammatory stage, while it is still one of appendiceal colic, is followed by recovery, the mortality records would no longer contain so many records of deaths from appendicitis, gastritis, inflammation and obstruction of the bowels and peritonitis.

The mortality in skilful hands is nil, barring accidents, and the incision in the rectus muscle can be so closely approximated that the abdominal wall is not weakened in the slightest by the operation. As the disease progresses, the mortality increases in direct proportion to the extent to which the peri-appendicular structures have become involved. Undoubtedly, many patients will recover from the attack without recourse to the knife, but the vitality of the
appendiceal tissue is impaired, and it offers a fertile soil for future inflammatory onslauts, which is borne out by the large percentage of recurring attacks. In time a period of chronicity is reached when any unusual exertion provokes a dull ache in the right iliac fossa, digestion is impaired, the bowels become sluggish and the patient baffles the skill of the attending physician by the multitude of his trifling ailments which continue unrelieved by all medical efforts. In women in whom the initial attack has involved the adnexae in adhesions, we find a slight attack of appendiceal colic occurring during each menstrual period. This condition of chronic invalidism is not exaggerated. It is frequently observed by surgeons with a large experience in this disease and is often referred to in their writings.

The neurologist reaps his harvest in many instances from cases of neurasthenia. I am forced to take exception to the term "postoperative neurasthenia," about which this particular type of specialist is fond of talking and writing. Is it not more likely that this condition is born of the lesion calling for the operation and not of the operation, therefore, is it not just to criticize the name "postoperative neurasthenia" and suggests that the surgeon be consulted for a diagnosis of the lesion causing the ailment? The present tendency seems to be to employ the surgeon only to cut, losing sight of that diagnostic ability which every good surgeon should possess.

A number of patients are referred to the writer at the German Hospital each year suffering from such a train of symptoms and in whom an operation reveals an appendix more or less completely enveloped by firm adhesions, binding it to the floor of the iliac fossa or to the cecum. The appendix is frequently distended with mucus and its cecal opening obliterated. While my mortality in such cases has been practically nil, yet the operation at times has been very difficult, with free oozing from the surfaces laid bare by the separation of the adhesions, necessitating drainage which favors a weakened abdominal wall.

There is the other termination of the initial attack to be considered and one that often follows the second, third or fourth attack, viz., perforation of the appendix with abscess formation or general peritonitis. The presence of pus will increase the risk to life, render the operation difficult and necessitate drainage with a hernia in the future. I cannot agree with the teaching that with a gangrenous or perforated appendix the patient will almost invariably recover without operation and under proper nonoperative treatment. My experience has taught me otherwise. In certain exceptional instances, in which a competent surgeon is not available or when the patient refuses to allow operation, which in the experience of the writer rarely occurs, some form of medical treatment must be carried out. When the patient is seen early, absolute rest, cleansing of the bowels by, preferably, castor oil, little or nothing by the stomach, particularly if there is persistent nausea or vomiting, and the application of cold to the abdomen, includes about all that is necessary to do.
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In mild attacks, in the absence of obstruction of the lumen of the appendix, this treatment should suffice to bring about recovery from the attack. The only advantage that the local application of cold has is in its anesthetic effect which lessens the chances of the attending physician giving an opiate. When the stomach will not tolerate castor oil, broken doses of calomel, Rochelle salts, Epsom salts, Seidlitz powder or citrate of magnesia may be given.

In the class of cases in which the medical attendant has not been called in for two, three or four days after the onset of the attack and when the case has advanced to general peritonitis with marked distension of the abdomen, high temperature, rapid pulse, persistent sick stomach and torpid bowel, the treatment recommended by Dr. Ochsner of Chicago, known as the "rest treatment" will perhaps accomplish the most. This consists in the enforcement of absolute rest, with the complete withdrawal of food by the mouth and the substitution of rectal feeding with lavage of the stomach for nausea.

In the so-called fulminating type of cases in which there has been very early rupture of the appendix, frequently close to its attachment to the cecum, the abdominal walls present a condition which is almost typical, namely, general and most marked rigidity with but slight, if any, abdominal distension. This class of cases can be saved only by operation at the very onset of the attack, and even then there will be a mortality.

Personally, I believe that it is a mistake to give any medicine at all to patients suffering from appendicitis, fearing the presence of a perforation or commencing perforation which is too likely to be increased by free peristalsis as is provoked by purgation. The surest and at the same time most conservative medication is, to me, the immediate application of the aseptic scalpel of the surgeon. The technique employed during an appendicitis operation will depend upon the conditions suspected and the lesions found on opening the abdomen.

For convenience of description only, the following classification is given.

1. Simple cases, without pus and with or without adhesions.
2. Abscess in the right iliac fossa.
3. Abscess in the pelvis.
4. Unusual positions of the appendix.

In simple cases the choice of an incision is immaterial and will depend upon the results which the operator has obtained with any particular method. I rarely use the McBurney incision because of the lessened area of the operating field which it necessitates, and an increasing experience and the fear of meeting with complications, which to deal with successfully call for room, has taught me that I can guess as to the extent of the disease before operation. I usually make an incision from one and a half to two inches in length, about one inch within the external border of the rectus and slightly curving with the convexity outward. The center of this incision will usually cross a line drawn from the umbilicus to the anterior-superior spine of the ileum, but may vary if the clinical symptoms suggest a high or a pelvic position of the appendix. Having divided the skin, fascia and anterior sheath of the rectus,
the fibers of the rectus muscle are separated with the handle of the scalpel.

Unless the incision is above the mid-point between the umbilicus and os pubis, the posterior sheath of the rectus will not be encountered. The transversalis fascia and the parietal peritoneum are grasped by two hemostats and a small cut is made with the knife during expiration, the time when the intestines recede from the parietal peritoneal wall. The peritoneal incision is now enlarged by knife or blunt-pointed scissors sufficiently to admit the index finger. The forefinger is inserted and the position of the cecum and condition of the appendix determined. In most uncomplicated cases it is not difficult to find the appendix, and the cecum can be withdrawn with ease and replaced as the appendix is reached; the appendix delivered, a hemostat is thrust through the meso-appendix, about 2 cm. from the cecum, withdrawn with a silk suture in its grasp and the meso-appendix securely tied off. If the meso-appendix is large, it is better to tie it off in sections, or, if it be very short, it is divided with scissors and the vessels grasped and cut. With scissors the appendix is divided from its mesenteric attachment, ligated with silk close to the cecum and excised, after the careful placing of gauze to avoid any contamination of the bowel or peritoneum from accidental contact of infection. If the appendix is distended with feces or pus, a hemostat may be applied 1 cm. from the cecum. This serves the double purpose of preventing contamination and enabling the assistant to study the appendix during its ligation.

After dividing or cutting away the appendix, the mucous membrane of the stump is curetted and wiped clean with bichloride solution. A double row of Lembert silk sutures is so placed as to cover the stump within a fold of the cecum. After placing the last stitch, the needle is introduced into the stump of the meso-appendix, when the latter is plentiful, and an additional suture fastens it over the site of the appendix. A careful scrutiny is made for bleeding and the cecum dropped back into the abdominal cavity. The peritoneum is closed with an interrupted or a continuous silk suture, when the fibres of the rectus muscle will be observed to be closely approximated and its sheath is sutured with continuous silk. A few silk sutures complete the operation and a small antiseptic pad is applied with a gauze binder.

This operation, in suitable cases, does not take but a few minutes to perform. With a skilful anesthetizer, a thin belly wall and no adhesions, it is one of the simplest operations required of an abdominal surgeon.

Cutting the appendix out of the cecum or the use of the purse string suture I do not consider as safe as ligation, for the surgeon who is not expert in abdominal work. The presence of adhesions increases the difficulty of operation and with a small incision requires the surgeon to "work in the dark," which may be disastrous to the patient. For this reason, when it is impossible to deliver the cecum or when the examining finger fails to locate the appendix or detects adhesions, the incision should always be enlarged, either up-
ward or downward, depending on the location of the appendix. When the incision is extended downward, the deep epigastric vessels will frequently be divided and necessitate ligation. In this way the cecum and appendix can be brought under observation and the latter gently freed from its bed of adhesions. It is safer to dispose a few-pads so as to wall off the intestines and pelvis. When the appendix is below the cecum, its enucleation is rather easy, but in other instances in which it extends upward behind the cecum it may be necessary first to ligate and cut the appendix off and then dissect it from its meso-appendix, the cecum itself or the band of adhesions by which it may be confined. In the latter instance the peritoneum of the cecum will be peeled off and must be closed with Lembert sutures.

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(To be continued.)

SOME OF THE PRINCIPLES WHICH SHOULD GOVERN US IN FRACTURE THERAPY.

By THOMAS H. MANLEY, Ph.D., M.D., of New York City,
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In order that we may accomplish the best results in the management of those complications arising contemporaneously with treatment or succeeding it, it is well, first of all, to direct attention to the prevention of them, to prophylaxis.

And, here, let us first take notice of the unaided powers of Nature in the work of restitution, to note that the tendency of broken bones is to unite very rapidly if left alone. Mr. John Chiene, of Edinburgh, in his address on Surgery, at the meeting of the British Medical Association, at Bournemouth, in 1890, called attention to this and noted as an example costal fracture, which cannot be immobilized and yet unites quicker than any other fracture.

Sampson Gamgee was the first to cast aside the views of pathologists up to his time, on the pathogenesis of fracture, and declared that noncomplicated fracture always united without callus when there was no displacement, and no retentive apparatus was applied that would embarrass the circulation; that bone tissue, as any other, united by primary and secondary union, a fact which has been repeatedly demonstrated in my own experience in hospital and private practice. He called attention to the fact that, in the lower animals, broken bones, without any treatment, quickly repaired, and seldom with deformity.

Lucas Championnière, in his late treatise, has gone so far as to discard all descriptions of mechanical appliances in fracture, except in those cases attended with marked and recurring displacement.

The fear of the law, of the risk entailed by a departure from antiquated methods, professional hostility, rivalry and other reasons
often induce practitioners to pause before they take full advantage of the physiological auxiliaries of the economy; furthermore, the time-out-of-mind custom of splinting every description of fracture has led the laity to suspect that there can be no such thing as fracture unless it is "set" and fixed in mechanical adjustments. But none of those unimportant objections should be permitted to impede progressive science or swerve a conscientious surgeon from his line of duty.

Rest and Muscular Relaxation.

The first step in the treatment of a fractured limb is to place it in a comfortable position and to guard carefully against inflicting further damage on an already crippled circulation. That attitude of the limb which favors muscular relaxation should be preferred; the flexed position eases the strain on the joints, the extensor muscles and the "false joint" at the seat of fracture. This affords rest of the crushed parts and tends to dispel the shock to the nervous system, with that painful, disquieting apprehension so marked in all severe fractures.

My practice has been so to place broken limbs until muscular spasm has passed off, until the circulation is fully re-established and the acute swelling which accompanies reaction has subsided.

In complicated fractures involving the articulations, those impacted or co-existent with dislocation, the advantages of attitude are not so evident as in those in the shafts involving the articulations, although its adoption is a principle of dominant importance in all.

The Time These Fractures Should Be Permanently Coaptated or Set.

Circumstances play an important role in determining the most appropriate period for the definite adjustment of broken bones, attended with displacement.

It goes without saying that in the exigencies of a military campaign, and under many circumstances in civil life, some kind of immovable adjustment is often imperative immediately after the accident; as, for example, in transporting the injured to their homes or hospitals, or in railway casualties far from hospital stations. Here, however, the adjustment is of a temporary character for short, rapid transport and is permissible, as nothing approaching a precise and exact approximation of the fragments is attempted at the primary dressing. Besides, in very young, restless patients, or in those who reside at so long a distance from a physician that frequent visits are impracticable, there may be justification and necessity for the so-called immediate immobilization.

But, when circumstances admit of it, the immediate, rigid locking-up of every fractured limb in firm splinting is a flagrant violation of one of the most salutary principles of surgery and, without doubt, is responsible for more suffering to the patient, gangrene, delayed or nonunion, stiff joints and wasted limbs than any other factor in fracture-therapy.
A fractured limb is quite invariably, in a limited sense, in a state of suspended animation. Boyer described it as a "torpor of the tissues." The circulation is embarrassed, the normal elements have suffered damage, voluntary control over the muscles is lost, and the limb, for the time, becomes a helpless appendage. In many we will find, immediately after injury, marked, incoercible muscular spasm, this being most notable in those bones moved by, or lying among, powerful muscles. A good example of this came under my notice recently in a case of patella fracture, in which a few hours after injury there was nearly five inches of separation of the fragments, while a week later this gap had automatically reduced to less than one inch.

Stimson, in his latest edition on "Fractures," written sixteen years after the appearance of his first superb work, speaks in no ambiguous terms on this phase of fracture treatment and says: "Generally speaking, the treatment of fracture should begin when the patient is first seen, but by this is meant that every indication should not be at once met by appropriate measures, even the correction of the displacement, the setting of the fracture and the immobilizing of the fragments may have to be left undone or incomplete, because of conflicting and dominating conditions.

"A delay of even several days is usually, in respect of these indications, of small importance; for the preparatory course in the bone and the soft parts goes on notwithstanding it, and, when final adjustment is made, the condition differs but little from that which would have existed had it been made at first. Not every fracture is accompanied with displacement that needs to be corrected and, in those in which displacement exists, in not every one is reduction possible or advisable, and sometimes, when it is possible and advisable, circumstances require that it should be delayed."

Such an admonition from such a source must carry great weight with it, as the author is well known to have had a larger experience in the traumatic surgery of the joints and bones than any other living American surgeon, and has given the profession one of the most complete and valuable works on the subject yet published.

Clearly, Professor Stimson had complicated fractures in mind, or those complicated by internal injuries, although the underlying principle enunciated applies to all.

On Splinting and Fixation of the Fragments.

We are in possession of ample clinical and experimental evidence sufficient to prove that the less compression or tension employed on a limb immediately after injury, the better for aseptic repair and re-establishment of full function.

The mistake is too often made of concentrating one's whole attention on the displacement of the fragments, to the exclusion of those vital and necessary structures, without the full nutrition of which all our efforts are in vain.

Fractures without displacement do not call for immediate splinting, though, as a precaution against displacement later, supports
are sometimes, though not always, necessary. Complicated fractures of a multiple character, attended with an extensive shattering of bone and damage to the soft parts, are never firmly splinted without seriously imperiling the integrity of the limb. Many of these do surprisingly well without an adjustment of any kind during the first week or two, if they do at any time. Many times to my amazement at first this has been demonstrated. Among a few of the most notable instances was a man who had been struck by the pole of a heavy brewer's wagon, while the horses were running away. Besides a fracture and dislocation of the clavicle, the humerus was broken twice through the surgical neck and just above the elbow; besides, there were four ribs broken on the same side. For some days the circulation in the arm was so feeble that no attempt was made to apply splinting, besides, he was an asthmatic patient who could tolerate no sort of support in fixing the shoulder. For three weeks he lay in a semiprone position, the shattered arm and shoulder lying unencumbered on pillows. However, union here was not only rapid, but apposition was excellent and function was well re-established.

Not long after, a woman in the sixth month of pregnancy was admitted to my service, who had sustained a terrible smash of the skeleton. She had fallen three stories, on to the stone pavement of a back-yard, in falling striking across a beam for clotheslines, about six feet from the surface. Besides a double fracture of the right humerus and fracture of the clavicle, all the ribs of the thorax on the right side from the third to the tenth were broken and their ends driven into the lung substance. Emphysema spread widely into the superjacent tissues, and a large escape of blood widely distended the pleural cavity.

The degree of cyanosis following was extreme, so that at no time for three weeks could any bracing apparatus be applied. By the time supports could be borne, primary union of the fragments was evident. Ultimately consolidation with very good form and function followed.

In the summer of 1900 a freight conductor was brought into the hospital, who had fallen and was crushed under the truck of a freight car. At the time of entrance, besides other injuries, his left arm from the shoulder to the wrist was fractured in four places, one fracture close to the anatomical neck of the humerus, one near, but not involving, the elbow joint, one across the coronoid fossa of the ulna and the neck of the radius, and one just above the pronator quadratus. There was so much shattering of bone that movement communicated to any part of the limb produced sensation similar to so many loose bones in a bag.

Notwithstanding all this comminution of bone and crushing of the soft parts, the main blood-trunks escaped, and the nerves, though seriously damaged, showed evidence of vitality. For ten days after admission the arm lay buried under a carbolized dressing on a warmed hair pillow. Enormous distension attended inflammatory reaction, the edema extending down to the tips of the
fingers. On the tenth day, as inflammatory symptoms began to subside and it was evident that the limb was saved, it was placed in a loose gypsum dressing. Here, too, union has been rapid and with little deformity.

These cases are among the class which has heretofore been designated "simple fracture," i.e., they were closed. The vitality of a limb, as well as its restoration in action and strength, after being broken depends very largely on the movement of the unimpeded bloodcurrent, both the arterial and the venous. In all fractures of the epiphyseal ends or the diaphyses the bloodvessels suffer injuries in varying degrees; and it should never be lost sight of that the very first consideration of the surgeon should be, after his patient is permanently settled in his quarters at home or in a hospital, to examine critically into the state of the circulation and be cautious that his manipulations or the injudicious employment of splinting, of needless force or bandaging do not augment the damage to the vessels or hamper the movement of the bloodcurrent.

The tendency of all fractured bones is toward spontaneous reduction and consolidation, when the degree of dislocation is not very great and there is no impaction of the fragments.

It is, therefore, obvious that a retentive apparatus, at best, only provides a support to steady the fragments during necessary movements of the body. Mechanical fixation, strictly speaking, while being our ideal aim, is a myth and an impossibility by splinting alone. Spiking, wiring and clamping the fragments are expedients rarely employed, except in open fractures. Mr. Arbuthnot Lane, an extensive writer on the subject of "Mechanics in Fracture," says "that the supposition that the surgeon is able to restore the broken bone to its normal form, as it is termed, to set the fracture, by manipulation, etc., and to retain it in position by splints and other means, is, except in a few cases of transverse fracture, quite wrong, as the muscular contraction exerts practically no influence in opposing the restoration of the broken bone to its original form" (Edinburgh Medical Journal, September, 1901). Mr. Lane is an ardent advocate of operative exploration and immediate mechanical fixation in all fractures attended with marked displacement, and, while, as is well known, exact approximation of the fragments is not indispensable for the securing of fairly good outlines and full function, we must give due weight to the views of one who has widely opened these parts and inspected them at different stages of the injury, with satisfactory results following.

Importance of Avoiding the Employment of Such Mechanical Restraints as Will Impede the Free Circulation of the Blood or Induce Undue Pressure on the Nerve-Trunks.

Some years ago the writer made a series of experiments with a view to observing the influence of induced fracture on the movements of the bloodcurrent, utilizing the frog for that purpose, as, through the transparent webbing of the feet of this amphibious
animal, the elements of the blood, its movements and the investing capillaries show with remarkable clearness. The essay embracing this research was presented at the meeting of the Mississippi Valley-Medical Association in October, 1895, and need not be detailed here; suffice it to say that my purpose was to note first the effect produced by fracturing a bone-shaft, in various places, through its diaphysis, near its articulations or into them.

Second, to observe the effects which retentive materials produced when so adjusted as to fix the limb.

In every instance, after induced fracture of any description was produced, the velocity of the bloodstream was slackened in the arterioles, and in whole capillary territories the bloodcorpuscles came to a standstill.

When a spiral fracture was produced by a twisting movement of the limb or direct violence into a joint, the circulation everywhere ceased, there was complete stasis in all the vessels, large and small.

This temporary arrest of motion was observed to persist for varying intervals, in fractures attended with shattering and other types, a languid current only beginning after 24 hours or later.

In the finer capillaries the vasomotor paralysis often lingered until as late as the third day before bloodcorpuscles re-entered them. There were, besides, territories which remained entirely devoid of circulation; there had been a free diapedesis, with an entire fading away of the capillary outlines.

My next step was to note the immediate effects of splinting or bandage over the site of fracture after replacement had been effected. It was impossible to employ any permanent retention apparatus, as it was immediately shaken off. I was, therefore, restricted to observation after immediate coaptation of the fragments. It was curious to note here that sufficient tension of the fine cording used to maintain the splints in position invariably produced a complete arrest of movement in all the vessels of the webbing.

Briefly to summarize, from these experiments it was clearly demonstrable and conclusive that the infliction of a trauma sufficient to disorganize a bone or seriously damage a joint (1) usually impeded temporarily or arrested the free flow of blood through the finer vessels; (2) the tendency was toward early re-establishment in most of the vascular areas, when no pressure adjustment was employed; (3) that many of the finer capillary ramifications may remain permanently obliterated; (4) a compression adjustment or immoderate tension on the injured limb tends to vascular stasis and other ulterior pathological changes in the blood itself and the vascular structures.

Animal experimentation of any description has but a relative application to the human body, more particularly when complex physiological and pathological questions are to be solved. Nevertheless, it has an inductive value not to be underestimated. In this instance the deductions from these experiments were quite in
harmony with, and are largely confirmed by, clinical observations. They emphasize the fact that in all fractures, especially the complicated, the coincident participation of the vascular structures with traumatic osseous disorganization is obvious, and impresses the necessity of always giving due regard to this fact in the treatment of broken limbs.

It would seem, however, that in some fractures the damage of the great blood-trunks alone is not sufficient to explain the grave nutritive changes in the limb which may follow, as delayed or non-union or wasting of the limb, the gangrene or mortification sometimes following with or without splinting, because it does not appear, according to the testimony of Stimson, that the ligation of the femoral artery materially interferes with union in a fracture of the lower extremity, and Dr. Merrill Ricketts, of Cincinnati, has recently shown that both the femoral artery and vein may be ligated without the least impairment in function and strength of the limb following. What role a lesion of the nerves plays in complicated fractures has not yet been determined, but there are sufficient reasons to infer that a crushed or overstrained nerve-trunk calls for caution not to compromise its vitality by anything which may induce a limitation of the fullest distension of its sheath by extravasated blood or the hyperplasia of acute inflammatory action.

Already, since the advent of modern aggressive surgery, operative intervention has been frequently and successfully invoked in a large number of fracture cases, in which the disability resulting and special symptoms present pointed to callus inclusion, from pressure, or even a complete division of the nerve-trunk.

The nerve-trunk possesses the most extraordinary resisting properties in traumatisms, being the last to perish after a grave injury; in fracture it may be seized and strangled in a callus or between two or more fragments, overstretched or be pierced by a spicula; yet the extraordinary rapidity and completeness of repair. Neural complications here open up a new and highly important field for osteoplastic surgery.

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EDITORIAL.

A NEW JERSEY NUMBER.

The present issue of GAILLARD's is devoted largely to the Medical Society of New Jersey, the oldest State medical organization in the country. With a membership of nearly 1,100 the society is a power among physicians. The report of the committee on the revision of the constitution and by-laws will be found on another page. The gentlemen comprising this committee have worked long and faithfully in compiling the material, and there is no doubt that the new constitution and by-laws will be adopted at the annual meeting at Asbury Park in June.

This number of GAILLARD's will be read by every member of the State society. In case anyone desires to comment on any feature of the report, or wishes to offer any suggestions which may be of benefit to the fellows of the society, he will find these columns open to him. The editor not only courts such discussions, but he extends a hearty invitation to New Jersey medical men to contribute articles of clinical or scientific interest to GAILLARD's.

A BLACKLIST.

According to newspaper reports, a local New Jersey medical society has established a blacklist and, in the future, persons whose names are on the list, will be refused medical attention by the members, unless the fees are forthcoming in advance. Only the names of people who possess the ability to pay are blacklisted. The New Jersey physicians are showing commendable sense in taking such action, and the best advice to all local societies would be "Go thou and do likewise."
EDITORIAL.

Unfortunately, every community is burdened by the presence of a goodly number of human leeches, who, believing the world owes them a living, fix themselves upon the sides of society and suck its vitality without measure and without price.

These persons are possessed of sufficient means to meet all indebtedness, but, true to their natures, fail to come to time. After they have sucked one town dry they migrate, as it is said to be cheaper to move than pay rent.

Physicians, more than any other class, suffer from the depredations of these pests. The average medical man, accustomed to doing much charitable work, takes care of the leeches with the worthy poor. He is thereby out his time, his medicines, and is often sorely tried in mind.

Most pests can be gotten rid of by the use of formaldehyde, petroleum or rough-on-rats, but this dead-beat pest is one which the laws of society and the land do not permit to be eradicated by such summary methods. For this reason, the physicians must band together and boycott the beats and continue the boycott as long as necessity requires. If this is done the doctor will have more time, more money and a less ruffled temper.

MEASUREMENT OF BRAIN FATIGUE.

Among the curious exhibits that the Prussian Ministry of Public Instruction will include in its educational display at the St. Louis Exposition is an aesthesiometer, an apparatus for measuring mental fatigue, which is widely employed by German physicians. The aesthesiometer measures the sensitiveness of the skin, and in this manner registers the amount of fatigue to which the brain has been subjected.

The instrument is applied to the forehead or cheek, and has wholly displaced the ergograph.

Dr. Schrader, professor at the Kaiser Wilhelm Gymnasium at Hanover, has perfected an instrument that is now being used on entire classes. It measures the time elapsing in the reaction of the sensorium after mental exertion. The principle upon which it is based is that mental work produces a deadening of the nerve centers. The apparatus registers photographically at intervals between seeing an electric flash and pressing a button in electric connection with the camera. The measurement of fatigue during class-room work generally shows that history makes but a slight call on the mental powers, while geometry and Latin are far more exhausting. During the study of Latin the nerve power is reduced one-quarter, and memory appears to suffer an enormous waste of energy.
MEDICAL HAPPENINGS IN NEW JERSEY.

Health Officer Agnew, of Paterson, says a contaminated milk supply caused a majority of the many cases of typhoid fever recently reported there. The officials of the Health Board found that in fully 80 per cent. of the cases the milk used came from one large dealer. Samples of this milk showed the presence of germs of typhoid. As the dealer gets his milk from different sources it was difficult to find where the tainted supply came from. It was finally discovered there were three cases of typhoid in the family of an out-of-town milk dealer who supplied a portion of the local dealer's milk.

Investigations conducted by the Health Department of Passaic have led to the discovery that many cases of diphtheria in the city have been caused by the common practice among school children of putting pencils into their mouths after other children have done the same thing. It is a custom throughout the public schools to distribute pencils at the beginning of the day and to collect them at night. As this is considered a direct means of contagion, the City Department has issued an order stating that each pupil must keep one pencil continuously. His or her name must be marked on it, and any other pupil found using it will be punished. Thus far nearly 100 cases of the disease have been reported in the city.

The oldest practicing physician in the United States is said to be Dr. O. R. Skinner, of Freehold, who is in his 93d year. He was a surgeon in the late Civil War. He is kept busy with his professional duties and answers promptly all calls.

Dr. James Moore, of New Haven, Conn., has been visiting Dr. Martin J. Synnott, of Fullerton avenue, Montclair.

Dr. M. W. Clouse, of Arlington, is the new court physician of the Independent Order of Foresters.

Dr. P. W. Barber has moved his office from 941 Broad street, Newark, to his residence, 110 Eliashemius avenue, Arlington.

Dr. M. Herbert Simmons has been chosen vice-president of the Orange Board of Education, and Dr. G. Herbert Richardson is a new member of the board from the Fourth Ward.

The New Jersey State Board of Health reports that 62 per cent. of the medical samples analyzed by the chemists of the board were below the accepted standard of purity. Examination of 126 food samples, other than milk, showed there were 77 below the standard. The milk samples made a better showing. Half of the olive oil samples from drug stores were impure, but the samples obtained from grocery stores were pure. The report shows, however, that the adulteration is not so great as it was in other years. This fact is due, doubtless, to the activity and vigilance of the Health Board, but still it can be seen that the adulteration of food and medicine still exists to an extraordinary extent.

Dr. George N. J. Summer, one of the younger physicians of Trenton, has been named as Pennsylvania Railroad surgeon there to succeed Dr. Thomas H. MacKenzie. Dr. Sommer was selected because of his exceptional skill in surgery.

In Jersey City, where work has been begun on the northern bore of the tunnel which will connect New York City with Jersey City, a hospital has been erected, so that workmen who may be overcome in the tunnel will receive prompt medical aid. The men work in airlocks, and a new shift of men is sent into the compressed air every four hours. They are working under a pressure of 48 pounds to the square inch, and to endure this must be sound in heart and lung. Applicants for employment are examined by a physician, and, if accepted, are paid $4 a day. After
working four hours in the tunnel the men are brought to the surface and given broiled sirloin steaks and liquid stimulants.

Dr. Levi W. Case, of Montclair, has been elected physician to Montclair Circle, Brotherhood of the Union.

John Carnrick, one of the founders of the firm of Reed & Carnrick, Jersey City, died in New York last month. His great ability placed his firm among the foremost of the pharmaceutical houses of the country.

The report of vital statistics for December, 1902, issued by the Hudson County Health Board, shows East Newark the banner municipality, not a single death being reported from that town during the month. The death rate of the county per 1,000 of population was 1.5. In Jersey City it was the same, in Harrison 1.1, and in Kearny 1.6.

The Board of Health of Millville has withdrawn the order making it compulsory for each school child to be vaccinated before it can attend the public schools, on account of the popular indignation against the ukase.

Burlington County physicians are busy. Delanco has the measles, Bridgeboro is wrestling with the mumps, scarlet fever prevails in Burlington, and Mt. Holly has its share of pneumonia.

The Board of Health of Atlantic City, acting under the name of the State Board of Health, has commenced suit in the Court of Chancery at Trenton to restrain the sewerage company of the resort from polluting the ocean in the vicinity of the bathing grounds and the boating wharves.

John D. Rockefeller spent several days in January at Atlantic City. According to the newspapers Dr. Philip Marvel was called in to examine Mr. Rockefeller's throat, and the latter offered the former $1,000,000 if he would provide him with a new, healthy stomach. His throat and stomach give the millionaire oil man great trouble, and he is compelled to live on the simplest sort of diet.

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The medical staff of the Home for Crippled Children has been reappointed: It includes: Consulting orthopedist, Dr. Reginald H. Sayre; consulting surgeons, Dr. Joseph Fewsmith, Dr. Joseph C. Young; attending surgeons, Dr. Sidney A. Twinch, Dr. Charles E. Teeter; attending surgeon for diseases of the eye and ear, Dr. Wells P. Eagleton; assistant surgeon, Dr. George O. Welshman.

Miss Wilson, a trained nurse of Denver, has been appointed sanitary inspector of the Oranges.

Dr. Leslie D. Ward has been re-elected first vice-president of the Prudential Insurance Company. Dr. Edward H. Hamill and Dr. Robert L. Burrage have been continued as medical directors and Dr. W. P. Watson as assistant medical director.

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During 1902 the Orange Memorial Hospital treated 802 patients. Of this number 636 were discharged, 120 died and 52 were in the hospital January 1, 1903. The high prices of food and fuel raised the
price of living from 28 to 32 cents a day. The endowment fund now amounts to $115,500.

Dr. Everett P. Wheeler, of Newark, has been elected a director in the City Trust Company.

Dr. James A. Exton, Dr. M. F. Squire and Dr. M. O. F. Dolphin have been chosen directors of the West Hudson County Trust Company, in Harrison.

An epidemic of a strange disease has been prevailing in Camden. The person attacked first suffers from sore throat, violent headache and sickness in the stomach. The patient finds great difficulty in breathing while in a reclining position. There have been over two hundred cases in the city. It is of a few days’ duration, and no fatalities have resulted. Physicians are mystified as to its character.

A New York daily is responsible for the following: The Practitioners’ Society of the Oranges, composed of physicians and surgeons, has prepared a “black list” of people who do not pay their bills for medical service. The names of the worthy poor who cannot pay are not on the list, which is made up of well-to-do people who, the doctors say, can, but will not pay. The society has also decided to urge the fact that the proposed isolation hospital which is projected for the Oranges, and which it is proposed to build on the Orange Mountain, in West Orange, is not a menace to the health of the community. The society approves the establishment of the hospital, but has gone on record as being opposed to the site selected because of its inaccessibility, and favors placing it in a more central position.

To remove danger of infection, the Paterson Board of Health has decided to license all milk dealers in the city, fixing a uniform rate of $2 each per annum and making the penalty for selling without a license $50.

The Millville City Counsel, in conjunction with the Board of Health, has contracted with Dr. John R. C. Thompson, of Bridgeton, to care for a smallpox case for $800, and to look after other cases that develop in Millville during the next three months without extra compensation.

Dr. C. C. Hendricks has been dismissed by the Hudson County Board of Health from the position of County Health Inspector, which he has held for the last six years. Dr. John Connell, of Jersey City, has been appointed to fill the vacancy.

Dr. T. Halsted Myers, the orthopedic surgeon at St. Luke’s Hospital, New York, went to Morristown January 13, and in the presence of fifteen other physicians and surgeons at All Souls’ Hospital, performed the Lorenz operation for congenital dislocation of the hip. The patient was Lena Fageni, six years old, who has never walked. Dr. Myers was assisted by Drs. James B. Griswold and Henry A. Henriques.

The New Jersey Conference of Charities and Corrections will hold its second annual meeting in Trenton, February 19 and 20.

Dr. W. H. Risk, of Summit, has been re-elected to the Board of Directors of the Summit Bank.

Professor W. Gilman Thompson, of New York, gave an address on “Auto-Intoxication” before the members of William Pierson Medical Library Association, Orange, January 12.

Dr. William L. Martin, the only physician in Rancocas, died January 24, of pneumonia. He has been in practice for fifty years.

Senator Bacheller, of Newark, has introduced a bill into the Legislature providing for a general isolation hospital for the use of all the municipalities in Essex County.
Dr. Robert Stewart, of Jersey City, has been appointed resident physician at Snake Hill.

Dr. Herman T. Richard, a lung specialist, died January 31 at his residence in East Orange. He was born in Germany sixty-nine years ago, and came to the United States in 1867. During most of his residence here he practiced in Newark.

Paterson is justly proud of a handsome medal awarded to the Board of Health of this city by the directors of the Paris Exposition for having the best equipped isolation hospital in the world. The Board received the medal a few days ago. It is of solid bronze and very handsome in design. The hospital was designed by Franklin Van Winkle, a well-known civil engineer of the city, who has made a study of institutions of that kind. The buildings cost $26,500. News of the erection of this model hospital reached the directors of the Paris Exposition and they sent a request to the Paterson Board of Health for detailed plans and illustrations, the letter stating that there would be a competition among many cities having isolation hospitals. Members of the Board knew they had an excellent institution, but hardly dared hope they could cope with more populous and wealthy cities. Great was their surprise and gratification when they received word that the first prize had been awarded to Paterson.

Dr. Herman A. Newbold, of Morristown, has been made assistant visiting physician to the Memorial Hospital.

Dr. B. Van D. Hedges has been appointed a member of the Board of Health in Plainfield, and Dr. Charles B. Lufborrow has been made city physician.

The Practitioners’ Club, of Jersey City, met with Dr. O. R. Blanchard, at 37 Clinton avenue, February 10. Dr. Wallace Pyle was the essayist.

An isolation hospital will shortly be erected by the authorities of Somerville, at a cost of $1,000. There has been much small-pox in New Brunswick and South Bound Brook, and Somerville people are bound to prevent the spread of the disease in their town.

In a population of 2,000 Clayton has five doctors.

The marriage is announced of Dr. Alfred Lawrence, of Elizabeth, and Miss Adelia Matthews, of Hawkinsville, Ga. They will reside at 214 High st.

Dr. H. A. Towle has been appointed physician to the Newark Police Mutual Aid Association at an annual salary of $300.

The past twelve months shows a large increase over last year in the number of patients admitted and treated in the Monmouth Memorial Hospital, at Long Branch. The total number treated was 987. The staff at the hospital for the three months beginning January 1 is: Dr. D. M. Forman, of Freehold, and Dr. S. J. Woolley, of Long Branch. Dr. Forman will look after the surgical department, while Dr. Woolley will be the medical man.

Dr. John D. Jones, a summer resident of Morristown, died January 4 in Georgia. He leaves a wife and two children. He was one of the officials of the Agricultural Department in Washington. In his official capacity he spent several years in Europe in the interest of Forestry. In 1899 he went to Japan at the request of that government to instruct them in the matter of raising tobacco and several other products new to Japan.

Dr. William G. Gardiner, of Atlantic City, has removed to 1030 Pacific avenue.

An underground tunnel has been constructed to connect the hospital buildings of Cooper Hospital, at Camden, with the new nurses’ building. This passageway will be used by the nurses in cold and stormy weather.
Dr. W. E. Cladock is the new president of the Rahway Water Board.

The managers of the State Epileptic Village report that there is one epileptic in New Jersey for every 500 of population. There are now 85 patients under treatment in the village. Since 1898 9 patients have been discharged cured.

The new officers of the Camden District Medical Society are: President, J. T. Leavitt; Vice-President, Dowling Benjamin; Treasurer, William H. Pratt; Secretary, Vernon de Groß; Librarian, Joseph H. Wills; Historian, Daniel H. Strock; Standing Committee, William H. Izard, Daniel H. Strock and Alexander McAllister.

On January 7 there were in the county hospitals for the insane, 723 patients, 363 males and 360 females. At the Branch hospital in Overbrook there are 344 patients. Of these 136 are males.

Dr. W. D. Robinson has been chosen surgeon of Uzal Dodd Post, No. 12, G. A. R., of East Orange.

At the annual meeting of the Board of Trustees and Managers of Cooper Hospital, Camden, the following were re-elected as members of the medical and surgical staffs:

Medical—Dr. H. Genet Taylor, Dr. E. L. B. Godfrey, Dr. W. R. Powell.

Surgical—Dr. Daniel Strock, Dr. J. L. Nicholson, Dr. Paul M. Me ray, Dr. E. A. Y. Schellinger.

Gynecological—Dr. J. S. Baer.

Ophthalmologist—Dr. William R. Powell.

Laryngologist—Dr. E. S. Ramsdell.

Pathologist—Dr. W. S. Bray.

Obstetrician—Dr. Dowling W. Benjamin.

Resident Physicians—Dr. G. D. Grimes and Dr. C. D. Moulton.

Dr. J. A. Stiles, of Millburn, is the new treasurer of Court Minnesink, I. O. F.

Dr. Charles E. Teeter has been appointed pathologist to the Newark City Hospital. There is no salary attached to the position. His duties will be to examine the blood, tissues and viscera of patients whose manner of death is of sufficient interest to call for an autopsy. He will have a special laboratory.

The Newark death rate for last month was 17.83 per 1,000.

The Eleventh Ward Building and Loan Association, of Roseville, Newark, has been incorporated. Dr. Daniel M. Dill and Dr. Laban W. Dennis are among the incorporators.

Miss Ethel Stewart, of Millville, and Arnott Waddington, of Bridgeton, have been indicted on the charge of attempting to blackmail former Coroner Clayton McPherson.

Mrs. Linus Ackerman, of East Passaic avenue, Bloomfield, has been ill with whooping cough. She is 97 years old and the oldest resident of the town.

Dr. Walter Dodge, of Orange, has been elected physician of Court Frank, No. 17, Foresters of America.

Dr. Thomas N. Gray has been reappointed city physician of East Orange for two years.

The small-pox epidemic in Hudson County, which commenced in the summer of 1900, is now thought to be over. Over 1,500 cases have been treated at the Snake Hill Hospital, with a death rate of less than 10 per cent.

On January 19 Dr. F. H. Rice, of Passaic, successfully performed an operation for congenital club foot by the Lorenz method at the Passaic General Hospital, on Joseph Yerenski, eleven months old.

Trachoma and conjunctivitis have been very prevalent in Newark the past month.
At the annual meeting of the Cooper Hospital staff of Camden Dr. H. Genet Taylor was elected president and secretary. He appointed the following as examiners of the resident physicians and nurses: Physicians—Dr. W. A. Davis, Dr. W. F. Powell and Dr. E. A. Y. Schelling. Nurses—Dr. J. L. Nicholson and Dr. E. L. B. Godfrey.

Drs. Edwin De Baum and Charles A. Church have resigned from the staff of the Passaic General Hospital. They are members of the staff of St. Mary’s Hospital, and have found it impossible to devote the necessary time to both institutions.

Mrs. W. D. Harper, of Long Branch, has awakened an interest in the Monmouth Memorial Hospital among the society people in Lakewood. She expects to establish an auxiliary association of the hospital in Lakewood. Lakewood has no hospital, and most of the charity cases that occur here are sent to the Long Branch Hospital. Through the auxiliary association an effort will be made to have Lakewood contribute its share toward the maintenance of the hospital.

An important innovation in the education of nurses who attend the Training School for Nurses, connected with the Orange Memorial Hospital, will be introduced the present year. Heretofore, when the graduates completed their course they were assigned to positions in the hospital. Under the new order of things a preparatory course will be arranged, and prospective nurses, before entering upon active duties, will have about four months of practical training under the direction of a competent supervisor.

Dr. Edwin Leonard, Jr., of Jersey City, has been elected president of Reed & Carnrick, in place of John Carnrick, deceased. Dr. Leonard, who has been the firm’s pathologist for the past two years, is an alumnus of Amherst College and Harvard Medical School. He served as assistant physician at Boston City Hospital and McLean Hospital, Waverly, Mass., and while in practice in Melfos, Mass., was for two years pathologist to Melfos Hospital. Dr. Leonard is a member of many medical societies and possesses the scientific attainments so necessary in the conduct of a house like Reed & Carnrick.

Dr. Christopher Griested died of gastritis January 23, at his home in Jersey City. He was for a number of years a police surgeon in New York. He was born in 1822 and was a descendant of Hans Griested, the first surgeon at New Amsterdam, who died in 1666. He had been a physician for fifty years, and for the past three centuries there has always been a physician in the family. Dr. Griested is survived by a widow and five children.

On January 23 fire destroyed the River Lawn Sanitarium, an institution conducted on Keely cure lines and owned by Dr. D. T. Millspaugh. The thirty inmates escaped. The weather was bitterly cold and the sanitarium was in an exposed place near the river. The building was a three-story brick and frame structure. By the time the fire apparatus reached it the whole structure was ablaze. The origin of the fire is not known, but owing to the extreme cold resort was had to oil stoves to aid in heating the building, and it is believed one of these was upset. The loss is thought to be about $25,000.

Dr. Henry A. Mandeville, of South Orange, died January 31, after a long illness. For many years he was well-known in the township of South Orange, and was president of the board of trustees. He was born at Newburgh, N. Y., December 16, 1858. At 17 he graduated from New York University, and then obtained his medical education at the New York College of Physicians and Surgeons. Dr. Mandeville went to South Orange in 1887, where he married Miss Jennie Morgan. He was a member of many medical and lay societies and clubs. A widow and three children survive him.

Dr. James M. Ridge, of Camden, died January 31, aged 75.
EASTERN MONMOUTH PRACTITIONERS.


Dr. Kurtz read a paper about high temperatures in diseases. Dr. Brown showed a number of experiments with his X-ray apparatus, which were decidedly novel. A live subject in the person of a Long Branch boy was subjected to the X-rays in order to locate, if possible, a bullet in his head. The boy accidentally shot himself in the side of the head about a year ago and the bullet was never extracted. The wound was probed at the time of the accident, but no trace of the bullet could be found.

Dr. Brown put the X-rays on the boy's head, but they failed to locate the bullet. Some shadowy substance was seen, however, which might have been the leaden ball. The boy suffers no bad effects from the injury and is unusually bright.

ORANGE MOUNTAIN MEDICAL SOCIETY.

The annual meeting of the Orange Mountain Medical Society was held in the rooms of the William Pierson Library Association, in the Stickler Memorial Library Building, Orange, N. J., January 9. Officers were elected as follows:

President, Dr. Herman P. Gerbert; Vice-President, Dr. Thomas S. P. Fitch; Secretary, Dr. Richard D. Freeman; Treasurer, Dr. J. Minor Maghee; Reporter, Dr. Henry A. Pulford. The Executive Committee, it was decided, shall consist of the president, vice-president, secretary, Dr. R. C. Newton and Dr. W. J. Chandler. A board of censors was also elected, consisting of Dr. F. J. E. Tetreault, chairman; Dr. E. M. Ward and Dr. L. W. Halsey. Dr. A. W. Bingham, of East Orange, was elected to membership.

Dr. William B. Graves, of East Orange, was the host, and Dr. F. J. E. Tetreault, the retiring president, read an interesting paper on "Foods; Their Uses in Diseases." He said that the three important things to be considered in foods were their ease in digestion and resulting percentage of assimilation; their value as tissue-builders and their proportion of residue.

Mrs. Mary Young, of Cross Keys, who recently died, left her family physician, Dr. Halsey, of Williamstown, $1,000 for his faithful attendance during an illness of fifteen years.

A highwayman attempted to hold up Dr. R. R. Rogers, Jr., of Trenton, as he was returning from Bordentown, on the night of February 1. Dr. Rogers knocked the revolver from the robber's hand and gave him a severe thrashing.

Dr. C. E. de M. Sajous, of Philadelphia, has completed the first volume of a work which gives the results of his scientific investigation of the functions of the ductless glands. It would seem that future study along these lines might lead to a new era in practical medicine. Dr. Sajous' inquiry seems to have shown that the adrenal system is the source of the secretion which, with the oxygen of the air, forms the oxidizing substance of the blood-plasma. It has also revealed the origin and mode of distribution of the bodies with which this oxygen directly or indirectly combines: i.e., peptones, myosinogen, fibrinogen, hemoglobin and myelitin, to insure the continuation of life and the efficiency of all organic functions. Finally, it has suggested that in addition to these agencies, all leucocytes and, under certain circumstances, the plasma, contain a protective agency, trypsin, which, with Metchnikoff's phagocytic cells, serves to destroy micro-organisms and convert their toxins and other albuminoid poisons into harmless products. Considered jointly, these various factors seem to us to represent the aggregate of vital phenomena. A review of the book will occur in an early issue of GAILLARD'S.
Three Cases of Congenital Single (Unsymmetrical) Kidney, with Remarks

[By Ramon Guiteras, M.D., of New York City.]

Eight years spent in teaching anatomy and operative surgery at the Post-Graduate Medical School, during which time large numbers of cadavers were used, in which both kidneys were dissected or operated upon, failed to reveal a single instance in which a single kidney was present in any one body, and this, together with the same experience in numerous autopsies, led me to believe that such a condition almost never existed.

The rarity of single (unsymmetrical) kidney was very much impressed upon me by reading the statistics of that world-renowned urologist, Henry Alorris, and others. Malgaigne and Rayer were the first to publish the results of their researches. Rayer collected 46 cases from the review of over a century's reports; but investigations of this number did not include a single (unsymmetrical) kidney alone, but also the horseshoe, diffused and double kidneys, besides the cases in which a single, well-developed or hypertrophied kidney existed, accompanied with atrophy of the organ on the other side.

The statistics from the London hospitals showed the following frequency of single kidney:

In Guy's Hospital, in 4,632 autopsies, covering a period of ten years, but one case of single kidney was found.

In St. Bartholomew's Hospital, in 3,800 autopsies, covering the same period of time, not one such case was found.

In the Middlesex Hospital, in 6,536 autopsies in 24 years, but two cases were found. In the Hospital for Sick Children, in 936 autopsies, during ten years, one case was found.

In a table of 15,904 autopsies, in four cases there was absence of one kidney, and two other cases of extreme atrophy of one organ; that is, an absence of one kidney in almost 4,000 cases.

Dr. Weir, in the New York Medical Journal of December 27, 1884, states that single kidney occurs once in 5,000 cases.

Dr. Peterson stated that in 1,500 autopsies only one such case was found.

Sargali found 3 cases in 5,308 autopsies.
Menzier found 3 cases in 1,790 autopsies.

Finally, in making an average from the mass of statistics, Morris concludes that single kidney occurs once in 2,400 bodies. It will thus be seen that the probabilities of a patient having but one kidney are very small, and that not only no one surgeon, but probably all the surgeons in a community would not encounter a single kidney in a decade of operative work.

The surgeon must, however, be on his guard in cases of abnormal-looking or displaced organs, for if not single (unsymmetrical), they may be diffused, horseshoe-shaped or double.

If an atrophic second kidney (the organ on the other side) is present, it practically places the individual in the same position as if he had but one organ.

Congenital small kidneys are often healthy in structure, but it is doubtful at present how long life could be sustained with only one kidney remaining, and that one containing but an ounce or so of renal tissue. We are told that we have twice as much kidney parenchyma as is necessary to carry on its eliminating function, which is proven by the ability of a person to live with but one kidney, but it is difficult to determine if a small atrophied kidney is capable of doing the required amount of work after the diseased organ on the other side has been removed.

In the congenital atrophic kidney the ureter may be but a fibrous cord, and sometimes small and misshapen.

The Appearance of a Single Kidney.

Single kidney is usually found on the right side, and more frequently in men. It is usually larger than normal, although natural in shape, but it is sometimes lobular, rounded or otherwise abnormal in outline. The blood supply may be increased and, if the organ is displaced, as it sometimes is, may come from the iliac or middle sacral arteries. The ureter is usually absent on the side where the kidney is wanting, or else rudimentary near the bladder. Examination of a kidney can, therefore, remind one of the possibility of its being single, if it is found to be displaced, larger than normal or misshapen when palpating or inspecting it.

The cases here reported are most unusual, as they were encountered in a small hospital-service in less than ten months, and in 15 autopsies, that is to say, one in five cases; while in 10 years, in Guy's Hospital, in 4,632 autopsies, only one case was found, and in St. Bartholomew's Hospital, in the same time, in 3,800 autopsies, not one case was found. The average of the statistics above quoted was one in 2,400 autopsies, while in this small hospital, during the period mentioned, the average was five hundred times as great. An abstract from the histories of the cases is as follows:

CASE 1.—Laborer; 21 years of age; single; entered the hospital October 29, 1901; complained of chills and fever, accompanied with frequent vomiting and pain in the left lumbar region, from which he had been suffering for three days. He was referred to the medical ward. Examination on entering showed the heart slightly hypertrophied; lungs negative; spleen enlarged; temperature 105°; pulse 115. Urine, high-colored, s. g. 1026; contained al-
bumin, blood, hyaline, granular and mixed casts; renal epithelia; the urea was diminished. The patient was put on treatment of quinine, 30 grains daily. November 11, I was asked to see the patient. The tumor in the left loin seemed to me to be an enlarged kidney that extended well down in the ileocostal space and was easily palpated and tender to the touch. He said he had noticed the enlargement for about three weeks. I diagnosticated the case as one of probable tubercular kidney, although no tubercle bacilli had been found in the urine, and two days later made an exploratory lumbar incision. The organ was found to be very much enlarged, inflamed and riddled with what appeared to be small tubercular abscesses. I did not think it possible that it was his only kidney, although it was enlarged and lobulated, for it was so completely riddled with tubercles that it did not seem possible that he could be relying on an organ so involved by disease for the elimination of his urine. I consequently removed it. On the day following the operation he had passed 10 oz. of urine. After this not a drop was passed either spontaneously or by catheterization. Every means of promoting urine excretion was resorted to, such as diuretics, hot packs, hot rectal douches, etc., but to no avail. The patient's temperature had fallen to 98° after the operation and remained there until he died. His pulse ranged from 100 to 120. He lay quietly in his bed; his mind was clear most of the time, and he was able to answer questions up to the day before his death. He gradually became weaker and died on the eighth day after operation. There were no uremic convulsions during this time. The autopsy revealed the absence of both kidneys, the left one having been removed. In the place of the right kidney there was an extension of the right lobe of the liver down to the renal fossa on that side, resembling a tongue about 3½ inches in length, 3 inches in width at its upper part, gradually ending in a wedge-like form, slightly twisted on itself. No other abnormality was noticed. The kidney was 5 inches long, 3 inches wide and 2½ inches thick, and resembled
a large ripe tomato, only of a deeper red color. It was lobulated, there being four quite distinct lobules. The depressions between did not extend through the organ, but resembled deep fissures. The organ was mahogany red and studded with small tubercular abscesses under the capsule properia, varying in size from a pin point to a split pea. The upper pole was larger and more involved. The kidney had much fat attached to its capsule properia; there was but one pelvis and ureter present.

Microscopical Examination.—The kidney showed intense inflammation and numerous puscells. Degeneration of the epithelia of the tubules; little new connective tissue; peri-arterial extravasation of leukocytes. Epithelia of the glomeruli thickened, tubules filled with casts.

CASE 2.—Five months later there died in the hospital, in the service of my colleague, Dr. Lewis, another patient with a single kidney, an abstract of whose history I publish with his permission. Fireman: 30 years of age; entered hospital April 24, 1902. He had been sick for five days. His sickness began with chills and fever and continued daily up to the time of his entrance. He complained principally of chills, fever, cough and pain in the left side of his chest, weakness, headache and nosebleed. His temperature was 101° pulse 88. Physical examination showed the heart to be normal, dulness over the lower left side of the chest: sonorous and subcrepitant rales over the remaining portion. A needle introduced into the left pleura drew off serum and pus. His urine had a specific gravity of 1022 and contained epithelial, hyaline, granular and blood casts; albumin slight; urine high-colored, few red blood corpuscles. His condition grew constantly worse after the operation, and he died two weeks later of dyspnea. The autopsy showed empyema and bronchitis on the left side. It also disclosed the presence of a single kidney situated on the left side; the right kidney and ureter were absent. No other abnormality connected with the
organ was discovered. The left kidney was in normal position, 7½ inches long, 4 inches wide, 2½ inches thick; it was not distinctly lobulated, but there were depressions upon it giving rise to irregularities on the external surface. The lower lobe was wider than the upper. Neither kidney nor ureter was found on the other side.

Microscopical examination made by Dr. Noyes showed degeneration of the epithelia in the tubes, and casts. Little new connective tissue, few red bloodcorpuscles; glomeruli showed some cheesy exudation in capsule peripherly, connective tissue.

Diagnosis.—Acute parenchymatous nephritis.

CASE 3.—Laborer: 25 years of age: entered hospital August 21, in the service of Dr. Keller, to whom I am indebted for permission to publish an abstract from the hospital history. Patient on entering was in very weak condition. Said he had been suffering for three weeks from chills and fever, and pain in the abdomen, more marked in the hypochondriac region, and diarrhea. Examination showed temperature 102°, pulse 110 and dicrotic; few subcrepitant rales present on pulmonary examination. Specific gravity 1026. The urine was high colored, clear, contained a small amount of albumin, hyaline, granular casts. Patient was evidently in the third week of typhoid and was treated accordingly. He failed rapidly, however, and died two days later. Autopsy confirmed the diagnosis of typhoid fever made on entering, and it was found that but one kidney was present, situated on the right side, somewhat lobulated, with single pelvis and ureter; on the left side neither kidney, ureter nor suprarenal capsule was found. The kidney was 4 inches long, 2½ inches wide and 2 inches thick. Five or six irregular elevations could be seen on its surface.

The microscopical report of Dr. Noyes showed changes of chronic interstitial nephritis with the production of a moderate amount of new connective
tissue: degeneration of tubules in the cortex with exudates, glomeruli filled with leukocytes, proliferation of epithelia. The tubules in the medullary portion were more normal.

The lesson taught by the observation of these kidneys is that we can never tell by the shape, size or appearance of a kidney whether it is single or not.

That we should never operate to remove a kidney without first catheterizing the ureters, to determine from the urine thus obtained the presence and the working power of the other supposed healthy organ, or else performing an exploratory laparotomy to note its size, outline, etc.

That every man who does kidney surgery should be able to catheterize the ureters and, if he cannot, he should either call some one in to do it for him or make the exploratory incision. If an exploratory incision is made, while more can be learned from the double and comparative palpation obtained by an abdominal incision, it is more dangerous and, consequently, an exploratory lumbar incision should be made over the supposed healthy kidney. If this organ, on exploration, is found to be present and looks healthy, the incision should be closed and sealed and the other side (the supposed healthy one) should be cut down upon. The operation on the unhealthy kidney should be performed that is indicated by its former history and examination, together with the condition found at the time of operation. If the supposed unhealthy kidney shows nothing abnormal and appears to be healthy, an exploratory nephrotyomay be performed upon it or it may be left alone.

An exploratory nephrotyomay disclose calculi or small abscesses that do not show and cannot be palpated from the exterior, and, even if nothing is found, although the symptoms have pointed to calculus or some other abnormal condition, the incision will probably have benefited the patient, for it freely relieves neuralgic pain in, and hemorrhage from, the kidney, which are symptoms of renal disease.

In closing, I will say that I have frequently not been able to catheterize or even to see one or both of the ureters. On one occasion, in consultation with two of New York’s well-known genito-urinary surgeons, not one of us was able to see the ureter on the supposed healthy side, and yet, from the disorganized appearance of the diseased kidney at the operation, when I exposed it, I did not hesitate to operate, as I felt certain that the patient could not live without having a fairly healthy kidney on the other side, and it may be said that, in nearly every case in which the kidney is much diseased and yet the patient passes sufficient urine to keep in fair health, the other kidney will probably be comparatively healthy.

In but one case have I made an incision to explore the kidneys before operation; in this instance the patient had evidence of renal suppuration, but I could not palpate the kidney on either side through the abdominal wall. Neither could I see to catheterize the ureters on cystoscopy, as the patient had a so-called hemorrhagic cystitis. I explored in this particular case through the median
laparotomy incision and, having confirmed my probable diagnosis, I followed this by a lumbar incision and the removal of the diseased kidney by this route.

I would also like to add that, although I regret having removed a single kidney by operation, yet I feel that any other surgeon seeing this organ would have done the same, and I am convinced that the patient could have lived but little longer on account of the rapid extension of the tubercular process.

It may be thought unusual for a surgeon to report such a case, but I feel that free confessions and free expressions of opinion are two of the most valuable means of contributing to the general knowledge of the subject, whereas the reports of only successful cases and the failure to disclose one's mishaps and mistakes tend to deceive the medical public who rely upon us for their information and judgment.

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ACUTE APPENDICITIS AND ITS TREATMENT.

By JOHN B. DEAVER, M.D., of Philadelphia, Surgeon-in-Chief, German Hospital.

(Concluded.)

Troublesome bleeding can occur from the appendicular artery or from the bed of adhesions and must be controlled. In the former instances this can usually be done without difficulty if the tissues are not too friable to hold the ligature, but when oozing persists from the adhesions after light pressure has been applied, drainage should be employed. Here again the experienced surgeon may be able to control the bleeding by properly placed sutures, but not so with the occasional operator. When the bleeding is extensive I usually employ a "cofferdam" method in placing the sterile gauze drainage. Gauze pads are placed above, below, to the insides and against the sweep of the iliac bone. One or more gauze pieces are twisted into a wick and introduced between the gauze pads and down to the seat of hemorrhage. The angles of the wound are sutured with silkworm through-and-through sutures and the dressings applied. If but a single strip of gauze is used for drainage, I introduce the through-and-through wormgut sutures, close the peritoneum and rectus sheath up to the gauze with catgut and then tie the wormgut sutures; a few silk sutures are often needed to approximate the skin edges between the wormgut sutures.

In a paper, the length of which must be limited, it would not be possible to enter into all of the numerous details of the treatment of appendicitis with abscess. Furthermore, no two cases are alike, and the conditions found in each one must be met as they arise, by the judgment, skill and experience of the operator.

If the physical examination reveals a mass in the right iliac fossa, distinct and diagnosed an abscess, the condition of the patient becomes a factor in deciding the method of treatment. Occasionally a complete operation could not well be borne, and an incision may be made over the most prominent part of the swelling if it be qu"
evident that there is a collection immediately underneath or at the outer edge of the abscess and an effort made to reflect the peritoneum until below the upper limit of the abscess, when it can be opened, evacuated and drained with gauze. Such an operation does not remove the source of infection nor take into account the existence of the secondary collections, but in certain desperate cases may relieve the patient of a load of septic material and allow a subsequent complete operation.

At other times the abscess is much deeper and could not be reached by a simple incision. I make my incision in these cases near the outer border of the rectus muscle and quite long, three to six inches. After opening the abdomen the belly wall is raised by retractors, and the general cavity is thoroughly walled off by several layers of gauze, in the shape of thin gauze pads, paying especial attention to the pelvis, the space between the colon and lateral wall and the colon and anterior abdominal wall above. If this procedure is carefully performed, not a single knuckle of gut should show except the cecum or whatever forms the wall of the abscess. Iodoform gauze is placed below over the white gauze and the cecum slowly drawn upon upward until pus begins to flow; or it may be necessary to break into the abscess along its outer wall, the pus is taken up by small gauze pads as rapidly as it escapes until the cecum is fully drawn upward, exposing the diseased appendix, which is ligated and excised. The right iliac fossa is wiped clean and dry, though the patches of exudate on the wall of the fossa (the "green groin") are usually too firmly adherent to be removed.

Gauze packing is then placed so as to fill the space formerly occupied by the pus, and the gauze which has been disposed below is slowly removed and the pelvis examined for a secondary collection. This may be ascertained by introducing a glass drainage tube to the bottom of the cul-de-sac. If clear, no gauze is placed in the pelvis. The remaining gauze, except, of course, that about the seat of disease, is removed and at any points where small pockets of pus or areas of exudate are found a gauze strip is retained, any infiltrated omentum is ligated and excised. After counting all gauze pads and small pieces of gauze, the wound may be partially closed with wormgut sutures, above and below and the dressings applied, but personally I leave the wound, with few exceptions, absolutely open.

The operator should remember that disease of the uterine adnexæ, especially on the right side, may be due to appendiceal disease. Bearing this fact in mind, the tube and ovary should always be examined when a pelvic abscess exists, or even when the appendix, acutely inflamed, lies upon or below the ileopectineal line.

* Pus in the pelvis due to appendiceal disease is the result of leakage from the abscess in the right iliac fossa or due to a low position of the appendix with abscess formation. In either instance it must be evacuated and some form of drainage instituted to insure recovery. I am not in favor of vaginal puncture, unless no other
method of treatment is available. It is true that the condition of some patients is so desperate as to preclude the complete operation. I have a patient in my wards at the German Hospital at the present time on whom I have twice opened an abscess in the pelvis per vaginam. She is markedly septic and I know that further collections remain, and if she shows any sign of improvement I will open the abdomen and clean up the pelvis.

The method of performing this operation consists in drawing the cervix well forward or backward and incising the vaginal vault either anteriorly or posteriorly freely, opening the peritoneum and evacuating the pus; irrigation should not be practised, and the cavity simply drained with gauze. The use of the finger to evacuate the pus is very liable to spread the infection from the pelvis upward by opening up avenues by way of which infection can travel upward. The operation is extremely dangerous, as the bowel is frequently involved in the abscess and may be cut while opening the peritoneum. Furthermore, as in this case cited, it may fail to empty more than a small amount of the pus.

In nearly all cases, therefore, the abdomen should be opened. My usual practice, after opening the abdomen and discovering the extent of the disease, is to wall off the intestines thoroughly, as has been described, clean up the right iliac fossa, removing the appendix and pack the fossa with gauze. The pelvis is then treated in the same way and well drained with gauze; occasionally I use a glass tube when the amount of pus is large. The gauze in the right iliac fossa is removed piece by piece and replaced by permanent gauze drainage. All the walling off gauze is then removed and the wound partly closed (which, as before stated, I rarely do) with silk-worm through-and-through sutures. Unless the pelvic cavity is perfectly walled off by exudate I do not irrigate. No amount of gauze will prevent virulent micro-organisms from invading the general cavity when the pus is diluted by irrigating fluid.

After such operations the patient should be returned to a bed with the head of the bed well elevated and in some instances the patient placed in the semi-erect position recommended by Fowler. This position assists the drainage into the pelvis.

The practice of elevating the foot in place of the head of the bed, with the object of diffusing the peritoneal fluids, thus enabling the peritoneum not involved to exercise its absorptive power, I strongly condemn. The experienced abdominal surgeon gives the peritoneum as little work to do as he possibly can and does not take chances upon disseminating sepsis.

Cases have been reported in the literature in which operation has failed to reveal the presence of the appendix; I have not been so fortunate as to discover this anomaly, except as a result of the total necrosis of the appendix which has ulcerated off from the cecum. In some cases, however, the appendix has been situated in positions difficult to locate, hidden away in either the ileocecal or subcecal fossa or in a mass of exudate.

An appendix lying to the median line side of the cecum with
abscess formation is very difficult to deal with. The inability to
effect a complete walling off with gauze makes the risk of general
peritonitis much greater than with the abscess in the right iliac
fossa or pelvis. Last year I operated upon such a patient and upon
opening the abdomen found the omentum spread flat beneath the
incision and with light fibrinoplastic adhesions between it and the
peritoneum. The right iliac fossa was clear. The omentum was
broken through, and a pus collection found between the coils of
bowel just to the right of the median line, was evacuated by spon-
ging, and gauze drainage placed in position. No attempt was made
to locate the appendix, owing to the danger of infecting the general
peritoneal cavity. Death occurred a few days after operation, and
the autopsy revealed an extensive purulent peritonitis with the
appendix pointing to the left, necrotic and gangrenous.

The mere evacuation of an abscess can never be depended upon
even temporarily to relieve the disease. The appendix remaining
as a source of infection will often continue to cause the formation
of pus after the operation, and direct drainage from the necrosing
appendix cannot be performed with certainty. Secondary collec-
tions will form and may result fatally to the patient. I am positive
that there is a mortality following the simple evacuation of an ap-
pendiceal abscess.

In the presence of general peritonitis the surgeon is confronted
with the almost certain knowledge that despite all his efforts the
result will be fatal to the patient.

In the fulminating cases with the abdomen filled with seropus
general irrigation may be practised and the patient may recover,
but, as a rule, an infection so severe as to invade the entire perito-
neum without hindrance from adhesions will result fatally from
rapid toxemia.

In other cases of general peritonitis in which the bowel presents a
"scalded" appearance, deeply injected and lustreless, I sometimes
perform general irrigation and hope that the peritoneum will take
care of the septic products remaining, but such cases seldom re-
cover.

It should be noted that in children profound shock will usually
follow the general irrigation of the peritoneal cavity.

Washing out the abdomen with diluted hydrogen peroxide fol-
lowed by sterile water and closing without drainage is abominable
surgery, and I cannot understand how any surgeon could sanction
such a proceeding.

With an abscess in the right iliac fossa and symptoms of general
peritonitis, I evacuate the pus, pack the cavity with gauze and
carry strips of gauze to different parts of the abdomen to favor
drainage and aid in the formation of adhesions. In all cases in which
the amount of exudate is large and subsequent sloughing expected,
itoin drainage can be advantageously employed, using gauze or a
large rubber tube.

The care which patients, suffering from appendicitis with abscess,
receive after operation is of great importance. During the early
hours attention is mostly directed toward the relief of shock, but one point deserves emphasis. When the wound is not closed, the patient may force the gauze or even the bowel out during the straining attendant upon vomiting. For this reason, in such cases, I keep a nurse at the bedside constantly, with instructions to lay the hand firmly upon the wound during vomiting.

The surface dressing should be frequently changed during the first 24 hours to favor free drainage. When the cofferdam is used for oozing, the dressing should be frequently inspected to determine whether such bleeding has ceased. If, after several changes, the dressings are still saturated with a bloody fluid, one or more pieces of gauze may be pushed down the center, alongside the one introduced at operation. When glass drainage is used, the tube is removed in one to four days, depending upon the discharge. The use of glass drainage has been condemned by some surgeons, but it serves a useful avenue to ascertain the nature of the fluid draining into the pelvis. Before removal of the glass tube a long rubber tube with openings cut in the sides is introduced to the bottom of the pelvis through the glass tube and the latter withdrawn over it, rotating during removal to loosen any adherent bowel or omentum. The rubber tube is cut flush with the wound and held in place by a safety pin. Gauze is removed in six to twelve days, depending upon the force necessary to loosen it. The pain experienced during removal is frequently agonizing and the operation should be performed slowly, with thorough saturation of the gauze by boric acid solution or sterile water. Much force should not be used, for it is better to allow the gauze to remain for some days than to tear the peritoneum off the bowel or take chances on spreading infection by opening up avenues of communication with the healthy portion of the peritoneal cavity. Hydrogen peroxide diluted two or three times is often of service in loosening the gauze when very adherent. In those cases in which glass has been used and a rubber tube substituted, the removal of the gauze is greatly facilitated.

If the packing has been entirely removed, the cavity remaining should be flushed with the solution used (boric acid, saline or distilled water) and a rubber drainage tube introduced to the bottom; this is shortened from day to day as the wound granulates. Secondary sutures should never be introduced, owing to the danger of retaining purulent products and the formation of a collection of pus. In large abscesses the gauze should not be removed entirely at once, because of the chance of the intestines crowding over suppurating points, with the formation of a secondary pus collection. The pressure of the abscess may induce necrosis of the cecum followed by a fecal fistula, or the too tight packing of gauze may cause a like condition.

In other cases, despite the greatest care in removing the gauze, a necrotic patch on the cecum may break down and form a fecal fistula. These cases require dressing as often as the bowel movements saturate the gauze, and on the appearance of a fistula I usually increase the diet of the patient to solid food rather rapidly.
nd cease all attempts to keep the bowels open, except by the use of enemata. Sometimes the fistula spontaneously closes as the cecum becomes covered with granulations, and in other cases the mucous membrane everts with a rosette appearance and continues as a permanent fecal or mucous fistula. This complication is very annoying to the patient and will require re-operation in the future. Such operations are very extensive and attended with some element of risk from the danger of infecting the peritoneum.

In all cases in which drainage has been used the patient should wear some form of abdominal support. Hernia is to be expected, especially when the occupation of the patient requires heavy manual labor, and due warning should be given to avoid the accusation of having performed a faulty operation.

He who compares the two types of cases presented in this paper, those without and those requiring drainage, and who has seen the huge cavity and observed the complications attendant upon the abscess case, would never hesitate as to the time of election when his own appendix should be removed.

The diagnosis made, surgical advise should be sought at once without waiting for the disease “to develop” or to form an abscess which could be felt with the foot. In a suspected case of diphtheria the physician does not stand around with his hands in his pockets until he receives the bacteriological report of the swab from the throat. He administers the antitoxin immediately and then waits for the confirmation of his diagnosis. In appendicitis the treatment should be identical; with symptoms indicative of the disease operation should be promptly advised and the appendix examined by the pathologist while the patient is on the road to recovery.

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VASELINE VERSUS HARD PARAFFIN IN PLASTIC SURGERY.

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As an orthopedist I have been intrusted in the use of vaseline and hard paraffin in rectifying deformity, and, having considerable work with one of the principal movers in this development, Dr. Hugo Eckstein, I offer my experience with free quotations from the reprint of Dr. Eckstein upon Subcutaneous and Submucous Paraffin Injections. Although this work was given to the public in 1901, a second thesis in French and German has been written upon it,
yet the complete method of Eckstein has only just been printed, and
I have withheld this by request and out of deference to him.

Robert Gersuny, of Vienna, in 1900, injected vaseline to ameliorate affections and deformities. He made artificial testicles and cured incontinence of urine. The success of this method was soon acknowledged by Halban, von Frisch and Kapsammer. But soon afterward Pfannenstiel tried to cure a similar case of incontinence by the same method and observed a pulmonary embolus. It is possible that in one case of Kapsammer there was also a slight pulmonary embolus.

To-day it is known that several deaths have followed vaseline injection. H. Meyer demonstrated by experiments upon animals that vaseline could produce emboli and also act as a toxicant.

These two objections Moszowicz, of the Clinic of Gersuny, does not consider insurmountable, saying that the manner of the experiment of Meyer did not conform in any way to the present use of vaseline; and he seems to be right regarding intoxication.

Another disadvantage of vaseline is that this material remains soft within the body for a long time, and that it becomes hard after some weeks or months, not of itself, but by emigration of the connective tissue cells through and through the vaseline, so that it cannot be used in a portion of the body where it would be exposed, after the injection, to external or muscular pressure, which would push toward the point of least resistance. Also, it can sink down by gravitation—a fatal objection, as observed by Gersuny in two cases of inguinal hernia, in which the vaseline that had been injected into the hernial ring slipped down into the scrotum.

The last disadvantage is that, as observed by Gersuny and others (for example, Luxenburger), a quantity is absorbed, and this disadvantage reduces the apparent good effect.

All these disadvantages may be avoided with certainty by using another material, the point of liquefaction of which is much higher than the temperature of the body. Such material is hard paraffin, a substance chemically homologous to vaseline and well known in histological technique.

The paraffin used by Eckstein, in the Clinic of Julius Wolff, had a melting-point of 57° to 60° C. (140° F.). This is easily sterilized and injected by the use of the method to be described later.

After the injection this paraffin behaves very differently from vaseline or paraffin of lower degrees of liquefaction.

At first he used paraffin of 42° C. (107.6° F.) liquefaction, the paraffin being hardened by ethyl chloride, but this was reduced to a liquid again by the body heat in a few hours. The hard paraffin, after the injection of some three to five cc., becomes stiff in one or two minutes, resembling a mass of cartilage. In these one or two minutes it may be kneaded by the hand of the operator, as wax, afterward retaining the given form, no absorption taking place.

As a test for absorption Eckstein made little sticks of hard
paraffin and introduced them under the skin of rabbits. When examined after three months, no absorption was apparent.

The hard paraffin introduced by injection or incision was found to be included in a distinct capsule of connective tissue. This capsule is developed soon after introduction, and is not adherent with the paraffin, being easily separated from it, leaving the interior of the capsule smooth and bright. Examined microscopically after three or four months, we see the capsule made up of eight to ten layers of connective tissue cells, with no bloodvessels reaching the inner surface. In contrast to this, the vaseline and paraffin of lower point of liquefaction is grown through and through with connective tissue cells.

Stein hoped that by this process we would have an ideal formation; but the vaseline is continually being absorbed, and if it slips away to one side it cannot be extirpated, as in the experience of an English physician in the medical congress in December, 1901. In case of hard paraffin, it can be removed as a point of metal.

The danger of a pulmonary embolus is in a great measure avoided by the immediate hardening of the paraffin, since the hardened paraffin can cause no embolus, and, during the short period of hardening, it can be prevented from entering the veins by digital compression.

The author has produced decubitus in animals by injections at 86° to 90° C. Generally this occurred in regions where the skin was strained by the injection. Vaseline will act in the same way in similar locations, as in the rabbit’s ear.

The question of the toxic effect of hard paraffin can be excluded, for a material not absorbed cannot be a poison.

In our first experiments with hard paraffin we experienced a good deal of difficulty, the liquid hardening in a few seconds, even in a warmed syringe. I avoided this disadvantage by enveloping the syringe and needle in rubber, which holds the warmth, being a poor conductor of heat, while it also protects the patient and the hands of the operator. An ordinary strong syringe, holding 5 cc., will do, having a strong needle with a thin point.

The injection is made in the following manner:

Hard paraffin is procured, having a melting-point of 58° to 60° C., in little porcelain jars or pots ready for use, sterilized and filtrated. One of these porcelain jars is placed in a water-bath and liquefied, the water standing only about half the height of the jar while boiling.

The plunger must be made of rubber or asbestos, leather being destroyed in sterilizing. It is well to have several differently curved needles.

After half of the paraffin is liquefied, the heat is removed, for the other half is liquefied by the first, the liquid standing at about 65° to 70° C., and, after cooling to 60° to 62° C., is ready for injection. This melting and cooling process requires in all about seven to ten minutes.

The syringe with rubber covering is cooked before using, the
needle detached from its covering, to protect it from the action of the sulphur in the rubber. The leather disk should not be cooked, as it would be destroyed. After cooking, the syringe is laid in a warm antiseptic solution. Then the needle is adjusted, with the leather disk, all screwed together securely, and the rubber adjusted over the needle. Now the syringe is to be warmed by drawing in and ejecting hot water some half-dozen times. Now the paraffin is drawn in, filling the syringe, then a few drops expelled, and some two or three drops of hot water drawn in, filling the uncovered point of the needle. This is to prevent the rapid hardening in the needle, these drops being no disadvantage in making the injection.

If all these precautions are observed, it will be seen that the paraffin can be expelled drop by drop in the air.

Local anesthesia should be small in amount and wide from the field to be elevated. Narcosis is better; but no anesthesia is best, if the patient is brave.

The local infiltration of an anesthetic is objectionable if it approaches the field to be elevated, because the edema prevents precision in the amount of paraffin required.

The needle is introduced some distance away from the portion to be elevated, and the point is carried subcutaneously to the position desired. When the point has been reached, the operator and one assistant compress the surrounding tissue to localize the diffusion and prevent its spreading. This is important. This being done, the injection proceeds evenly without pause, not too rapidly, as the paraffin is not so easily controlled; nor too slowly, as it then hardens in the point of the needle.

When the injected quantity seems to be sufficient, or if it is not possible to inject more because of the tightness of the skin, you must stop. If you try to inject under a flat-drawn surface, you will find your paraffin in some other place. One may know how much is to be gained by lifting off the skin with the fingers; if you can make the deformity disappear in this way, you can expect as much by injection, and even a little more.

Remove the needle after ten to twenty seconds. By this time the paraffin has become too firm to follow the needle, and may now be moulded into the desired shape. If the result is not as expected, another injection can be made immediately from another point or from the same point.

Finish the operation in one sitting. If necessary. 5 to 6 cc. may be injected at one time, or until the skin is white. No danger of gangrene, except where the skin is thin and much elevated, as on the ear.

After injection there is often an edema, beginning the following day and lasting several days. This depends upon the place of injection. If all the points of injection are well collapsed, no edema will follow. Then it is only necessary to use a little English plaster. Otherwise, it is advisable to use a small wet dressing.

The redness of the skin depends upon the degree of pressure of injection. When there is no fulness or much tension from injec-
tion, redness lasts 3 to 15 days, but in a case of considerable pressure it may last three months. If too much has been injected, producing redness or too much elevation, you can make an incision one cm. long, after local anesthesia, and remove the paraffin with a spoon. Do not delay this longer than two or three weeks, as the capsule becomes strong, increasing the difficulty.

Dr. Eckstein has treated, among other cases, some 23 nose deformities, 5 saddle noses due to traumatism, 7 due to syphilis, one to lupus, 2 to suppuration of the septum, 3 distinctly Roman noses, which were given the Greek formation, and 5 pugs.

A woman, 39 years of age, was operated upon 20 years before for actinomycosis by removal of a portion of the superior maxillary, resulting in a deep cicatrix and facial paralysis. In this case 40½ cc. of paraffin were injected, the cheek being lifted to the height of the other.

Seven cases of cleft palate were treated, for defect in speech, with remarkable results. In these cases the closure had been made late, or was imperfect, resulting in a short uvula. These were treated after the method of Gersuny, who injected vaseline into the post-pharyngeal wall, making a small hill, so that the uvula might close the pharynx.

One woman, whose palate was closed by operation at 30 years of age, could not speak to be understood. One year later the paraffin injection was made, and now her language is intelligible.

In these cases it is well to inject only two to three cc. at one time. In more than 100 injections no bad effects were observed.

One case of syphilitic cleft palate, speech being indistinct, food and drink entering nasal cavity upon attempt to swallow, after two injections of 5 cc. each, was so improved that the patient could speak and eat quite normally.

Again, a number of patients were treated for postoperative deformity of the mastoid bone, resulting from middle-ear disease. Here the large depression in the bone was filled up with the hard paraffin, removing an unsightly scar.

In harmony with the animal experiments, no minimum of absorption was observed, though the oldest injection is more than a year old. The hard paraffin remained in the same place as at first injected, without change of form or consistency.
Peribronchitis and Interstitial Pneumonia.—A. Jacobi, (Archives of Pediatrics, January, 1903) says the majority of cases of interstitial pneumonia and peribronchitis are such as get well, if not anatomically, still practically, and their owners, when they finally die, succumb to some incidental process. Cases of hypertrophy of the connective tissue of the lungs which terminate in shrinking are most frequently observed during infancy and childhood. The patients suffering from this condition have asymmetrical chest; there is flattening on one side; diminished respiration over the corresponding part of the lung; slight or marked bronchophony; slight bronchial expiration, but no rales. There is usually a history of an attack of pneumonia, bronchitis, lung fever, or a long, ill-defined feverish disease during childhood. Such symptoms as have just been described are not invariably due to either tuberculosis or pleuritis. Interstitial pneumonia or, as it might better be called, pulmonary hyperplasia with secondary sclerosis, is a frequent and frequently an independent disease. There is full recovery from it, at least so far as life is concerned, and it is not, as a rule, an obstacle to comfort and activity. The diagnosis of this condition from pleuritis is often difficult, and Jacobi has frequently had a suspicion that observations of apex tuberculosis, which were not confirmed by the finding of bacilli in the sputum, were mistaken, and that, in truth, the disease was interstitial pneumonia which finally recovered with induration and retraction. In a general way, capillary bronchitis and lobar pneumonia have their symptoms behind and below; tuberculosis and interstitial pneumonia above and mostly in front: pleuritis with effusion below and usually behind, and tuberculous pleuritis both above and below. Patients suffering from this condition do not cough. In acute cases of this disease, the temperature may be high and remain so for weeks; but, as a rule, high temperatures do not persist long. The treatment is chiefly prophylactic and should concern itself with the protection of the patient against infections and against colds. The diet of weak and anemic children should not consist of unmixed cows’ milk too long; animal food and cereals are indispensable. Arsenous acid and phosphorus are of advantage as tissue builders. Children, 5 or 7 years of age, who do not thrive on that treatment and on food that contains enough iron should be suspected of parasyphilis. In such cases mercury, with or without iodides or iron, will often do good. When the heart muscle is feeble, a grain of digitalis daily, in divided doses, for a long period of time, will improve the circulation and thus nourish the heart and the rest of the body. Recent cell proliferation and recently formed connective tissue are absorbable, and should be treated with iodine either in the form of potassium iodide, sodium iodide, iodipin or hydriodic acid. Iron iodide is often useful when there is anemia but no fever. In some young and in many adults the further development of peribronchitis and interstitial pneumonia may be into emphysema, bronchectasis, caseous degeneration, abscess, gangrene, cavity and death.

The Control of Consumption by the Public Health Authority.—Percy C. Kirkpatrick (Dublin Journal of Medical Science, January, 1903) presents statistics showing that Ireland has an increasing mortality from tuberculosis, while all the other countries have a diminishing one. In 1900, phthisis caused 10,076 deaths out of a total of 87,506, or a rate of 225.6 per 100,000. This, he thinks, is due purely to the dilatory way consumption is fought in the country. His advice is that: (1) A voluntary notification of consumptive cases should be made; (2) education of the public in general and of the patient and his friends in particular, in the nature of the disease; (3) treatment of the patient’s surroundings; (4) supervision; (5) provision of isolation hospitals and (6) protection of the food-supply from contamination by the tubercle bacilli.

Tabes With Acute Hemorrhagic Edema of the Face.—At a recent meeting of the Société Médicale des Hôpitaux de Paris, P. Merklen and J. Heitz reported an interesting case of locomotor ataxia in a woman of 24, of syphilitic ancestry, but without a sign of acquired or hereditary syphilis. Since her marriage, 2 years ago, she has had typical gastric crises, with vomiting. She
has also noted pain in the extremities, reflexes were absent, she had Romberg's sign, hypoesthesia and anesthesis in places, pupillary inequality, and other pre-ataxic signs of tabes. As a complication of her last 3 crises she has had acute hemorrhagic edema of the face, affecting the lips and forehead especially, with epistaxis, lasting almost 2 weeks. She has lost 12 teeth during this time and the inferior maxilla shows marked necrosis. The edema was probably angioneurotic, directly due to the tabes. (Bulletin et Mémoires de la Société Médicale des Hôpitaux de Paris, November 20, 1902).

Facial Paralysis in the Period of Secondary Syphilis.—G. Thibierge and P. Ravaut report a case of facial paralysis in a woman of 19, who entered the hospital with mucous patches of the vulva. Later, when 3 months pregnant, peripheral facial paralysis was noted, at about the fifth or sixth month after syphilitic infection. Examination of the cerebrospinal fluid showed a very abundant lymphocytosis, with a few polymorphonuclear and altered large mononuclear leukocytes. This was much more marked than is ordinarily noticed in secondary syphilis. (Bulletin et Mémoires de la Société Médicale des Hôpitaux de Paris, November 27, 1902).

A Neurasthenic Pulse Phenomenon.—L. Braun and A. Fuchs (Zeitshrift für innere Med., Dec. 6, 1902) discuss abnormal cardiac rhythm, and the effects of irritation of various kinds upon the rhythm. It has repeatedly been noted that neurasthenics show very marked alterations in the frequency and force of the pulse waves. The authors state that if a neurasthenic person is placed in a horizontal position for some time the heart-action becomes more and more regular, and finally almost entirely so. Even the respiratory variations of the pulse become much less marked. If the patient is then required to make a few rapid movements, the neurasthenic character of the pulse rapidly becomes again manifest. Such an alteration in the pulse is characteristic of neurasthenia. The most striking change in the pulse is that dependent upon respiration. This is far more pronounced in a neurasthenic than in a normal person.

The So-called Tumors of the Auditory Nerve.—Peculiar tumors have been described in the recess between the pons and cerebellum, generally close to the auditory and facial nerves. They are easily removed by peeling them out, and on examination show various histological conditions. Fritz Hartmann (Zeitschrift für Heilkunde, November, 1902) collected 23 cases from the literature and reports in full 3 case-histories of patients he has observed. Patients varied between 30 and 55 years of age, and two thirds were women. The cause was mainly congenital, yet in 3 cases the condition followed traumatism. The symptoms included loss of hearing, headache, vertigo, fatigue in the extremities and, finally, marked nervous deafness. General tumor symptoms followed. The localizing symptoms were of value in diagnosis. The illness lasts 2 to 8 years, ending fatally unless operated upon. Operation is advised, especially peeling out the tumor from its surroundings. Since writing this article Hartmann has seen another case.

Spinal and Root Metameres in Syringomyelia.—Luigi Ferrannini (Zeitshrift für innere Med., Jan. 10, 1903) describes 2 cases that he believes indicate that in syringomyelia the disturbance of sensation is sometimes of a medullary type and sometimes of a root-zone type, according as the cavity-formation affects the spinal cord itself or the spinal roots.

The Posterolateral Sclerosis.—Charles W. Barr and D. J. McCarthy (Journal of Mental and Nervous Disease, January, 1903) report 8 cases of sclerosis of the posterior and lateral columns which illustrate how difficult it is to arrange a classification of the diseases of the white matter in which the posterior and lateral columns are affected alone or associated with minor changes in the other tracts, which, with our present knowledge of the anatomy and physiology of the cord, can be of no diagnostic value. They arrange such cases for clinical and laboratory purposes as follows: (1) Friedreich's ataxia;
(2) tabes with associated diffuse sclerosis extending into the lateral columns; to this group may be added those cases of tabes associated with paretic dementia with secondary lesions in the crossed pyramidal tracts; (3) tabes with degeneration in the crossed pyramidal and also in the direct cerebellar tract, with or without degeneration in Clark's columns; (4) posterior sclerosis of the lateral columns and disease of the anterior horns; (5) primary lateral sclerosis with minor changes in the posterior columns; (6) subacute diffuse degeneration of the spinal cord due to anaemia, cachexia, sepsis, etc., with sclerosis in the posterior and lateral tract predominating both in clinical manifestations and under the microscope; (7) diffuse interstitial sclerosis, seen occasionally in chronic alcoholism with multiple neuritis, in which parenchymatous degeneration is secondary to the overgrowth of glial and connective tissue elements; to this same group may be added the syphilitic posterior lateral sclerosis secondary to a meningeal lesion; (8) a combined system disease of unknown origin affecting the posterior and lateral columns and distinctly confined to the direct and crossed pyramidal tracts and the posterior columns; the direct cerebellar tract may also be involved.

Paralysis of All Four Limbs and of One Side of the Face, with Dissociation of Sensation, Developing in a Few Hours and Resulting From Meningomyeloencephalitis.—Charles K. Mills and William G. Spiller (Journal of Mental and Nervous Disease, January, 1903), in the study of the cases reported, found that the paralytic, sensory and reflex symptoms of a grave type developed gradually and after a period in which the symptoms of meningeal irritation were prominent. Eighteen days elapsed before indisputable symptoms of involvement of the cord were exhibited, and 20 days before the paralysis was complete. The extensive meningeal inflammation was shown by the rigidity of the back and also probably by the hyperesthesia of the extremities. Paralyses of all 4 limbs were complete in 5 hours, and the grave sensory, reflex and visceral phenomena came on with almost equal rapidity. With the exception of pain, meningeal symptoms were absent. Basal symptoms were present and developed in the tubercular case late in the disease, while the facial paralysis was a prominent feature in the paralytic syndrome which came to the surface in the short period of 5 hours.

Typhoid Bacilli in the Blood of Typhoid Fever Patients.—At a recent meeting of the Société Médicale des Hôpitaux de Paris, Courmont and Lesleur reported the results of their researches for typhoid bacilli in the blood of 37 patients with typhoid fever. In 33, whose blood was examined before and up to the twentieth day, the bacilli were always found; in the other 4, examined after 3 weeks of the disease, they were not found. Of the 47 cultures made from these patients, 11 were positive on the first, 17 on the second day. Out of the 33, positive observations, 6 showed the presence of bacilli in the blood before the Widal reaction was positive. This method is especially of value in forming the diagnosis early. Widal found the bacilli in the blood in 17 out of 20 serious cases examined in the first 3 weeks of the disease. The correct technique is of importance. (Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, December 11, 1902).

Typhoidal Rhinopharyngitis.—Gallois, Courcoux and Décobert report 2 cases of rhinopharyngitis in women, about 30 years old, on the ninth and tenth days of typhoid fever. In both cases cultures showed typhoid bacilli. The symptoms were clinically typical and the Widal reaction was positive. The pharynx was red, and there was dysphagia lasting one week. In 2 other cases with similar symptoms staphylococci and streptococci were found, without typhoid bacilli. The presence of typhoid bacilli upon the pharynx and in the nose is another source of possible infection, a means of spreading the disease. (Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, December 4, 1902).

The Cerebrospinal Form of Typhoid Fever.—P. Moizard and H. Grenet (Archives de Médecine des Enfants, January, 1903) report a case of typhoid fever in a boy of 5, who always caught cold easily. His symptoms for one
week before admission to the hospital had been headache, anorexia, insomnia, cough and constipation. Examination showed enlarged axillary and inguinal glands only. There was pain in the neck and the muscles were stiff. Rales were noted, with dyspnea. He vomited without nausea or effort, and Kernig's sign was noticed. Lumbar puncture failed to reveal any cellular elements, nor did the fluid contain iodide, though this was given internally. The Widal reaction was positive. Recovery followed in 4 weeks. The diagnosis depended on the presence of the Widal reaction and the absence of leukocytes in the cerebrospinal fluid. Such cases are relatively rare; the literature is fully quoted.

A Severe Case of Typhoid Fever.—Lecreux (Journal des Praticiens, January 3, 1903) reports a case of typhoid fever in a man of 18, with high fever and marked ataxia, treated by cold sponging and brewer's yeast. After 16 days of fever he recovered. Symptoms were typical and marked. Lecreux calls attention to the use of brewer's yeast in this case.

A Case of "Family" Syphilis.—Bentovin (Praktitchesky Vrach, Vol. 1, No. 42, 1902) relates the case of a merchant who contracted syphilis and, disregarding the precautions urged by the author, communicated the disease to his wife. The latter was also warned against the possibility of spreading the disease, but from ignorance and indifference paid no attention to the doctor's advice, and as a result a grandchild and a clerk, living in the same house, contracted the disease. The author points out the intolerable position of the physician who, by reason of professional secrecy, is powerless in preventing the transmission of the disease to the innocent.

Secondary Syphilitic Phlebitis.—C. M. Campbell presented a case of secondary syphilitic phlebitis affecting the internal saphenous vein of the right leg, in a man aged 38 years. No other cause for the phlebitis could be found as he had been in bed in the hospital for the 4 weeks previous. He was taking large doses of mercury and potassium iodide at the time the phlebitis appeared. The internal saphenous vein on one side alone was affected, 10 months after the initial chancre. (Bulletins et Mémoires de la Société Médicale des Hopitaux de Paris, November 27, 1902).

Syphilitic Inflammation of the Tissues of the Pelvis.—The case reported resembled one described by Fournier, which was an instance of syphilitic tumor of the pelvis resembling a malignant growth.—M. Loeb (Zentralbl. für innere Med., Jan. 7, 1903) states that 30 years ago he observed a similar case in a man, then 30 years old. The patient had had syphilitic infection. He had enlargement of the liver and was greatly emaciated, but he improved greatly upon potassium iodide. He rapidly grew worse again, however, exhibiting pronounced constipation, abdominal pain and vomiting. A tumor of stony hardness was found in the right iliac region; it suggested an osteosarcoma. The patient died of general exhaustion. The post mortem examination showed gummata in the liver; and the hard mass in the iliac fossa was found to be dense connective tissue; the intestines being so densely involved that it was impossible to dissect them out.

Chancre of the Tonsil.—F. Widal (Journal des Praticiens, January 3, 1903) presented a young girl with a chancre on the left tonsil. After waiting for the appearance of the eruption and other signs of secondary syphilis, he will begin specific treatment. He also showed a patient with indigestion and high fever, in which case the diagnosis could not yet be made.

Appendicitis as the Result of Infection With Intestinal Worms.—Saveljeff (Praktitchesky Vrach, Vol. 1, Nos. 50-51, 1902) concludes from a review of the literature and his own observations that Metchnikoff's theory as to the rôle played by intestinal worms in the causation of appendicitis in some cases is substantiated by clinical observations. He recommends the administration of anthelmintics in every case of appendicitis.
ABSTRACTS.

The Treatment of Appendicitis in the Country.—Paul Boudin, (Journal des Praticiens, January 3, 1903). In the country appendicitis is not very frequent, though symptoms of appendicitis often develop with indigestion, constipation, etc. Boudin gives a purgative, calomel as a rule, and waits. Such cases are easily cured. He reports several cases of this kind. He believes in curing the acute attacks and then having the appendix resected if necessary.

Pseudomembranous Laryngitis Complicating Measles.—When pseudomembranous laryngitis complicates measles, Klebs-Löffler bacilli are usually found. R. Linsbauer (Archives de Médecine des Enfants, January, 1903) reports 50 cases observed in 10 years, 29 of them ending fatally. The condition was laryngeal in 31 cases. The resulting laryngeal stenosis was worse 7, 6 or one day after the eruption appeared. Linsbauer advises antitoxin in all cases of measles upon admission. Intubation was performed in 34 cases, and secondary tracheotomy was never necessary. Before the employment of antitoxin, intubation was done in 76% of cases; since antitoxin, in 55% of cases only.

A Case of Diphtheria Complicated by Acute Endocarditis of the Mitral Valve.—John Wainman Findlay (Glasgow Medical Journal, January, 1903) reports a case of diphtheria complicated by acute endocarditis of the mitral valve, and from its study he concludes as follows: (1) That the child developed endocarditis during an attack of diphtheria; (2) that such a complication is extremely rare; (3) the evidence of bacteriologists suggests, in spite of the fact that the diphtheria bacillus has been found in the vegetations of endocarditis, that this complication probably results from some organism other than the diphtheria bacillus itself, which only perhaps predisposes the tissues to succumb; (4) the most probable microbic offender in this case was the versatile and ubiquitous pneumococcus; (5) it is impossible to say how far the serum itself may have been responsible for causing the endocarditis.

Erythema Following Vaccination.—H. Dauchez (Archives de Médecine des Enfants, January, 1903) reports 2 cases of erythema following vaccination in 2 infants, brother and sister. The eruption was general, circinate and polymorphous, with urticaria and pruritus. He believes that the eruption attended the use of virulent vaccine.

Bromoform Poisoning With a Fatal Issue in a Three-Year-Old Child.—E. Kiwull, (Centralbl. für innere Med., Dec. 13, 1902). The child, whose case is reported, was brought in an unconscious condition to the physician in attendance with the statement that it had been given a prescription for whooping cough that had been ordered for an eleven-year-old brother. The prescription contained 12 parts of bromoform in 100, and was to be taken in teaspoonful doses 3 times a day. The symptoms of poisoning did not appear until the last dose in the bottle had been administered. The child then exhibited convulsive movements and became unconscious. In spite of ether injections and prolonged artificial respiration, the child soon died. The post mortem examination showed slight congestion of the lungs; the blood in the heart and in the great vessels was fluid; there was almost no fluid in the cranial cavity, the pia was much injected, and the brain showed numerous points of congestion. A chemical examination of the contents of the stomach and the intestine did not show the presence of bromoform. In spite of this the author believes that it was a case of bromoform poisoning. The reason that the symptoms appeared only after numerous doses had been given is probably that the heavy bromoform had sunk to the bottom of the bottle.

Poisoning From Formalin.—F. Testi (II Policlínico, Dec. 20, 1902) reports the case of a man who, by mistake, swallowed a mouthful of a 40% solution of formalin. In view of the few cases on record of poisoning from this substance, and the probability of its increasing use leading to more frequent accidental ingestion, he deems a detailed account of its effects to be valuable.
These he describes as follows: The patient experienced an intense burning sensation immediately after swallowing the substance; this being followed by vomiting. The pain then became localized, especially in the pharynx, at the base of the tongue and upper part of the esophagus, so that deglutition became almost impossible. When seen by Testi the patient’s face was congested, and his ocular conjunctiva hyperemic, as were also the buccal and pharyngeal mucosa, fauces and tonsils. For 2 or 3 days this condition remained unchanged, during which time the patient was able to swallow but the smallest quantity of liquid. Two large eschars then appeared upon the fauces and tonsils, which became detached by the sixth day, regeneration of the epithelium and subsidence of hyperemia ensuing within about 8 days. The author states that the general stupor, anuria and modifications of temperature, pulse and respiration reported in Klüber’s case were at no time present in his; this, he thinks, may be accounted for upon the ground that the vomiting prevented absorption of the poison into the system, its effect being purely local.

On the Influence of Artificial Colors of the Aromatic Series on Digestion.—Vinogradoff (Russky Vratch, Vol. 1, No. 50, 1902) investigated the effect of analine dyes on artificial digestion. He found that safranin, ponceau R. R., asofuchsin, orange 11, cerulein S., phloxin R. B. N., iodeosin, chrysanalin, magdalo dark, asoflavin, benzopurpurin and coerise, in quantities of a few milligrams, almost completely inhibit the digestion of albumin. On the other hand, chinolin-yellow, methyl-green, acid-green, iodin-green, aoacid-yellow C., yellow T., naphtol-yellow, anilin-green, primulin, auramin O., anilin-orange, mariline-yellow and malonil-yellow, while not affecting digestion to the extent of complete inhibition, nevertheless weaken the action of pepsin and cannot be considered indifferent substances.

The Question of Antidoting Strychnine.—S. J. Meltzer and G. Langmann (Zentralbl. für innere Med., Jan. 7, 1903) again refer to the work of v. Czyhlarz and Donath, which indicated that the tissues have the power of antidoting strychnine, and also to their own criticisms of this work. They finally refer to Carrara’s recent work, which apparently indicated that when the kidneys are extirpated the antidoting occurs, and the latter must, therefore, be due to some alteration of combination resulting from the action of the tissues. The authors found that when the doses of strychnine are not too large and the injections are not made too quickly one after the other, one may, in an animal upon which a double nephrectomy has been done, administer several times the fatal dose without any sign of strychnine poisoning. This indicates that the introduction of the strychnine into a ligated leg had nothing to do with the results. The above statement, however, is not true during the first few hours after the nephrectomy. When Carrara’s method operation was changed, the strychnine being first injected, and 3 hours later bilateral nephrectomy being carried out, a rapidly fatal tetanus was observed after the removal of the ligature. The authors believe, therefore, that Carrara’s results were due to the nephrectomy itself, and do not indicate that the strychnine was in any way altered by the tissues.

The Danger of Pregnancy in Diseases of the Heart, Tuberculosis, etc.—Means to Prevent Conception in Such Patients.—Ginzburg (Praktisches Vratch, Vol 1, No. 50, 1902) recommends the use of tampons saturated with a 3% solution of carbolic acid in glycerine for the prevention of conception, when indicated by reason of the above affections. The spermatozoa are entangled in the cotton and promptly killed by the glycerine.

Malformation of the Uterus.—R. S. Hill (American Journal of Obstetrics, January, 1903) confines the term uterine malformation to those conditions having their macroscopic origin only during the period of uterine development. Ill-formations from neoplasms are not included. He gives the embryology of the uterus and vagina. He divides malformation of the uterus into infantile uterus, caused by retardation or cessation in growth after birth; and aberrant uterus, produced by a departure or divergence from the normal development during embryonal life, with or without a retardation or cessa-
tion in growth. The simplest degree of malformation is the nonfundated and grooved uterus. The septate uterus is the next in degree of malforma-
tion. The third variety of the aberrant class is the double-horn or bicornate
uterus. The double uterus or didelphys is probably the most frequent var-
ety of the aberrant anomalies, and is the result of a separate development of
the Müllerian ducts. The uterus with 2 cervixes and one body is produced
by the fusion of the extremities of the lower 2/3 of the Müllerian ducts, and
of failure of the centers of the same parts of the ducts to unite. The uni-
cornate or one-horned uterus is due to the failure of one, more often the
right, Müllerian duct to develop, while the other continues more or less un-
interruptedly its growth. Absence of the uterus is only a relative term: it
is exceedingly rare. The accessory uterus may be either a second or a third
uterus. It has only been detected on post mortem examination and, as a rule,
is nothing more than a small, solid mass, though exceptionally it may be
cavernous.

European Chyluria.—Chyluria is the passage of urine which is milky from
the presence of chyle, the fat from the intestine. In the tropics this is due
to filaria in the blood and urine, but no parasites are found in the cases
reported in Europe. Karl Franz and Karl von Stejskal (Zeitchrift für Heil-
kunde, November, 1902) have collected 41 cases, most patients being middle
aged, and some of them pregnant. In 3 men traumatism was considered a
cause. In some cases the urine was chylous all the time: in others, only at
times; in still others, only the day-urine was affected. After reviewing the
subject fully, they conclude that this exists as an independent affection: be-
sides, bloodcorpuscles are found in the urine in Europe as in the tropics.
From their experiments, which are given in detail, they find that there is a
distinct relation between the amount of fat in the intestine and the chyluria,
but this is quite independent of any fat injected subcutaneously. Alimentary
glycosuria occurs early after increasing the sugar in the chyle. Besides,
mononuclear leukocytes are found in chylous urine in large quantities. Many
details follow.

Hemapheic Jaundice.—A. Gilbert and M. Herscher, (La Presse Médicale,
December 27, 1902) describe hemapheic icterus as a condition characterized
by cutaneous, blood and urinary symptoms. The skin is of a slight yellow color,
as a sort of abortive jaundice: the face is most affected, while the palms of
the hands and soles of the feet often show the icterus also. The bloodserum
is hypercolored, with greenish reflections, showing the presence of biliary pig-
ment by Gmelin’s test. The urine is amber or somewhat brownish in color,
leaving reddish stains. It gives Gubler’s reaction with nitric acid, since it
contains much urobilin and bile salts, rarely also biliary pigments. The con-
dition is due to slight cholelithiasis, accompanied with marked oliguria. In most
cases the icterus is acholuric, because the biliary pigments in the bloodserum
have been totally changed into urobilin. Very rarely it may be choluric.

Resection of the Liver and Its Influence on the Interchange of Gases in
Animals.—Postoff (Russky Vrach, Vol. 1, No. 40) draws the following con-
clusions from his experiments on animals: (1) Resection of the liver undoubt-
dedly exerts an influence on the interchange of gases in animals: (2)
with the removal of large pieces of liver (10 gm.) the activity of the latter is
diminished, and the amount of CO₂ and H₂O, as well as the absorbed O₂, is
less than normal; (3) when less than 40 gm. of liver are removed, the
interchange of gases is increased; the smaller the piece of liver removed, the
greater the amount of CO₂ and absorbed O₂; (4) resection of the liver is an
altogether permissible operation.

The Ferments of Milk.—P. Nobécourt and P. Merklen (La Presse Médicale,
December 27, 1902) review the work done by the discoverers of the various ferments in milk, giving in detail the differences between the fer-
ments found in the milk of human bings and animals. They find that all are
found in the milk of women, dogs and asses; but, while the rest are found in
cows’ and goats’ milk, amylase and the salol-splitting ferment are absent.
Thus it is that asses' milk, in its ferments, most approximates mother's milk. Investigations show that both amylase and the salol-splitting ferment exist already during intra-uterine life. Amylase is constantly present in the feces and urine of suckling infants. They conclude that the differences in the ferments found in breast-fed and artificially fed infants are quantitative, not qualitative. The literature of the subject is fully reviewed. On account of the difficulty of experimentation upon this line, there is as yet but little known of the value of the ferments of milk.

A Case of Lymphadenoma Associated With Recurrent Fever.—Henry T. Bewley and J. Alfred Scott (Dublin Journal of Medical Science, January, 1903) report a case of lymphadenoma associated with recurrent fever and quote Dr. Shaw, who states that: (1) Lymphadenoma with recurrent fever is not a special form of disease; (2) such cases are due to a terminal infection occurring at any time during the last year of life of some patients affected with lymphadenoma; (3) the nature of the bacterial invasion is different in different cases, and in some cases proof of a bacterial invasion is wanting; (4) in a considerable number of patients there is great constitutional disturbance with elevation of temperature, rigor, vomiting and diarrhea, anorexia and malaise; (5) in other patients the superficial lymphatic glands, and even the spleen, become very tender and enlarged during the attacks: (6) the skin over the enlarged glands may become reddened and show an increase of local temperature, and (i) the prognosis is, as a rule, hopeless, and the duration of life after the onset of the periodic attacks of fever averages about 7½ months, but may be as much as 12 or 14 months.

Some Remarks on Malaria.—E. Schoull (Journal des Praticiens, January 3, 1903) reports an epidemic of malaria in Tunis in November, 1900, following frequent rains. There were absolutely no mosquitoes in the neighborhood. Intramuscular injections of quinine acted well in all forms of the disease, those resembling typhoid fever and those affecting the lungs. Abscess never followed in true malaria; in other cases, however, abscesses occurred after the injections in 4 patients. In the prophylaxis of malaria Schoull gives quinine daily, increasing the doses if an epidemic appears. Arrenhal is only of value in chronic malaria, or malaria with cachexia.

An Unusual Case of Strangulated Hernia.—P. Giannantoni and S. Gugliuzzo (La Riforma Medica, December 23, 1902) report the case of a man who was affected with inguinal hernia and who had repeatedly reduced the hernia himself by taxis, and had suffered no special inconvenience from the condition till upon one occasion when, after excessive exertion, the hernial tumor again escaped through the inguinal ring: the patient, at the time, experienced severe pain, which radiated over the abdomen. He continued to suffer even after, with the exercise of some force, he again succeeded in reducing the tumor. Defecation became impossible from this time, and fecal vomiting ensued. A physician being finally called, operation was decided upon: but as examination showed naught but a dilated inguinal canal, without a trace of hernia, reducible or otherwise, and the history given by the patient being the only clue to the condition, a tentative diagnosis of strangulated hernia reduced en masse was made. Accordingly a median incision was made from the umbilicus to the symphysis pubis, and an incarcerated hernia, reduced en masse, was then found in the right iliac fossa. The tumor being immovable, the inguinal canal was opened by Bassini's classical incision, and the tumor thus brought out of the abdominal cavity, the condition existing prior to the reduction being reproduced and the radical operation for strangulated hernia being performed. From the successful outcome of this case the authors conclude that the median laparotomy is advisable not only in doubtful cases, but in all cases of incarcerated hernia reduced en masse; this operation to be followed by the procedure described by them.

Stimulation During Anesthesia.—W. M. Brichner (International Journal of Surgery) says that for bolstering a flagging heart strychnine and whiskey may be injected hypodermically, in doses, for adults, of gr. 1/30 and 30 min
ums, respectively, which may be repeated. Digitalis (m. 10 of the tincture) is very serviceable, as are caffeine (the salicylate of caffeine and sodium, gr. 2 in olive oil), and nitroglycerine. Small doses of morphine (of gr. 1/8—gr. 1/6) possess the double advantage of stimulating and steadying the heart and of reducing the quantity of anesthetic necessary to maintain narcosis. To combat shock occurring during operation, the assistant may order the introduction, by means of a piston syringe, beyond the internal sphincter ani, of:

Tinct. digitalis, 20 m.
Whiskey, 1 oz.
Salt, 1/2 to 1 dr.
Water (at 100° F. to 120° F), 8 to 16 oz.

In the event of collapse, large doses of strychnine (gr. 1/20—gr. 1/10) and of whiskey are indicated. One-half dram of ether, in which may be dissolved a grain of camphor, may be injected, for rapid, though transitory, effect. Finally, intravenous infusion may be required.

The Ocular Manifestations of Diabetes.—Thilliez, in an extensive article in the Journal des Sciences Médicales de Lille (August 16 and 23, 1902) has reported the various ocular symptoms found with diabetes. These are noted in about two-thirds of all cases. Furuncles may affect the lids, and muscular paralysis, conjunctival hemorrhage, keratitis, iritis, cataract, hemorrhage into the vitreous with opaqueness, retinitis, optic neuritis, disturbances of accommodation and refraction, or hemiopia may occur. The most common condition found is iritis; cataract holds second place in regard to frequency, while troubles in accommodation are often found. Most of the ocular conditions are due to the presence of an intoxication in the blood. This causes degeneration of the heartmuscle, endarteritis, phlebitis and hemorrhage. The occurrence of eye symptoms is a sign of the gravity of the diabetes. The treatment should be both local and general.

Contribution to the Clinical Study of Anachlorhydria and Investigations Concerning Decomposition-Processes in the Gastro-intestinal Tract and Their Treatment.—Luigi Ferrannini (Centralbl. füür innere Med., Dec. 20, 1902) reviews some of the literature relating to anachlorhydria and reports several cases. He divides the condition into the primary and secondary forms. He finds that the presence of HCl in the gastric contents is associated with a smaller amount of ethereal sulphates in the urine than in the absence of HCl in the same patient. He has tried treating the condition with pilocarpine and has had some good and some unsatisfactory results.

The Coincidence of Oxaluria and Indicanuria.—W. v. Moraczewski (Centralbl. füür innere Med., Jan. 3, 1903) contributes a considerable series of investigations concerning the relation between the indican and the oxalic acid of the urine. All his observations depend upon qualitative tests. In all, he has observed 439 cases; and in 376 of these there was increased indican. In 398 calcium oxalate crystals were found in the sediment. There was a normal indican reaction in 63. Calcium oxalate crystals were not present in 41. Increased indican and oxalate crystals were found together in 317 subjects. When the indican was markedly increased, oxalate crystals were found in all the patients. In only 10 per cent. of them was there increased indican without oxalates. Proper diet and alkalis tended to decrease both the indican and the oxalates of the urine.

On Secondary Metamere of the Extremities; Experimental Investigations. —Luigi Ferrannini, (Centralbl. füür innere Med., Nov. 29, 1902). The investigations reported consisted in removing extremities and studying the changes in the spinal cord, in order to decide whether the theory of Brissaud would be supported by these studies. The result was that the changes showed absolutely no regular characteristic and did not support Brissaud's theory. The intensity and the extent of the lesions were not alike in any 2 cases. The extent was decidedly varied, various groups of cells being involved. From the standpoint of motor lesions, therefore, the author believes that Brissaud's theory is disproved by these investigations.
Two Cases of Snake-bite.—A soldier was bitten in the forearm by a snake of medium size, during cool weather, in France. He incised the bite with his penknife and sucked the blood. Then he had his arm ligated above the bite. A half hour later the wound was disinfected, and injections of Calmette's antivenene were given. The only symptom which followed was swelling; in 5 days he was well. Another soldier, in hot weather, in Africa, was bitten in the right thumb by a large snake. Antivenene was not used until later, though the treatment was otherwise just like that in the first case. Symptoms noted were great prostration, swelling, fever, coma, etc., with slow recovery in a month. The virulence of the different snakes, the delay in using antivenene in the second case, the difference in the growth of the snakes, the different seasons of the year and the different physical conditions of the patients all account for the difference in the severity of the symptoms noted. (Archives de Medicine et de Pharmacie Militaires, November, 1902).

Large Laryngeal Myxoma, with Recovery Following Extraction.—Delobel, in the Journal des Sciences Médicales de Lille (November 15, 1902), reports the case-history of a woman of 27, with a large myxoma of the larynx, easily removed under local anesthesia. All signs of asphyxia disappeared and she has kept well since. Examination of the tumor after removal showed that it was a myxoma, formerly considered a very rare tumor of the larynx.

Injections of Argentic Nitrate in Enuresis.—Clément Delfosse, in the Journal des Sciences Médicales de Lille (November 1, 1902) reports 10 cases of nocturnal enuresis in boys, treated by injections of a solution of nitrate of silver, 1-30. Ten to 20 drops are injected daily after washing out the anterior urethra. He divides the cases into those with perfect diurnal continence; those with diurnal pollakiuria and those with diurnal incontinence also. Of the 10 cases 5 were cured, 3 after 1, one after 2 and one after 3 injections. He believes the condition to be neuropathic in most cases. He attempted the treatment with belladonna, but did not give sufficiently high doses in any case to effect a cure.

Hyperostosing Osteomyelitic Coxalgia.—Froelich and Weiss report 3 cases of hyperostosing coxitis in children ranging from 8 to 12 years of age, with suppurative arthritis of the hip, due to the staphylococcus albus. Similar cases from the literature are quoted. While not common, the condition has been noted several times. There are slight claudication, adduction and some shortening and atrophy. The affection lasts from one to 4 years. Recovery results eventually. The condition must be distinguished from tuberculous coxitis. (Rèvèue Médicale de L’Est, October 15, 1902).

Urea in Diabetes Mellitus.—In the Rèvèue Médicale de L’Est (November 1, 1902), Constant reports the results of a series of experiments. He found that in true diabetes the quantity of urea excreted was below normal, while in transitory glycosuria it was far above normal. After reviewing the literature, he reports in full 3 case-histories, one of pancreatic diabetes, another of alimentary glycosuria and the third of nervous glycosuria. Curves show the sugar and urea excreted in each case during 25 consecutive days. He concludes that diminution of urea in the urine is a sign of physiological decadence, of profound nutritive disturbance. He finds that transitory glycosuria is but the incipient stage of true diabetes, and describes the four stages in the development of diabetes.

Upon the Vesical Mucosa's Power of Absorption and Elimination.—That the vesical mucosa lacks the power of elimination has been experimentally
proven upon dogs by M. Bucco (Gazzetta degli Ospedali, October 26, 1902) through ligation of the ureters close to the bladder, and the subsequent subcutaneous injection of methylene blue and potassium iodide, followed by introduction of physiological salt-solution into the bladder. Neither substance appeared in the liquid withdrawn from the bladder, though the saliva reacted to iodine-tests 5 minutes after the subcutaneous injection of potassium iodide. Power of absorption was proven beyond question, however, through preliminary ligation of the ureters and injection into the bladder of potassium iodide, strychnine, atropine, morphine, etc., the saliva reacting to iodine tests 20 minutes after injection of potassium iodide, and systemic effects of the other drugs being seen also after injection. The author considers the question of absorption through the vesical mucosa of medicolegal importance through poisons introduced intentionally or accidentally into the bladder; (as in irrigation of the bladder with toxic substances) as well as of clinical import, in view of the possibility of absorption of toxic substances eliminated by the kidneys, or of decomposition products of the urine in the bladder itself.

Sclavo's Serum for Malignant Pustule.—This remedy has been successful in the hands of F. Meloni (Gazzetta degli Ospedali, October 26, 1902), who treated 2 cases of malignant pustule, which had failed to respond to other medication and which had shown the gravest symptoms, with subcutaneous injections of 40 and 50cc. of the serum; immediate amelioration followed, with later complete recovery.

Clinical Notes Concerning the Short Bacillus of Diphtheria.—M. R. Casabo (Crónica Médico Quirúrgica de la Habana, October, 1902) reports 5 cases of diphtheria which ran a mild course without antitoxin treatment, and in which the lesion was found to be due to the short bacillus. The cases are cited as illustrative of the benign nature of the short bacillus as compared to the medium and long varieties. Though the author calls attention to the fact that, as the short bacillus may acquire a greater virulence in certain media, so may the disease which it induces run a more severe course in those in whom the resistance is lowered.

Arachnodactyia.—Achard reports the interesting case of a girl of 18, whose hands and feet were long and narrow, the fingers and toes seeming exaggerated. Both hands and feet resembled the extremities of a spider. Her mother, grandmother and one sister also had long fingers and toes. Her head was large, with prominent forehead, while the face, inferior maxillary and nasal bones were small. No proof of hereditary syphilis could be secured. No cause for the condition was found. Achard objects to the terms hyperchondroplasia and dolichostenomelia, and calls the condition arachnodactyia. (Bulletin et Mémoires de la Société Médicale des Hôpitaux de Paris, October 18, 1902).

Pneumococci Appendicitis.—Ferrier has reported the case-history of a man of 22, with a severe attack of appendicitis resulting in death on the eighth day. At the age of 8 years he had pleurisy; influenza a few weeks before death; and bronchitis frequently. At the autopsy pneumococci were found on the mitral valve, in the appendicular abscess, spleen and blood. The symptoms were not marked, and there was absolutely no peritonitis. In the discussion which followed Sevestre reported a somewhat similar case. (Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, October 16, 1902).

Aleukemic Lymphatic Lymphadenitis.—Well and Clerc report a case of aleukemic lymphatic lymphadenitis, in a man of 63, which had existed a year. He noted polydipsia and polyphagia, but no glycosuria was found. The cervical, inguinal and axillary glands enlarged, as did the spleen. They decreased somewhat upon arsenic and quinine. He became very anemic and anemic murmur was heard. The erythrocytes numbered 2,387,000, leucocytes
16,275. Neutrophilic polymorphonuclear leukocytes were 22%, mononuclears 65%, large mononuclears 8% and eosinophils 5%. Three other cases were found in the literature. There was hardly any leukocytosis, yet the lymphocytes were increased in number. Because of the lymphocytelma present the condition must be closely related to lymphatic leukemia. In cases with enlarged glands, in which the cause of the lymphadenitis is known, the leukocytosis is always due to an increase in polymorphonuclears. The differentiation, therefore, rests upon the blood examination. (Bulletin et Memoires de la Societe Medicate des Hopitaux de Paris, October 16, 1902).

Abscess Under the Anterior Surface of the Liver Following Dysentery.—Pujobet and Rallier du Baty report an interesting case of a huge abscess, in a man of 27, situated below the anterior surface of the liver, following some time after an attack of dysentery which developed soon after his return to France from Indo-China. The condition had existed 7 months before operation, and he had become markedly cachectic. The abscess had been tapped several times, and incisions had been made made twice, with temporary recovery after each operation. The first time 2 liters of pus were evacuated. Upon examination a huge, bulging mass was observed in the epigastrium. Exploratory puncture was twice negative. Death followed laparotomy. Post mortem the abscess sac was found under the anterior surface of the liver. It was noticeable that fever was not present at any time, the abscess having been slow, chronic and progressive. The pus was found to be sterile. (Journal des Sciences Medicale de Lille, October 11, 1902).

Beer-Yeast in Otology.—The treatment of mastoiditis, otitis media and otitis externa furunculosa with beer-yeast has been most successful in the hands of Molist (Revista de Ciencias Medicas de Barcelona, Year XXVIII, No. 7, 1902). The special preparation of this substance used was that known as cerevisina-Fita, compounded according to the formula of Dr. Fita; a teaspoonful being administered every 4 hours. In a case of mastoiditis, pain is said to have decreased markedly within 24 hours; and noticeable reduction of tumefaction was seen upon the second day. By the fourth day tenderness upon pressure over the mastoid process had disappeared, and no sign of inflammation remained; neither were there after-effects in the middle ear. The author believes that, in this case, pus has not yet formed, and that the effect of the yeast is due the abortion of abscess which had seemed imminent. The outcome of this method of treatment was equally happy in the case of a child convalescing from a severe nasopharyngeal diphtheria in whom acute otitis had developed, accompanied with profuse suppuration, perforation of the tympanum and involvement of the mastoid cells. After 3 days of unsuccessful treatment by local application of antiseptics, cerevisina was used as in the other case, and the relief of all symptoms was immediate, the patient making a good recovery within less than a week. In this case also, mastoid abscess is believed to have been aborted by beer-yeast.

Primary Sarcoma of the Lung.—G. Silva (Gazzetta degli Ospedali, October 19, 1902) reports 2 cases of primary sarcoma of the lung. He emphasizes the clinical points of diagnosis, which he claims rest mainly upon the character of the pain, which is described as lancinating and radiating from the chest down to the epigastrium and back to the shoulder; the pain being more severe than that experienced in even the most advanced forms of tuberculosis, with which sarcoma has much in common from the clinical standpoint. A peculiar, hard resistance upon percussion also characterizes the condition, and cough is present with scanty expectoration; absence of the tubercle bacillus from the sputum assisting the diagnosis by exclusion. The author differs from most observers in that he does not regard the presence of neoplastic elements in the sputum as essential to the diagnosis of sarcoma, these having been absent in both his cases, autopsy having shown what he believes to be undoubtedly pulmonary sarcoma; though histological confirmation of this diagnosis is lacking.
Extranedian Division of the Pubic Bone to One Side of the Symphysis.—Van de Velde (Cent. f. Gym., No. 37, 1902) prefers the term hebotomy to publotoxy to describe the above operation. He claims that this operation materially lessens the danger of infection and hemorrhage in symphysiotomy. He reports 2 cases in detail, performed by himself. He believes the operation is easier than symphysiotomy; that as the saw cut is not in the median line the normal support of the bladder and urethra is not affected; that as the soft parts are much thicker at the side than in the median line there is less danger of the wound tearing through into the vagina; that on this account and because the clitoris is not touched there is much less danger of alarming hemorrhage; that too great separation of the ends of the bone is prevented by the action of the adductor longus and gracilis muscles; and that immediate healing is more likely between two smooth ends of bone than after the division of a joint.

Bossi’s Operation For the Artificial Induction of Labor.—F. Varaldo (II Policlinico, December 6, 1902) gives a minute description of Bossi’s dilator, an instrument resembling the 6-branched dilator used in France, but having only 4 branches, the length of which is sufficient to permit the joints to remain entirely upon the outer side of the genitals when the instrument is applied to the cervix. Its entire construction of metal insures the possibility of perfect disinfection, and it is claimed that with it dilation of the cervix can be accomplished in 20 minutes, without laceration.

Influenza in the Three Phases of Maternity.—The lowered state of resistance in the nervous system and hence in the whole organism during pregnancy renders the pregnant woman more vulnerable in epidemics of influenza, according to Simone (II Policlinico, December 13, 1902); and the special predilection of the pathogenic agents of influenza and of their toxins for the nervous system adds to the gravity of the prognosis under such conditions. Further, repeated observations have shown that the infection induces swelling and softening of the uterus, with congestion of the endometrium, resulting frequently in metrorrhagia sufficient to dislodge the ovum and cause its expulsion; or, if it be retained, the broken continuity of the uteroplacental septum, resulting from the abnormal condition, may allow the passage of the infection to the fetus. In the case of a pregnant woman affected with influenza the author seeks in every possible way to fortify the physiological powers of the organism; and should evidence of involvement of the genital organs appear, absolute rest in bed and administration of hydrazists in drop doses, together with the usual symptomatic care, have, in his experience, frequently prevented spontaneous expulsion of the ovum. A more complicated problem is to be solved when the infection induces a cardiac insufficiency which menaces the life of mother and child. If the fetus has not reached a viable age, Simone questions the propriety of intervention as recommended by many obstetricians, but trusts to appropriate medication. Should pregnancy be well advanced, however, and the condition of the fetus demand it, he advises the induction of premature birth. The baneful influence of influenza upon parturition is illustrated in the report of a case in which the mother’s life was sacrificed to religious scruples against instrumental interference. In view of the uterine inertia which this disease induces, the author holds that the obstetrician should stand ready always to effect a rapid dilatation of the cervix, and forceps delivery. As in pregnancy and parturition, so also in the puerperium, are the untoward effects of influenza seen, as evidenced by metrorrhagia, retarded involution and septic infection.

A Case of Oxalic-Acid Poisoning.—R. Kobert (Cent. für innere Med., November 15, 1902) has shown before this that in oxalic acid poisoning there is a deposition of crystals of calcium oxalate in the kidneys; and this was considered to be strong evidence of oxalic acid poisoning. He now reports the
case of a man, who was seen to drink some fluid, apparently with suicidal intent, and was, a few minutes afterward, found dead. The post mortem examination showed that there had been caustic action upon the upper part of the digestive tract; the kidneys were hyperemic; the blood did not coagulate unless calcium chloride was added; and in the blood there were numerous crystals of calcium oxalate. The gastric contents contained oxalic acid. These conditions demonstrated that it was a case of oxalic acid poisoning. The observations of the crystals in the blood and of the uncoagulability of the blood were considered to be extremely important.

The Bactericidal Action of Urotropin.—Czyniński (Przegl. lekarski, August 16, 1902) seeded tubes, containing urine obtained from a person who received 4 gm. of urotropin daily, with staphylococcus pyogenes aureus, bacillus coli communis and bacillus typhosus. At the end of 36 hours (incubation at 37° C.) the organisms could be recovered, but no further development had taken place. He then dissolved 2.6 gm. of urotropin in 100 cc. of sterile urine. Of this, varying portions were added to plain urine so as to contain from 0.1% to 2.6% of urotropin. The tubes were inoculated with staphylococci. In none did any growth occur. These experiments showed that urotropin possesses marked antiseptic properties, occupying in this respect a place between carboic acid and bichloride of mercury. He believes with Sachs that the dose of urotropin should be large, about 4 gm. daily.

On the Late Recurrence of Cancer.—Geinats (Russki Vratch, Vol. 1, No. 44) draws the following conclusions from the literature and his own observations: (1) Cancer may recur at any time during the life of the patient. Even if 20 years have elapsed from the time of the operation there is no guarantee that the growth will not recur at the original site or in the neighboring lymphatics. (2) Volkman's teaching that cancer may be considered cured if the growth does not recur within 3 years is not correct, for in 15% of the cases recurrence is observed after 3 years. (3) As the time after the removal of cancer lengthens, the probability of its recurrence is correspondingly diminished. (4) The course of late recurrence does not differ from that pursued by an early recurrent growth; it is as malignant and demands immediate operation. (5) All forms of cancer are equally predisposed to late recurrence. (6) The origin of the growths which recur late is the same as of those which recur early, and they spring from portions left at the time of the operation. (7) Small portions of the tumor may remain dormant for many years, preserving the capacity for growth at the appearance of favorable conditions. (8) Late recurrences are observed principally in persons of strong constitutions and who are not debilitated by exhausting diseases and syphilis. (9) All the data concerning the curability of cancer, based on 3 years' observation, require revision.

Endovenous Treatment With Sublimate (Bacelli's Method) in a Grave Case of Malignant Pustule.—G. Antonelli (Il Policlinico, December 13, 1902) reports a case of malignant pustule which developed the gravest symptoms despite all efforts to arrest its progress by the usual means. Prompt amelioration followed the endovenous injection of one-third of a Pravaz syringeful of 1 per cent. solution of sublimate, and 2 subsequent injections of one and a half syringefuls effected a complete cure.

The Relation Between Malaria and Anopheles.—Favr (Russki Vratch, Vol. 1, No. 37) obtained corroborative evidence of the correctness of the mosquito theory from his observations in malarious districts of Russia. He found anopheles wherever malaria prevailed. He also found a zygote in the stomach of one mosquito, and, by infecting mosquitoes with malarial blood, was able to observe the various stages of development of the plasmodium within the body of the insect.

Scarlet Fever Without Fever.—Steenebruggen, of Liège, Belgium, (Annales de la Société Médico-Chirurgicale de Liège, July, 1902), has reported 3 cases of
scarlet fever in children which, while typical in other respects, ran an apyretic course. In one case the great rapidity of the pulse with the absence of fever made the condition most striking. The source of the contagion was plain in each case, making the diagnosis certain.

Varicocele in Childhood.—Broca (Le Bulletin Médical, November 22, 1902) presented a boy of 14, with a large varicocele, which was supposed to have followed a hernia. The hernia was said to have been easily reduced, but the varicocele persisted. This condition, which is common in young men and boys, is always found on the left side, and is not due to venous stasis, He believes it to be caused by persistence of too many veins, derived from the Wolffian body. At operation, the veins of the pampiniform plexus were resected, and a cyst in the head of the epididymis was found and removed, There was no evidence of any hernia.

Erysipelas in a Young Infant Treated With Antistreptococcus Serum.—The experience of R. C. Rijo (Chronica Médico-Quirúrgica de la Habana, Year XXVIII, No. 20, 1902) in the treatment of a case of erysipelas with anti-streptococccic serum is sufficiently favorable to justify the author's faith in the remedy. The patient, an infant of 3 months, was first seen by Rijo upon the twentieth day of the disease, when it had become generalized, the entire body being more or less affected. Other remedies having failed entirely of effect, an injection of 20 cc. of the serum was given, with a resulting improvement sufficient to make a second injection unnecessary; the further treatment consisting in applications of guaiacol liniment. A complete cure was effected within 12 days after the injection.

Cirrhosis of the Liver and Diuresis.—In the Medizinisch-Chirurgisches Centrallblatt (November 21, 1902) Schuster notes the good effect of abundant diuresis in the treatment of atrophic cirrhosis of the liver. Tapping generally gives but temporary relief. With good cardiac function, sparteine, potassium iodide, calomel, tincture of iodine, iodipin, etc., are all of value, by increasing diuresis and so causing recovery for a time, at least. Several case-histories are reported to show the value of iodine and its derivatives in reducing the ascites of hepatic cirrhosis by increasing diuresis.

The Diet in Lithemia.—In the Bulletin Médical, (December 10, 1902), Pascault describes the correct diet for a gouty or lithemic patient. For breakfast he allows milk, sugar and bread, butter and salt; for lunch, green vegetables, potatoes or other farinaceous food. Fresh fruit, bread, butter, salt, water and coffee, with sugar; and for supper, soup with milk, bread, green vegetables, stewed fruit, water, bread, butter and salt, all in exactly weighed quantities. Thus no nitrogenous food is given and but little albumin at first. Later eggs and a little meat may replace the starches, and cheese may be added. All food should be well masticated, and no surplus should be taken.

A Case of Chronic Aortitis.—De Grandmaison (La Médecine Moderne, December 10, 1902) reports an interesting case of Hodgson's disease, in a man of 46, probably caused by lithemia, since he had had no infectious disease except scarlet fever at 14 years. Dyspnea has been noted for 6 years, but was relieved temporarily by rigid diet and trinitrin.Suddenly he complained of severe pain in the chest; 6 hours later of another severe pain higher up in the chest, followed 6 hours later by terrible pain, persisting until death. This was explained by, first, rupture of the media, then rupture of the adventitia, and, finally, by increasing rupture of the aorta, with death following rapidly. The case-history is given in full.

Iodothyrin and the Continued Electric Current in Raynaud's Disease.—Bal tus (Journal des Sciences Médicales de Lille, November 8, 1902) has reported the case-histories of 2 patients, aged 31 and 35 years, with Raynaud's disease, treated with iodothyrin and the continued electric current. While the constant current gave instantaneous and permanent results, iodothyrin had but
a slight and fugitive effect on one patient, not affecting the other at all. These researches confirm the remarks made by Ranaud in 1866.

Is the Tubercle Bacillus a Saprophyte?—A. Leray, in _La Médecine Moderne_ (November 5 and 12, 1902), states that the hypothesis that all tuberculosis occurs by direct contagion only is no longer believed. In some cases the disease is due to auto-infection. He finds cases of direct contagion rare in tuberculosis; yet, in people living by themselves, solitary prisoners for example, phthisis is very frequent. Pathology shows that the capillaries are first infected, the bacilli coming from the intestines, possibly, through the mesenteric glands. Bacteriology shows that the bacilli are rarely found in incipient lesions, but are found in abundance in cadavers. Alcoholism, overwork, impure air, poverty, etc., all predispose to the condition, before the bacillus enters the organism. Leray urges counteracting these influences in the prophylaxis, since measures taken against the bacillus alone have proved unavailing. He believes that research shows that the tubercle bacillus is primarily a saprophyte.

On the Influence of the Contents of the Large Intestine Upon Strychnine.—Meltzer and Salant (Cent. für innere Med., November 1, 1902) have shown that even when the kidneys are extirpated there is no cumulative effect of strychnine after giving repeated small doses. It was thought that there might be an eliminative action of the digestive tract. The contents of the digestive tract were, therefore, investigated for strychnine, after giving large doses; but no strychnine was found. This poison was then added to the contents of the digestive tract, but its presence afterward could not be determined. Emulsions of various organs had no effect upon the strychnine; it was, therefore, concluded that the contents of the digestive tract in some way destroys or alters the strychnine. It was found that this action is apparently confined to the contents of the large intestine. Strychnine, when added to the stomach-contents or to the contents of the small intestine, could be subsequently demonstrated to be still present, but when added to the contents of the large intestine, or when some of the contents of the large intestine was mixed with the contents of the stomach or of the small intestine, it was found that the strychnine disappeared.

Do Aspirated Exudates Show Autolysis?—J. Schutz (Cent. für innere Med., November 22, 1902) states that some preliminary experiments on this question had apparently given negative results. Two positive results have, however, recently been reported by Umber; consequently, further investigations were undertaken by the author. The fluid of the exudate was placed in flasks, toluol was added, and the flasks were placed in an incubator. The coagulable albumin was then removed and the nitrogen of the filtrate determined. It was found that there was no increase of the uncoagulable, as compared with the coagulable, nitrogen, in 7 cases, the exudates used being from cases of ascites and of pleuritic effusion. The contrary results obtained by Umber were probably due to the presence of large numbers of cells in the exudates examined by the latter author, since autolysis is a property of the most varied forms of cells. At best, the autolysis in Umber's cases was very slight; and, while exudates and transudates may have an autolytic action in the body, they apparently have little or none when removed from the body.

Sciatic Neuralgia and Carbolic Acid.—After all other methods of treatment had been used without success, Claffi (II Policlinico, December 6, 1902) resorted to daily injections of carbolic acid dissolved in alcohol, distilled water and glycerine, alternately upon the right and left side, in the course of the sciatic nerve; with the result that, what is hoped to be, a permanent cure was effected.
FORMULÆ.

SOME TIMELY FORMULÆ.

Acute Rheumatism.—Prof. George Dock, of Ann Arbor, recommends the following prescription for acute rheumatism:

| Sodium salicylate. | q. s. ad. | fl. 6 oz. |
| Sodium carbonate. | 2 dr. |
| Camphor water. |

M. S.: One tablespoonful in water every hour.

The Treatment of Granular Pharyngitis.—M. Moure (Presse Médical) recommends painting the back of the throat twice weekly with the following:

| Iodine, | 0.25 gm. |
| Potassium iodide, | 0.3 gm. |
| Laudanum, | 3 gm. |
| Glycerine, | 129 gm. |

M. This may also be used as a gargle in a strength of a teaspoonful to a half tumblerful of tepid water.

The author also recommends the use in similar proportions as a gargle, or pure as a local application, the following:

| Sodium biborate, | 6 gm. |
| Antipyrine, | 4 gm. |
| Tincture of guaiacum, | of each 5 gm. |
| Spirit of peppermint, | |
| Neutral glycerine, | 140 gm. |

Painful Cough.

| Dil. hydrobromic acid, | 1½ dr. |
| Spts. chloroform, | 1½ dr. |
| Syrup, | 4 oz. |

M. S.: Teaspoonful every 3 hours.

Enuresis.—(For an adult):

| Tinct. ferri chloridi | q. s. ad. |
| Tinct. nucis vomicae | 6 dr. |
| Tinct. cantharidis | 2 dr. |
| Syr. simplicis |
| Aque |

M. S.: One ounce 3 times daily.

For a child:

| Strychninae | ½ gr. |
| Pulv. cantharidis | 1½ gr. |
| Morphinae sulphatis | 1 gr. |
| Ferri pulv. | 20 gr. |

M. et ft. pil. No. 40.

S.: One thrice daily.

For Hemorrhoids.

| Morphinae sulphat. | 3 gr. |
| Cocaine hydrochlor. | 20 gr. |
| Acid. tannici | 30 gr. |
| Ung. belladon. | ½ dr. |
| Ung. zinci oxid. | ½ dr. |

M. ft. ung.

S.: Apply locally night and morning.

Gouty Headache With Anemia:

| Acidi salicylici | q. s. ad. |
| Ferri pyrophosphatis | 6 dr. |
| Sodii phosphat. |
| Aquæ destil. |

M. S.: One tablespoonful in water.
In the death of Dr. Theodore Gaillard Thomas, the medical profession of this country loses one of its brightest luminaries. Educated in the Medical College of Charleston, and a native of the South, he possessed those rare traits of courtesy, urbanity and professional ability which have given so much prominence to the large colony of southern physicians in New York. As a gynecologist, Dr. Thomas undoubtedly led the profession, and the fame of his work as an author and operator is world wide. He was a consultant to six New York hospitals and, although he had given up active practice, his consulting work kept him much engaged. Dr. Thomas was closely connected with the late Dr. Gaillard, founder of this Journal. For many years and up to December, 1902, he had been a valued member of its editorial board.
DRUG ADULTERATION.

The recent exposure by the Health Department of New York of the adulteration of phenacetin with acetanelid proved highly embarrassing to many retail druggists. According to the evidence of some of the more truthful of these men, they have been purchasing from peddlers and others at from quarter to half the market price. The druggists were well aware that the phenacetin they were purchasing was highly adulterated, but their greed for gain overcame their probity and they stooped to one of the meanest of tricks. Unfortunately this is nothing new. Every day a large per cent. of the drug clerks hand out adulterated drugs to unsuspecting customers. The physician cannot understand why the medicine seems inert. Let him awake to the fact that substitution and adulteration is the general cause of the inertness of drugs. Results show that such frauds are not confined to preparations bought from the supply houses. They are equally numerous in preparations made for their own trade by the retail druggists and sold under their own labels. Few of them can truthfully plead ignorance of what they are doing. They are in a great many instances deliberately tampering with life by rendering abortive the efforts of the physician to aid nature in overcoming disease.

There is absolutely no excuse for such a state of affairs. The manufacturing chemists have no trouble in buying pure drugs and in dispensing their products in the pure state. The retailer has the same opportunity.

The laws of every State should make drug substitution and adulteration an indictable offense. A few prosecutions would undoubtedly lower the amount of avarice possessed by altogether too many retail druggists.

ALCOHOLISM AS A SPECIALTY.

The more enlightened members of the medical profession are coming to recognize the fact that inebriety is a disease, and should be treated from a scientific and therapeutic standpoint. It is a surprising circumstance that a great body of trained men, who are searching for the causative agent of every ill that flesh is heir to, should so long neglect the study of an ailment which is not only the foundation of many diseases, but which causes over three-quarters of the crime committed in every commonwealth.

Within the past few years a few medical men have taken up the study of inebriety in a systematic manner, and have demonstrated that it is a disease as amenable to treatment as any disorder of the mind or body. But in the number of these investigators is comparatively small when the great body of physicians is considered. To the shame of the profession it
should be said that there is a surprising lack of interest in this work. As a specialty, it offers wonderful opportunities, but greater and far better than that, it offers chances for noble and philanthropic work exceeded by no other branch of medicine.

Liquor is the bane of mankind. With stealthy steps it slowly winds its sensuous tendrils about the bodies of unsuspecting victims, and eventually drags them down to ignominy and disgrace. Strange indeed is it that the profession does not wake up to the necessity of curbing the power of the liquor demon. John D. Rockefeller has set aside millions for the endowment of an institute for research work. No doubt the etiology and treatment of inebriety will be studied by the investigators in connection with their other work. Dr. T. D. Crothers, of Hartford, was one of the first to study the cause and effects of alcoholism and has done yeoman service. Another pioneer is Dr. Isaac Oppenheimer, of this city, whose long experience as a specialist in nervous diseases gave him unexcelled opportunities for the observation of cases of this nature. Indeed, his success in such cases was so marked that it attracted the attention of a number of gentlemen who were philanthropically inclined, and for the purpose of benefiting humanity they have organized the Oppenheimer Institute.

There are other physicians of lesser note in various parts of the country who are devoting themselves especially to the care of inebriates, but the number is far too small. There should be at least one man in every community of any size recognized as a specialist in inebriety, and he should endeavor to educate the general public along proper lines. An united medical profession could do more to stamp out intemperance than all the political parties, sensational pulpits and professional temperance agitators combined.
MEDICAL HAPPENINGS IN NEW JERSEY.

There are 172 physicians in Jersey City, whose alma maters are given as a matter of record. The colleges and the numbers of representatives are given below: University of New York, 40; P. & S., New York and Bellevue, 31 each; Homeopathic, New York, 16; Univ. of Penn., 10; Woman's Med. College, 8; Long Island Hospital, 5; Baltimore, Univ. of Maryland, Cleveland Homeopathic, Vanderbilt, Univ. of Virginia, Albany, Ohio, Eclectic, 2 each; Harvard. Dartmouth, Queen's, Ireland; Griefswald, Erlangen, Leonard. Cleveland, Leipsic, Gottingen, Jefferson, Halifax, Hahnemann of Philadelphia, and P. & S. of St. Louis, 1 each.

The members of the Bayonne Medical Society were entertained by Dr. A. C. Forman, Feb. 19. The feature of the meeting was a general discussion on appendicitis. Supper, a regular feature of the meetings of the medical gentlemen, was served by the host and Mrs. Forman.

Alice H. Burdick, M.D., 60 years old, who practiced medicine in New York city, but who lived in Passaic, was killed by a train, Feb. 19, at the Passaic station.

Believing the woman was alive, a physician was sent for. Opposite the station one of the messengers saw Dr. Edwin De Baum. He hurried over, only to find the victim was his mother. He was so much shocked he had to be led away. Dr. Burdick was one of the first women to graduate in medicine. She had practiced for many years.

The twelfth annual report of the State Board of Medical Examiners of New Jersey gives considerable space to the discussion of reciprocity in the matter of licentiates from other States. Medical reciprocity between New Jersey and other States whereby the examining board of one State indorses other licentiates in lieu of their own examination has been tried on the one hand and the individual merit of the applicant or indorsement has been tried on the other, and the latter has been found by far the most satisfactory to the present board of managers, and the mutual reciprocity system has entirely abandoned. The report states that after wide experience and much consideration the board has adopted as a basis of indorsement the personal fitness and professional qualifications of the candidate, plus a State certificate of license, issued after examination in substantially the same medical branches and under essentially the same conditions as the law of the State and the regulations of its board require. Equally as high qualifications and as full compliance of the law are required of candidates for indorsement as of candidates for examination. This system could not prevail under the mutual reciprocity system, hence the abandonment of the latter. The five conditions of indorsement relating to the moral character of the applicant, the academic education, medical training, nature and extent of the State examination, and average attained, are fully set forth. According to the present report licentiates were indorsed who represented 26 colleges and eight State examining boards.

Dr. Charles B. Leavitt died February 18 at his home in Trenton, of pneumonia.

Dr. Leavitt was a son of Dr. Lyman Leavitt, of Trenton, and had been practicing for several years. He studied med-
icine under his father and later received his degree from the University of Pennsylvania.

Dr. Leavitt for two terms held the office of county physician. He is survived by a widow and one son.

The annual dinner of the Practitioners' Society of the Oranges was largely attended. In addition to the physicians, many lay friends were present and enjoyed the excellent menu and the oratory afterward. A unique feature of the affair was that no "M.D." made an address, the speechmaking being done by a clergyman, a lawyer and a business man.

Dr. Stephen G. Lee, of East Orange, was toastmaster, and the committee that arranged for the dinner comprised Dr. D. A. Cator, Dr. Thomas N. Gray and Dr. Ralph H. Hunt.

Henry H. Hall, an East Orange business man, was the first speaker. He spoke of the value to a physician of inspiring his patients and others with respect for himself and his calling. It cut him very deeply when a medical man so far forgot himself as to allow a person with his hair plastered down over his left ear call him "Doc." He warmly announced he would not allow a man who permitted himself to be so addressed to treat a member of his family. Rev. Walter Reid Hunt, pastor of the Unitarian Church, Orange, spoke interestingly of the relations existing between the clergyman and the physician, and contrasted the old and new schools. Mr. Hunt declared it to be the duty of the medical profession to enlighten the public on such matters as the blessings of vaccination and to let them know an isolation hospital is not a pesthouse. Arthur J. Baldwin, an East Orange lawyer, spoke of the jokes made by the comic men at the expense of professional men, especially doctors and the men of law, and remonstrated against the monotonous jibes.

The Newark Health Board employs twenty-one inspectors, and the maintenance of the department amounts to $140,000 a year. The Jersey City Health Board is run at a cost of $4,000.

Dr. G. Eugene Harbert, of Pemberton, has located at Orange.

A children's ward is to be added to the Bayonne Hospital, at a cost of $3,000.

The thirteenth annual meeting of the American Electro-Therapeutic Association will be held in Atlantic City September 22-24.

Dr. Carlos Allen died February 19 in Vernon, in the eighty-eighth year of his age. Dr. Allen was a native of Vermont. He came to Sussex county in 1842, and had lived in Vernon since 1846. He was a man of liberal education and culture. At one time he was president of the Sussex County Medical Society.

An osteopath has opened an office in Morristown.

Dr. Charles B. Sutgreaves has been appointed physician at the Mount Holly County House to fill the vacancy caused by the resignation of Dr. Eugene Harbert.

The year of 1902 was a very successful one for the Mountainside Hospital, Bloomfield. There were 381 patients cared for, of whom 274 were treated without charge. The trustees are considering the erection of a new building to cost $35,000. Over half of this amount is now in hand.

Dr. George A. Harris, one of Bridge- ton's oldest physicians, dropped dead in his office February 9. Dr. Harris was born at Daretown, Salem County, February 18, 1844. He served in the Civil War and was wounded at the battle of Chancellorsville. For the last thirty years he had practiced in this city.

The marriage occurred in South Orange February 11 of Dr. C. Morris Peabody,
of Caldwell, and Miss Rosa Nell Wright, of Denver, Col.

Dr. Edward P. Luce, the oldest practicing physician in Bayonne, and one of the oldest in the State, celebrated with his wife, the fiftieth anniversary of their wedding, February 23. They were the recipients of many gifts from relatives and friends.

The officials of the State Hospital for the Insane at Morris Plains, have asked the legislature for $85,000 for equipment for the institution. The maintenance fund will be in the neighborhood of $350,000.

The New Jersey Electro-Therapeutic Sanitarium Company has been incorporated with a capital stock of $100,000.

Dr. H. C. H. Herold has been re-elected to the presidency of the Newark Board of Health.

At the February meeting of the Orange Mountain Medical Society, Dr. Thomas A. Harvey read a paper on "The Symptomology of Appendicitis" which was followed by a discussion. At the adjournment Dr. Carl Buttner entertained the members at dinner.

Dr. J. P. Mears, former house surgeon at Christ Hospital, Jersey City, has been appointed an acting assistant surgeon in the navy. Dr. T. Albert Kirk, the interne, has been promoted to house surgeon, and Dr. H. J. Weld, of Detroit, has been made interne.

According to the reports made to the Bridgeton Board of Health there were over 300 cases of grip in that city at one time last month.

Dr. Manning N. Robinson, of Newark, has been very ill with blood poisoning, contracted during an operation. He has been one of Newark's best known practitioners for 30 years, and is one of the staff of St. James' Hospital.

The Senate has confirmed the nomination of Norman Fox, of Morristown, to be manager of the Epileptic Village.

Dr. John C. Parsons entertained the Jersey City Practitioners' Club on March 10. Dr. C. H. Purdy was the essayist.

The Board of Health of Jersey City has adopted an ordinance to protect patrons of barber shops. It provides that the floors and woodwork in all barber shops shall be scrubbed at least once a week. The shop must be swept daily. No one shall sleep therein, and no skin disease shall be treated therein unless the barber be a licensed physician. Cleanliness on the part of the barber must be observed. He cannot blow short hairs from a man's neck after a haircut, but instead must use a towel or fine hair brush. Brushes, razors, combs and other instruments must be sterilized in hot water or in a solution of formalin within five minutes after their use. Every customer must be provided with a perfectly clean sterile towel. Razors and razor strops shall not have the hands of the barber rubbed upon them nor his breath blown upon them during the process of sharpening. A penalty of $10 is to be levied for each and every offence.

Dr. Wilbur A. Blauvelt, of Newark, died February 18, aged 27.

Mrs. Frances A. Gray, widow of Dr. William K. Gray, and mother of Dr. Thomas N. Gray, of East Orange, died in Belvidere, March 3, aged 65.

Charges having been filed against Dr. Walter Taylor, house physician of the Jersey City Hospital, by the nurses of the institution, he has been suspended. Dr. Mahr, of Brooklyn, is his successor.

Dr. J. Edward Stubbert, of New York, will lecture on "A Historical Sketch of
Some So-called Consumption Cures," April 6, before the members of the William Pierson Medical Library Association, of Orange. Prof. Walter B. James spoke on "Modern Aspects of Malarial Infection" at the meeting of March 2.

Dr. J. Clarence Singer, of Perth Amboy, was married to Miss Margaret Kenny, of South Amboy, February 21.

Dr. John F. Hagerty, of Newark, has been very ill with double pneumonia.

The appointment of Dr. Bruce S. Keator, of Asbury Park, as manager of the Rahway Reformatory, has been confirmed.

Dr. J. A. Stites, of Springfield, has been seriously ill.

Dr. Lemuel G. Goode died February 24 in Jersey City, of pleuro-pneumonia, after an illness of four days. His health had been impaired by the amputation of a leg in December, 1901. He injured the leg by hitting it against the hub of his wagon, and blood poisoning developed.

The amputation was performed in Christ Hospital, Jersey City, under spinal cocainization. Dr. Goode retained consciousness and made notes of the operation. He said there was a sudden and sharp pain when the surgical implement passed through the bone, but that there was no other sensation.

Dr. Goode had mechanical tastes. He had an automobile and a steam launch built from his own designs. He leaves a widow and four children. He had lived in Jersey City from early boyhood and graduated from Long Island Hospital in 1887.

Dr. James F. Ackerman is vice-president of the new Seacoast National Bank, recently organized in Asbury Park.

Dr. and Mrs. Wilfred F. Harrison, of Bloomfield, celebrated the fifteenth anniversary of their wedding March 6.

Dr. A. E. Peters, a physician who for forty years had been one of Newark's leading pharmacists, died of paralysis March 2. He practiced in Newark several years before entering the drug business.

A training school for nurses has been opened at the Beth-Israel Hospital, Newark. Miss Sophia A. Mang, a graduate of the German Hospital, will be in charge.

The New York Medical Critic announces that each subscriber to that journal will receive a free copy of the Medical Index next month (March, 1903).

The volume will contain names, place and date of publication, price, circulation and names of editors and publishers of over 600 of the principal medical publications in this country and abroad, and also the titles and authors of each article published during the year 1902, arranged according to subjects and alphabetically. When it is noted that the list is complete up to January, 1903, it should prove especially valuable in bridging over the period which has elapsed since the index medicus was discontinued.
NON-RECURRENCE OF SARCOMA TEN YEARS AFTER AMPUTATION OF THE LOWER TROCHANTER.

By JOHN A. WYETH, M.D., LL.D., of New York, President of the Faculty of the New York Polyclinic Medical School and Hospital.

The following case is deemed worthy of record for the reason that an interval of ten years has elapsed since amputation of the right lower extremity for an osteosarcoma involving the condyles of the femur and the knee joint.

The amputation, as far as the flaps were concerned, was the same as advised for disarticulation of the hip, although the femur was divided at the lesser trochanter, the head and neck remaining in situ.

The patient, a young lady of seventeen, strained her right knee while exercising in a gymnasium, in February, 1893.

I first saw the patient in June of that year, recognized the tumor as osteosarcoma and advised amputation, which was performed June 27, 1893. This patient is still under observation and is in perfect health. The neoplasm was carefully studied at the time, and there can be no doubt as to the diagnosis.

The frequency of recurrence either in the stump or in the central organs after amputation for osteosarcoma may be emphasized by a short synopsis of a group of cases which I collected and presented to the Philadelphia Academy of Surgery in 1901. In these cases disarticulation at the hip joint had been performed, after the method advised by the writer, in 117 cases which survived the operation, and of these I was able to obtain a more or less satisfactory history of 83.

Of these 83 cases the disease recurred with fatal termination in over 63%. One survived four years and died from recurrence in the lungs; another 3½ years and died from recurrence in the abdominal viscera; five patients survived two years; one survived twenty months; seven survived eighteen months; one, sixteen months; one, fifteen months; three survived fourteen months; two died thirteen months after the operation; five survived one year, and three died within the first year. Four others died in eleven months; two at nine months; one in eight months; one in seven months; eight patients survived six months. One is reported having perished in "several months" from recurrence; another fatal case recurred "very early" in the lungs, and another patient died "in a few months."

The following summary gives a location of the recurring neoplasms
in these fatal cases: Lung, 23; lung and brain, 1; lung and pleura, 1; lung and abdomen, 1; pleura, 2; abdominal viscera, 3; liver, 1; abdomen and chest, 1; stump, 10; stump and mesenteric glands, 1; stump and general metastasis, 1; stump and iliac fossa, 1; lymphatic, just above Poupart's ligament, 1; sacro-iliac synchondrositis, 1; location not given, 4; apoplexy, 1; total, 53.

Of all the surviving patients, one, a boy, fourteen years old at date of operation, was living and well nine years after the operation. Two others survived 7 years and were then living, and two were living 5 years after amputation; three survived 4 years and were still living when reported, while in the 3-year group without recurrence there were three cases; three patients survived 2½ years, and nine were reported as surviving 2 years after operation; one patient was living 18 months, and another, a child only five months old when the amputation was done for myxosarcoma, was living 14 months later.

My study of the list of cases upon which this report was based led me to conclude that the fact of the neoplasm being confined to the bone, whether endosteal or periosteal, or involving the soft parts, has little, if any, influence upon the ultimate safety of the patient.

Of five patients on whom I made an amputation at the hip joint for sarcoma, in the one who survived the longest (the man being now alive, five years after operation), the tumor which involved the trochanteric region of the femur had infiltrated the soft tissues as high as the obturator foramen, from which a lot of suspicious tissue was removed by curettage. This case was allowed to suppurate during convalescence. Three years and a half after the operation the growth recurred in the stump and was again subjected to streptococcus (pyogenic) infection, and this was followed by seeming disappearance of the neoplasm.

The frequency of recurrence in the central organs after amputation emphasizes the necessity and importance of early diagnosis and operation, before the sarcomatous elements can be carried to, and deposited in, the internal organs, where under proper conditions they sooner or later proliferate.

19 West Thirty-fifth street.

THE TREATMENT OF ITCHING.

By EDWARD BENNET BRONSON, M.D., of New York,
Professor of Dermatology, New York Polyclinic Medical School and Hospital; Visiting Physician City Hospital; Consulting Physician Babies' Hospital.

As in the case of many other diseases, we acquire much valuable information with regard to the best treatment of itching through an inquiry into Nature's methods for its relief. It is the instinct of every animal, when attacked by itching, to scratch. In most cases this is effectual and suffices. In those forms of itching which might be termed physiological, which are not accompanied with disease, scratching under provocation of itching undoubtedly often has a salutary effect. It tends to improve the nutrition, it facilitates the fall of deciduous hairs, it would liberate impactions from the follicles and promote the process of desquamation.
Scratching relieves itching in several ways.

(1) By removal of the irritating cause. In mere itching, however, this is a misdirected instinct. The instinct of the animal in scratching implies the suggestion of an attack, of a sting or a bite of some insect which arouses the resentment of the skin. The most natural relief would be by scratching. In disease the same impulse, though a false and misdirected one, obtains, and yet relief follows in many cases, at least, temporary. This is chiefly due to the fact that a diversion is created.

In the condition of itching there is what may be described as an engorged sensation. The irritation is a vague indeterminate one which presents no certain presentations to consciousness. The result is sense of fret and vexation. It is always the effect of accumulated nervous energy which finds no sufficient outlet. By the act of scratching there is a dispersion of the engorged sensation, converting it into a muscular energy and frequently incidentally a sensation of pain. Complete relief by scratching does not result until it is carried to the point of pain, and pain is antipathic to itching.

The objections to this mode of relief are that it is liable to aggrivate any inflammation that may be present and render liability to recurrence of itching in a severer form still greater. Moreover, it induces hyperemia of the part which is always an accessory factor in itching inflammatory diseases. The question is how to avail ourselves of the relief obtained by this rude method so as to avoid the dangers resulting from it.

In many forms of itching, especially those unattended by inflammation, something to excite the skin to a more definite sensation or in the line of a perceptive sense will frequently accomplish the same result. Thus, instead of using the nails, as is the common habit, clawing the skin, the same effect can often be produced by stroking the surface in a reverse direction with the back of the nails.

There is a certain form of itching which seems to be dependent upon the conditions incident to old age. It is known as pruritus senilis. It is a well-known fact that disturbances of function, particularly sensory disturbances, are especially liable to occur when the normal sensibility of the part is obtunded. Under such circumstances stimuli which tend to restore the nerves to their normal susceptibility by rendering impressions more perceptible would diminish the liability to disturbances and vexation.

In cases of pruritus senilis it often happens that a judicious employment of friction or other stimulation of the skin decidedly diminishes the tendency to pruritus. In some cases the use of a brush, not too stiff, at night, or a rough glove may be employed; this will accomplish the same effect. It is in such cases that we see the best effects of electricity; faradism, if frequently employed, either over the entire surface, or frequently, when only limited to the spine, is a measure of considerable value. It is said that franklinization with the electric breeze is often of advantage, although I have had no personal experience with this measure. By means of firm pressure it is sometimes possible
to accomplish the same result as by friction, or by the use of other measures suggested. Anything which will transform the indefinite irritation of pruritus into a tangible sensation suffices to allay it.

A method suggested some years ago by Allingham for the relief of pruritus ani is dependent upon this fact, viz., the introduction into the anus at night of a conical plug of some hard material and to be retained there during the night, but the usual measures by which we create the requisite diversion consist in the application of certain remedies of an effective character which produce a temporary smarting or burning effect upon the skin, which, however, are little liable to aggravate the inflammation.

Cologne water in some simple cases of itching acts as an antipyretic, the same may be said of many alcoholic solutions of stimulating drugs; menthol, chloroform, thymol, camphor and other similar substances owe their good effect, in part at least, to this quality, these drugs containing other properties which probably have a still more potent effect in the relief of pruritus. Among the most effective antipruritics that we possess must be counted menthol. It is well known that the action of this drug has a decidedly stimulating effect upon the temperature sense. The feeling of coolness which it produces pretty certainly tends to annul itching by transferring the excitation from the nerves of contact to the nerves which control the sense of temperature. It is best applied in the form of an alcoholic solution or in cologne water. For ordinary purposes a 2% solution suffices, although in many cases stronger preparations may be used. Chloroform and thymol are both to a certain degree anesthetic to the skin. Chloroform combined with alcohol, or, in some cases, associated with menthol, is one of the most reliable remedies in the pruritus of urticaria. In the form of liniment it will sometimes allay the itching of pruritus ani when all else fails. Camphor always possesses this dual action, alleviating the itching partly by the smarting which its application causes and partly by its action as a direct sedative or anesthetic to the skin. Thymol is also a cutaneous anesthetic.

In many cases of generalized neurotic pruritus a 2% alcohol solution, either alone or combined with carbolic acid, gives most effectual relief.

Of the many remedies in use for the relief of itching, with little question the first place should be accorded to carbolic acid. It has been aptly called, by Unna, the opium of the skin. Although useful in various combinations and in various strengths, in order to be most efficacious it should be used in a pretty concentrated form. The formula which more than any other I have found serviceable for many years is a solution in linseed oil with the addition of a small quantity of liquor potassae, one dram; carbolic acid, two drams; linseed oil, one ounce. This is a very strong solution and preparation, which, if injudiciously used, would be corrosive; when applied lightly over the surface it will allay itching more certainly and for longer periods than any other remedy with which I am familiar. It should not, however, be used very extensively, although I have never seen any toxic effect resulting from it; nor should it be rubbed in. It is best adapted to cases in which the pruritus is
limited to comparatively small areas, as pruritus of the anus, pruritus of the vulva, etc., or on the external aspects of the limbs. Of course, it is not adapted to cases of acute inflammation or to cases in which surfaces are much abraded. While this is the maximum strength, and the one which is most effectual, weaker solutions may be used as the case requires. In many cases the best effect is obtained by first applying menthol, which is quicker in its action, followed by the carbolic preparation, which has a more permanent effect. Frequently in severe cases of pruritus a single application would quiet it for the entire night. It is a fact that a large proportion of the antisepsics have antipruritic virtues. This is eminently true of mercury bichloride, which may be used in strengths varying from 1-500 to 1-2,000, in watery solutions.

It is difficult to explain the latter action except by regarding this agent as a local sedative by virtue of its hostility to all forms of life and its ability to retard excessive vital action. The marked anesthesia of the skin that is produced by concentrated solutions is doubtless due to this property. Many valuable anesthetics fail to be of value in the skin because of their inability to get through the intact epidermis. This is true of cocaine, orthoform and other similar remedies; when the surface is abraded, these remedies are of considerable value. An objection to cocaine, however, lies in the fact that its frequent use tends to cause an atony of the vasomotor nerves with the production of persistent vascular engorgement, which would tend to retard the cure of any inflammatory disease that might be present, and which also renders the part more susceptible to subsequent irritation than it was before. In some cases, however, in which pruritus is excessive, as in some cases of pruritus vulvae or pruritus ani, a resort to this remedy is indispensable, especially at the beginning of treatment. The use of a 2% to 4% solution of unguent or cocaine will allay the irritation and hyperesthesia, at least temporarily or for one night, and thus give the distracted nerves a chance to recover themselves and render more permanently curative measures more effectual afterward.

With regard to the use of internal sedatives, their use is less than is often supposed. The greater majority of them, through their toxic action, though they may give temporary relief, are apt to be followed by an aggravation of the disease. This is especially true of opiates like belladonna, and similar drugs. In some cases, more particularly of urticaria, relief is afforded by considerable doses of atropine, but the quantity of the drug required and its necessary perturbing influence upon the economy render it unsuited for the cases which are liable to be of long duration. The same may be said of such remedies as antipyrine.

When the rest has been much disturbed at night and the hyperesthesia is rendered worse by long loss of sleep, occasional hypnotics are advisable, and also the use of the bromides. Certain forms of pruritus, more particularly those attended with urticaria, are associated with a motory disturbance in the skin, more particularly affecting the unstriped muscular fibers of the bloodvessels, arrectores pylonum. Spastic contraction of these muscles has an important rôle in connection with the pruritus, hence there is an indication for the use of motor depressants
in the cases just alluded to. The effect of gelsemium is perhaps due to its property as a motor depressant more than to any other. It is a remedy, however, which is very depressing and is rarely to be recommended.

The local application of chloroform owes part of its effect to this same action, as well as the other anesthetics of the skin.

Hot water as a remedy for itching has long borne the test of experience. The sedative effect of the hot bath is well known. In order to be effectual it should be somewhat prolonged, and the sensation produced is often very decided. In the application of hot water, which is most valuable in localized areas, as of an extremity, or more particularly in pruritus of the anus or the vulva, the temperature should be at least 100 degrees, and the application should be kept up for a period of several months. The patient is directed to squat over a vessel containing hot water, and with a swab the parts are continually bathed until the slight smarting, at first produced, ceases, and then by the addition of still hotter water the temperature should be raised still higher. In this way the temperature may finally be raised to 110 degrees.

A very grave form of itching, to which certain individuals of nervous organization are subject, is the so-called winter or frost itch, pruritus hiemalis. Inasmuch as the trouble is the direct effect of the action of cold on the skin, to a certain extent this effect may be forestalled by suitable clothing. If at the onset of cold weather, as soon as the itching begins a change should be made in the underclothing and proper precaution taken to avoid chilling of the extremities, which are very commonly the seat of the itching; toward the close of day, at which time the itching is apt to begin, it is sometimes well to bandage the lower extremities, removing the bandages at night. The same treatment and remedies as described in the previous conditions of pruritus will be equally effective in these cases.

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**TETANY AND ECLAMPSIA IN CHILDLIFE.**

By RUDOLPH HECKER, M.D., of Munich, Germany.

(A Translation.)

Tetany has, for a number of years, gradually assumed the chief interest among the different forms of spasm of childlife. The remarkable course of this disease which—like a current in the Karst mountains that at intervals flows subterraneously—sometimes seems to disappear entirely, to become plainly visible again after a while; the peculiar relations of the disease to certain others, for example laryngospasm, eclampsia, rachitis, and, finally, the observation that the affection occurs much oftener than was originally thought, were the causes of a more careful study of its symptoms. To-day we possess a considerable number of recent works on this subject, but they are scattered in the various medical journals and, the results and opinions reported being

*From "von Volkmann's Sammlung klinischer Vortrage."
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in some respects quite contradictory and the dispute of the authors being by no means settled as yet, it will be a difficult task for the practitioner to obtain an applicable conception of the state of affairs, while as precise a knowledge of infantile spasm as possible is essential for him, if he means to guard himself against grave diagnostic and prognostic errors.

It is my intention, therefore, to try and give you our views of tetany, its relations to laryngospasm, rachitis and eclampsia, also to condense some of the recent observations on the character of the latter affection, and thus to sketch the outlines of a picture of the above-named diseases. I shall avoid detailing individual researches and try to select only what is most essential to preserve the distinctness of the review. Those in want of a more detailed information I refer to the respective articles (see literature).

TETANY.

This disease, for years known to occur in adults, and more closely studied by Erb, Frankl-Hochwart and others, was first described in 1855 by Trousseau as a distinct, although rather rare affection of early child-life. After its study had been neglected for some time, interest in it was rekindled when Escherich again called attention to it at the Berlin Congress in 1890. He reported its frequent occurrence at certain times and brought laryngospasm, a symptom which until then had been classed with rachitis, in causal connection with it. When Loos, soon afterward, still more precisely defined this standpoint of Escherich in an exhaustive work, and postulated: "No laryngospasm without tetany," a long-accepted doctrine (upheld particularly by Kassowitz) appeared to have received the coup de grâce. The doctrine in this form can no longer be maintained, but, unquestionably, it revived the question of tetany and caused quite a number of papers to appear pro and con, thus contributing to clear our views.

Symptomatology: We distinguish the symptoms of manifest tetany and the so-called latent symptoms. The former are known to you all, there is no difference of opinion in regard to them. The characteristic symptom is the occurrence of tonic spasms, which appear symmetrically, at first in the fingers, then in the hands and toes, and finally, after some time, in the arms and legs, very rarely in the muscles of the trunk. They cause a peculiar position of the attacked members which occurs particularly in the hand. The fact that the fingers are extended in the interphalangeal articulations, but flexed in the carpal joints and deviated toward the ulnar side, and the fact that the extended thumb is at the same time, in the arms and legs, very rarely in the muscles of the trunk, known as "obstetrical hand" (main d'accoucheur, Trousseau) and which gives its most peculiar characteristic to the affection.

These contractures, in the majority of cases, disappear, unless a persistent form of tetany is present, to re-occur after varying intervals. But the disappearance is only apparent, in reality the affection continues to exist as a pathologically increased irritability of certain nerve groups, and this, with a little experience, can easily be demonstrated by a number of methods; namely by the production of those manifestations which
already have been referred to as latent symptoms, viz., the phenomena of Trousseau, of Erb and of Chvostek. To-day the view prevails that the demonstration of this hyperexcitability of the nervous system suffices for the assumption of tetany, that, consequently, the presence of actual contractures is not at all necessary, and that the latter symptom should be considered as nothing but an aggravation of the pathological picture.

As these three phenomena are still the center of the discussion, we have to dwell upon them more explicitly.

**Trousseau's Phenomenon.** (For detailed description see Escherich, Traité des Maladies, etc.) If the fasciculus of the vascular nerves in the internal bicipital groove is compressed by the fingers or by means of elastic lacing, very soon a disappearance of the pulse and a pallor of the skin will be observed and after one or two minutes the hand assumes the above-described characteristic position of the obstetrical hand. This is nothing but a tetanic contracture caused by mechanical irritation which only lasts as long as the irritation is active; on diminishing the pressure, the spasmodic condition also lessens. In children, however, this phenomenon is not always equally marked; generally the following position only is found: The thumb is adducted and bent inward, the fingers are slightly curved, extended in the metacarpal joints, much adducted, sometimes overlapping, the hand is prone and flexed toward the ulnar side. The contracture is of diagnostic significance only when the fingers are fixed in the position and can not be unbent except by energetic pressure, and when they return at once to their former position, the pressure being removed. This phenomenon is not found in any other affection, it is pathognomonic of tetany and is of the same significance as spontaneous contractions. But, being the first of all symptoms to disappear, and as, in many instances, it exists only temporarily and for two or three days cannot be elicited at all, its presence cannot be demonstrated in every case, and we have, then, to depend on the other signs, especially because the experiment is not always advisable, for instance in cases of great excitability, owing to the danger of a fatal attack.

**Erb's phenomenon,** the increase of electrical excitability of the motor nerves by the galvanic current, is undoubtedly the most constant and, therefore, the most important symptom of tetany. It is found in all cases of latent and manifest tetany; it is the earliest to appear—even prior to the contractions—persists during the entire course of the disease, and remains demonstrable for weeks after the disappearance of the spasms. According to the works of Hauser, Fischl and particularly after the important researches of Mann and Thiemich, it must be regarded as undoubtedly pathognomonic, and, on account of its constant presence, as a diagnostic means it is superior to Trousseau's phenomenon, which is sometimes wanting. In making an experiment the following is to be observed: To facilitate it, narcosis may be employed, but, with a little practice, this is not absolutely necessary. It is sufficient for examination to test one nerve, best the median nerve, which is to be searched for at its most excitable point, immediately above the olecranon internal to the biceps tendon; it is of no importance that, in children,
the ulnar nerve is also found in this place (thus accounting for twitching in the adductor pollicis, flexor carpi-ulnaris, etc.). To obtain applicable values of comparison it is necessary to use Stintzing’s normal electrode of three sq. cm. as the irritant electrode, while an indifferent plate of 50 sq. cm. is placed upon the sternum as the indifferent electrode.

While in healthy children of two to thirty months of age the first appearance of the KSZ in the median nerve is, with very rare exceptions, between 0.7 and 2.0 milliamperes, we find these extreme values reduced to 0.1 to 1.4 milliamperes in tetany. We thus see that kathodal closure contraction, if produced by a current of less than 0.7 milliamperes strength, is a sure sign of existing hyperexcitability, i.e., of tetany. If the KSZ is higher, an increased excitability may still be present, but we are not able to draw positive conclusions from the KSZ alone. The examination of the KSZ, therefore, is in many cases not sufficient to demonstrate the presence of tetany. Decisive, however, is the conduct of the kathodal opening contraction. While this generally occurs only in rather strong currents (normal average value 8.22 M. A.), in children afflicted with either manifest or latent tetany we will succeed in producing it at considerably lower values (on an average, of 1.94, 2.23 milliamperes respectively); therefore, the extreme values for both cases being far apart, i.e., as the lowest current normally necessary for the KOC is far above the maximum of that occurring in tetany, a reliable means for the recognition of existing hyperexcitability is offered in the examination of the KOC. According to Mann and Thiemich values below 5.0 milliamperes belong to tetany exclusively, values above 5.0 milliamperes signify the normal condition only. It is true that sometimes the considerable pain which is caused by the application of the currents forms an impediment to the examination.

Characteristic of tetany is furthermore the almost constant preponderance of AOC over ASC which under normal circumstances occurs very rarely.

A change in the type of the clonus can also, according to Escherich, be observed in so far as even with very weak currents (5.2, even one M.A.) a very noticeable KSTE, in fact even AOTe occurs, an observation which is contradictory to the statements of Mann and Thiemich, according to which the KSTE test is quite unreliable.

It is true, if larger numbers are observed, that there is also a hyperexcitability in tetany with the faradic current, but in the individual case it is often indistinct, so that much value should not be attached to this method of investigation, more so because an exact measuring of the strength of the currents is generally impossible.

The increase of mechanical irritability, the partial symptom of which is generally known as the Chvostek or facial phenomenon, is last in importance among the latent symptoms. If, in a healthy child, any nerve, for example, the facialis, the radialis or the peroneus is tapped with a finger, with the percussion hammer or with the edge of the stethoscope, this action will not cause any symptoms whatever; but if the same is done to a tetanic child, we will very soon observe a
twitching of the muscular region which is supplied by the respective nerve. The phenomenon of Chvostok is elicited in tapping the facialis at a point midway between the zygomatic process and the labial commissure, best with the hammer, or, standing behind the child, by stroking the cheek with the finger from below up (Schultze, Kirchgasser). If the hyperexcitability is very marked, contractures will be noticeable over the entire region of the affected facialis branches, principally at the corner of the mouth, at the nose and at the eye; if the phenomenon is less pronounced, isolated parts of the musculature only will twitch on stroking, particularly the pyramidalis nasi, the depressor and corrugator supercilii muscles. The symptom can only be observed in a sleeping or a quiet child.

This Chvostek phenomenon is absent in very few cases. But, an increase of the mechanical excitability being found also in other nervous affections (hysteria, epilepsy, chorea, etc.), the specificity of this sign is not a complete one. Being easily elicited, it is a quick and good means of guidance. It can claim real diagnostic importance only conjointly with another latent symptom, or, eventually, alone if it is very marked and demonstrable in several nerves.

Mention may also be made here of the "mouth symptom," observed by Escherich (Traité des maladies) in sleeping (healthy and tetanic) children, and the "labial phenomenon" seen by Thiemich in two cases of tetany. The former consists in the occurrence, after a tap on the corner of the mouth or the upper lip, of a contraction of the orbicularis oris on the opposite side, while at the same time the lips are brought forward as for whistling; the second symptom is a sudden contraction of the orbicularis oris caused in the waking child on tapping any part of the upper lip, the mouth being brought forward in a snout-like manner. But both these symptoms are of no practical value as yet. Of as little significance is the demonstration of an increased mechanical muscular excitability, which sometimes occurs in all kinds of cachectic and nervous conditions.

According to valuation, therefore, Trouseau's phenomenon is generally acknowledged to head the list of latent symptoms of tetany; the next is Erb's phenomenon of galvanic hyperexcitability—both are considered "obligate" latent symptoms—and, last, as a facultative latent symptom, the mechanical hyperexcitability, the facialis or Chvostek phenomenon.

**Tetany and Laryngospasm.** As mentioned above, Escherich, supported by his own investigations and those of Loos, has shaken the deep-rooted dogma of a causal connection between laryngospasms and rachitis, in maintaining that laryngospasm has neither any causal connection with rachitis nor is an independent disease. It should be regarded as a symptom, as a special form of tetany which is equivalent to the convulsions and nothing else than a tetany of the respiratory muscles. Now then, what are the proofs of this contention? Escherich, at that time (1890), reported 30 cases of children afflicted with tetany, partly with manifest, partly with obligate latent symptoms,
all of which, except three, suffered from laryngospasmodic attacks; on the other hand, Loos observed 90 cases of laryngospasm, of which not less than 84 presented the symptoms of tetany. Of the remaining six cases which were without such symptoms Loos assumed that, in them, the laryngospasm was the only symptom of undoubtedly present tetany, a view which was, later, confirmed by Ganghofner, and he postulated: "No laryngospasm without symptoms of tetany." But this dictum has long since lost its validity, because Loos' tetany has a very wide range, as we shall see, and besides, because there remains a varying percentage of cases of laryngospasm of all observers except Loos, which do not present any connection with tetany. Escherich continued his careful studies for seven years more, and he found, in his 300 cases of laryngospasm, that the symptom complex of tetany was absent only two or three times. It is true, he remarks at the same time that cases were not too rare in which one or the other of the symptoms was wanting, but, unfortunately, in his report (1897) he does not state those symptoms which alone caused him to diagnosticate tetany. Ganghofner, whose figures approach those of Loos-Escherich most closely, notes, of 105 cases of laryngospasm, manifest tetany 24 times (23%), "obligate" latent symptom (Trousseau) 37 times (35%), "nonobligate" latent symptoms (i.e., mechanical and electrical hyperexcitability) 38 times (36%), no tetany symptoms six times. Therefore, 58% of all cases of laryngospasm were undoubted tetany, plus 36% of "most probable" tetany, therefore, a total of 94% of the cases of spasmus glottidis presented tetany symptoms! Fischl, who examined the patients of the same institution during the three preceding years, obtained a similar result (56%). On the other hand, this author found manifest and latent tetany extremely often in combination with laryngospasm, which agrees fully with Loos, Escherich and Ganghofner (Fischl 63%, Ganghofner 76%, Escherich-Loos about 100%).

Escherich sees a further proof for his teaching in the absolutely parallel increase and decrease and final disappearance of both kinds of pathological symptoms which he could observe in all his cases, in which the cessation of the laryngospasmodic attacks followed. as a rule, the cessation of Trousseau's phenomenon and preceded the termination of the facial phenomenon and of mechanical irritability.

It is conceivable that the communications of the Graz and Prague schools caused considerable sensation, and the respective authors soon found themselves sharply opposed. The partly exhaustive investigations of Kassowitz, Kalischer, Hauser, Cassel, Bendix, Kirchgässer and others show also, it is true, a remarkable coincidence of laryngospasm and tetany, but not to such an extent as those of Escherich, Loos, etc., and the authors named are not inclined to deny a—even causal—connection between tetany and rachitis. While the extremely conservative (Kassowitz and Kalischer) deny any causal connection between tetany and laryngospasm, Hauser admits that spasmus glottidis may frequently be the most prominent symptom of a latent tetany, but he believes that the majority of all cases of laryngospasm have nothing to do with tetany, but that between this disease
and rachitis relations exist which probably mean more than a coincidence. Cassel reports 60 cases of tetany, only two (3 1-3%) of which presented symptoms of laryngospasm, and, on the other hand, 116 cases of spasmus glottidis in which manifest tetany could be demonstrated but twice (1.7%). He denies any connection between laryngospasm and tetany and regards the former, as does Kassowitz, to be a nervous symptom of rachitis. Spasmus glottidis occurs, according to Kirchgässer, about twice as often as tetany, and a synchronous occurrence of tetany and laryngospasm is found in one-half of the cases of tetany and only in one-quarter of the cases of laryngospasm; therefore, symptoms of tetany could be demonstrated in only 25% of the latter. Bendix found the same proportion in the Polyclinic of the Charité in Berlin.

How is it possible, now, to understand these marked contradictions? Of course, one of the reasons is the difference of the material observed, patients from the polyclinics and clinics in Graz and Prague, on the one hand; ambulatory patients exclusively, on the other hand. It is obvious that a much more exact and complete examination is possible in children who are under constant supervision, than in those who come to be observed only at a certain hour of the day, and irregularly at that. If we call to mind the circumstantiality and difficulty of the galvanic examination, also the fact that so essential a symptom of latent tetany as the Trousseau phenomenon may, at times, be entirely absent, without the disease itself having disappeared, then certain differences in the results will not be so remarkable. But the main point is the manner of investigation of the various authors and the varying conceptions of tetany which they represent. Thus Escherich, and more markedly Loos and Ganghofner, allow a wider range for latent tetany, as they lay a great deal of stress upon the demonstration of the increase of mechanical irritability, and consider Erb’s phenomenon as less important; in fact, Ganghofner even believes that tetany should be diagnosticated not only upon demonstration of Trousseau’s or Erb’s phenomena, but also upon demonstration of the increase of excitability of the facial and other nerves, if it is considerable and can be demonstrated in more nerves than one. Fischl demands for the assumption of latent tetany at least one of the obligate symptoms (Trousseau or Erb); Kassowitz and Cassel, the other extremists, diagnosticate tetany only upon the presence of the characteristic muscular spasms, if Trousseau’s phenomenon can be demonstrated at the same time; they, therefore, do not acknowledge tetany. Hauser and Thiemich place the galvanic hyperexcitability above all others, whereas Kirchgässer omits the examination for Erb’s phenomenon entirely, etc.!

We thus see, as long as such diverging views prevail as to the conception of “tetany,” that no distinct picture of its relations to other affections, as laryngospasm and rachitis, can be obtained.

There is no doubt that a close connection exists between laryngospasm and tetany, inasmuch as the former very often represents a special form of manifestation, a symptom of the latter. It remains the merit of Escherich and Loos to have called attention to this fact. We are compelled, in each case of spasmus glottidis, to look for symptoms
of latent tetany which may be present. But we must object fully to
give up laryngismus for tetany; there is rather some reason to consider
a certain number of cases of laryngospasm as a special group, inde-
pendent of tetany. The method of Loos, by which laryngospasm is desig-
nated simply as a "single tetany symptom," does not appear plausible.
if we call attention to the view as propagated by Escherich and Loos
themselves, according to which the nature of tetany depends upon a
hyperexcitability of the peripheral motor nervous system. It ought to
be possible to demonstrate this increased excitability in some manner,
electrically or mechanically; if not, none is present!

Incidently I wish to call attention to the difference of the local con-
ditions. Tetany of adults, as well as children, is a much more frequent
affection in Austria than in Bavaria, especially in Munich. This differ-
ence was already noticed by Escherich, and I can again confirm this
from the material of our polyclinic. In the "Ambulatorium für Kinder-
krankheiten," München-Nord, there occurred, during the first 18 months
of its existence, no case of manifest tetany and only one case of latent
tetany (Trousseau, Erb, facialis phenomena) synchronous with laryngos-
spasm and rachitis, and one case of spasm of the glottis without latent
symptoms, and this in about 2,000 children.

This fact is very remarkable as compared with the statistics of
Berlin and Austria!

Tetany, Laryngospasm and Rachitis. The doctrine, inau-
gurated by Kassowitz and still upheld by him as well as by
Cassel and others, that tetany and laryngospasm are caused
by rachitis, finds its main support in the very remarkable coincidence
of both affections and in the parallelism of certain symptoms. Almost
all children afflicted with tetany or laryngospasm are rachitic, with
very rare exceptions. This is a fact which is uniformly emphasized by
all investigators, followers as well as opponents of Kassowitz's doctrine;
the figures fluctuate between 66% and 94%. Another factor is the pre-
dominating occurrence of the three affections in children between three
months and three years of age; a third factor is the frequency of these
three diseases during spring, and a fourth, finally, the reaction common
to all phosphorus treatment.

These contentions were strongly objected to, principally by the
schools of Prague and Graz. It should be considered, above all, that tetany
is an exceedingly rare complication of rachitis. Only an infinitesimal
fraction (0.45% to 2%) of the cases of rachitis is ever attacked by
tetany, and Loos correctly emphasizes that, without great difficulty, the
same number of children of the same age with bronchopneumonia or
another frequently occurring affection could be found, which present
the same degree of rachitic changes, without anybody ever thinking
of looking for a causal connection between these diseases. Furthermore, by no means the severest, but, on the contrary, the milder cases
of rachitis are associated with tetany, while, on the other hand, non-
rachitics may also be attacked by it. Kirchgässer and even Cassel men-
tion that there are cases of tetany which, even to the most critical
scrutiny, do not present any rachitic symptoms (13%); however, it must
be observed that Cassel, under certain circumstances, considers rachitis to be present if there is nothing to be seen but an enlargement of the fontanelle. As to the synchronous coincidence of the affection, the statistics do not show an absolute agreement according to the latest reports of Fischl, Cassel and others. While rachitis occurs most frequently in April and May, tetany is most common in February, laryngospasm in March; and while the two latter affections have almost disappeared during summer, plenty of rachitics with florid symptoms come under treatment during the warm season. Still another difference is shown in the duration of these three affections: If both are present simultaneously, tetany often disappears remarkably quick, while the rachitic skeleton does not present the slightest changes (Loos). Finally, the success of the phosphorus therapy in rachitis cannot be denied, but it fails too often in tetany as well as in laryngospasm to be considered as evidence in favor of Kassowitz's theory; besides, even if success would be accomplished, we would be just as much entitled to connect malaria with pertussis (quinine) or acute intestinal disturbances with hereditary syphilis (calomel). Phosphorus produces a reduction of the excitability which can be observed in tetany as well as in the nervous symptoms of rachitis, in neurasthenia, hysteria, etc.

There is no question that there is a very close connection between tetany and rachitis; however, this connection certainly is not causal, but Escherich correctly refers it to a factor common to both diseases which factor Kassowitz was the first to ascribe to rachitis: The injury to the body by the bad air in the crowded habitations of the poor during the winter months (see also etiology.)

It seems to me that the true significance of laryngospasm is, on the one hand, that it frequently is considered as a symptom of tetany, as a nervous manifestation of rachitis. This assumption appears very probable because of the occurrence (1) of cases of laryngospasm and tetany without any rachitic changes, (2) of cases of laryngospasm combined with rachitis without any latent symptoms and (3) of entirely isolated cases of laryngospasm.

(To be continued.)
LACERATION OF THE PERINEUM INCIDENT TO PREGNANCY—PATHOLOGICAL ANATOMY AND CLINICAL FINDINGS.

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The proper appreciation of the subject must include the anatomy of the pelvic outlet, the function of the structures there found, a classification of the varieties of laceration and the sequelae dependent on each.

Anatomy. 1. In dissection of the female perineum, after removing the skin and subcutaneous tissue, we come upon the first structure of importance in the perineum, the deep layer of the superficial fascia. It arises from its attachment to the exterior surface and free border of the rami of the pubic arch and passing backward it curves over the transversus perinei muscles where it enters into the bis-ischiatic facial junction. The center is prolonged backward and merges into the tendinous center of the perineum. The sphincter ani is situated in this plane and is attached to the tendinous center of the perineum in front and the coccyx behind.

2. On removing this layer of fascia the sphincter vaginae and superficial transversus perinei muscles are exposed. The sphincter vaginae arises on either side of the vagina from the dorsum of the clitoris. Passing backward it broadens out and is inserted in the angle of the junction of the superficial fascia with the triangular ligament. Some of the central fibers converge with their fellows of the opposite side and are inserted in the tendinous center of the perineum. The superficial transversus perinei muscles extend from the internal surface of the tuberosity of the ischium to the tendinous center of the perineum.

3. Beneath these we come to the anterior layer of the triangular ligament. This is attached to the rami of the pubic arch laterally, its base joining with the superficial fascia and levator fascia, or posterior layer of the triangular ligament, to form the bis-ischiatic facial junction. The central portion of the base is attached to the tendinous center of the perineum. It is composed of dense fibrous tissue. Beneath this structure are some unimportant muscles which it is unnecessary to describe.

4. We then come upon the levator fascia, the anterior portion of which is also called the posterior layer of the triangular ligament. It is given off from the obturator fascia, from which it arises from the interior of the body of the pubes anteriorly to the spine of the ischium posteriorly, and lies inferior to the levator ani muscle. From its origin it spreads to the median line. It is perforated by the vagina to the margins of which it is attached.

5. The next structure is the levator ani muscle. The anterior portions, also called the levator vaginae, are of interest to the gynecologist. They arise from the inferior surfaces of the bodies of the osa pubes; pass posteriorly on either side of the vagina until they approach the interval between the vaginal and rectal outlets, when they curve internally, to be attached to a fibrous median raphe—the exterior of the raphe being attached to the tendinous center of the perineum. It supports the posterior wall of the vagina. The posterior portion arises from the ob-
torator fascia and is inserted into the tendinous center of the perineum to the wall of the rectum and the coccyx.

6. The recto-vesical fascia is the next structure. It is given off from the pelvic fascia and forms a sling at the outlet of the pelvis to support the viscera there presenting.

Function. We find then, that the pelvic outlet is closed in by two strong layers of fascia, the recto-vesical and the levator, by one important muscle and two slight muscles. The sphincter vaginae and transversus perinei muscles are not sufficiently powerful to exert any marked effect, and for practical purposes, need scarcely be considered here. The function of these structures is to make the pelvis a closed cavity in the female as well as in the male. As the rectum is closed in the same manner in both sexes, we shall confine ourselves to the manner in which the vagina is closed. It has been a question of dispute as to whether the muscles or fascia were most essential, but the proper answer, doubtless, is that both are equally essential. It will be observed that the vagina as well as the rectum is brought sharply forward toward the pubes before making the point of exit. The outlet of the rectum is controlled by the sphincter ani, but there is no analogous muscle controlling the vagina. The angle of flexion in both organs is maintained by their insertions in fascia, which it will be observed have their origin above and in front, and are inserted about the vagina and rectum and support them as by a sling. The outlet of the vagina being thus brought forward, the vagina rests upon the posterior wall by which it is supported. The vagina has under such normal conditions, a valve-like function, and the pelvic cavity is completely closed. What, then, is the function of the levator ani? It will be observed that this muscle arises from the pubes, encircles the vagina and is inserted in the perineum. Its whole force is exerted forward and upward, bringing with it the perineum and posterior wall of the vagina. Its function then, must be to reinforce the fascia when any strain is put upon it.

These facts may be easily demonstrated upon the living subject. If a woman with a normal perineum, is examined, after introducing the finger just within the entrance, if pressure is made downward and backward, it will be resisted by a firm band of tissue composed of the muscles and fascia previously described. The posterior wall of the vagina lies in close apposition against the anterior wall. On introducing the finger further we can trace throughout its course the floor of fascia and muscle covering in the outlet of the pelvis. On removing the finger and directing her to strain down as if to defecate, the perineum will be observed to spring up at once, thus effectually closing the vagina.

At this point the question may be asked: "How is the perineum concerned in the support of the internal organs, as there is no direct connection between them?" The answer is that the sole support given is by making the pelvis a closed cavity. Under such circumstances pressure is equal in all directions upon the contained viscera.

Varieties. The classification of lacerations of the perineum given by Penrose is, I believe, the most logical, and is as follows: Slight Median, Median Involving the Sphincter Ani, Laceration in one or both Sulci, Subcutaneous Laceration.

The slight median laceration is the one that extends directly backward in the median line. Beyond the fact that it gives inconvenience
during the healing process if not properly repaired, there are no sequelae. The reason for this is that as it extends only in the median line the supporting structures are not injured. There is simply a division of the perineum, with the supporting structures inserted in it and performing their function.

In the median involving the sphincter ani the sole sequelæ are connected with the incontinence of feces. The tear being in the median line, there is no impairment of the supporting structures of the perineum.

On the other hand the third variety, laceration in the vaginal sulci, presents an entirely different clinical picture. While on the external aspect the tear is in the median line, on exposing the posterior wall it will be observed that the tear is either continued up one or both sulci. In this case the fasciae and muscles are torn across in their course, and the perineum becomes more or less functionless according to the extent of the tear.

The subcutaneous laceration is similar in all respects to that just described, except that there is no external tear.

Sequelæ. The effects of lacerations are so far reaching and include so much that I shall not even attempt to enumerate them all, but shall only mention briefly those of the most importance.

The slight median laceration has no sequelæ.

The median laceration involving the sphincter ani establishes incontinence of feces. If the sphincter ani is not entirely severed, the incontinence is partial and is only exhibited when the feces are fluid. We find no prolapse of the vagina or internal organs. Should prolapse be present we will find that there is an associated laceration in the sulci. The sphincter ani contracts as does all muscular tissue and in some cases lies entirely behind the anus, the ends of the muscle being denoted by dimples at the points where the scar tissue is drawn in by the muscle. The mucous membrane of the rectum when involved shows up as a patch of strawberry red. The septum between the rectum and vagina is bordered by a line of firm cicatricial tissue. In severe cases the tear may extend up the septum for several inches.

Laceration in the vaginal sulci destroys the function of the perineum. It is the most frequent and most important. Referring to the manner in which the vagina is closed, we have observed that this is accomplished by the posterior wall being brought up against the anterior by the perineum, being supported in this position by the fasciae reinforced by the levator muscle. These have their origin above and in front, encircle the vagina and are inserted into and form the perineum. When the tear is in the sulci, it tears through these important structures and destroys their function in proportion to the extent of the tear. If only one sulcus is affected, the loss of function is partial, if both are involved, it is more or less complete according to the extent of the tear. If being the nature of muscular tissue to contract, the divided edges are widely separated when cicatization has taken place, and being deprived of their function the muscles and fasciae undergo atrophic changes.

That the supports of the perineum are impaired or lost is readily demonstrated by the changes that will be observed as taking place. The anus, instead of being drawn up toward the pubes, making a deep anal cleft, will drop back toward the coccyx, the anal cleft becoming shallower and the anus pouting and often exhibiting the formation of piles. The
perineum instead of being convex and in a tonic condition will have a
relaxed and flabby appearance. The posterior wall of the vagina is no
longer in close apposition with the anterior, and we have a patulous
vagina. The vaginal walls, not being supported, begin to prolapse, with
the formation of rectocele and cystocele, which is favored by two causes,
the change in the direction of the vagina and the loss of muscular support.
Under normal conditions, when a woman is in the erect position, the
direction of the vagina is nearly horizontal. When the sling of fascia
and muscle, which holds the outlet forward, is ruptured, the outlet drops
backward, and the vagina approaches a vertical direction. The anterior
wall under such circumstances derives no support from the posterior.
The effect of the loss of muscular support is especially evidenced when
the patient strains as in the act of defecating. The force from above
is not counterbalanced by the muscular action of the perineum, and the
vagina is everted with each effort. This forms one of the best tests of
the loss of support of the perineum. The prolapse of the vagina drags
with it the walls of the rectum and bladder. The further development of
rectocele is favored by the fact that the direction of the fecal current
is not controlled by the action of the levator ani, but bulges forward
against the posterior wall of the vagina. The formation of cystocele is
induced not only by the prolapse of the vagina, but also by the fact that
the perineum has dropped back from beneath the base of the bladder.
Another common sequela is the prolapse of the uterus and retrodis-
placement. The retrodisplacement occurs as the first stage of prolapse,
and is also induced by the traction of the posterior wall of the vagina
on its attachment to the uterus. The prolapse of the uterus is directly
induced by the failure of the perineum to close the vaginal outlet. When
the pelvis is a closed cavity pressure on the contained viscera is equal
in all directions. When the function of the perineum is destroyed and
the vagina is patulous, the abdominal pressure on the uterus above is op-
posed only by the atmospheric pressure from below, and the uterus pro-
lapses, and with each effort made by the patient, is driven further down-
ward. Without going into mechanical laws to account for this, it may
be illustrated by a very familiar example. When the drain pipe of a
wash basin is closed with its plug and the basin filled with water, the
hand may be immersed in it and moved about without feeling pressure
in any direction. If, however, the plug is removed, the hand has to sup-
port the column of water above it and is driven down into the hole in the
bottom of the basin.
Subinvolution of the vagina and the uterus are also frequent sequela.
Endometritis is usually present as a result of subinvolution and displace-
ment, and also of the liability of infection owing to the patulous condition
of the vagina.
The sequela of the subcutaneous laceration are the same as that
just described, as the pathology is the same.

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ABSTRACTS FROM THE BEST JOURNALS.

On the Pathology of Primary and Secondary Carcinomata of the Bile-Ducts—F. Miodowski (Virchow's Archiv, Band 169, Heft 1) reports the case of a man, 47 years of age, who for 8 weeks had a sense of pressure in the abdomen, nausea and vomiting and extreme icterus. It was stated that in that period he had lost 52 pounds. The liver was enlarged; the spleen was not enlarged; there was a tumor in the region of the umbilicus. At the autopsy a tumor was found in the lower portion of the ductus choledochus invading the pancreas, which was sclerotic and showed areas of fat necrosis. It appears to be extremely rare that induration of the pancreas should be secondary to primary tumor of the ductus choledochus, only 2 other cases having been reported. Not infrequently the duct is involved when the pancreas is primarily affected. He reports a second case of a man, 43 years of age, who had had pain in the abdomen for 6 weeks, but for 3 weeks had been jaundiced. There was a history of attacks of colic, emaciation, enlargement of the liver, and palpable gall-bladder. Cholecystotomy was performed and 2 stones the size of a cherry removed from the bladder and 2 from the cysticus. The icterus increased, although there was free discharge of bile through the fistula, and the patient died. At the autopsy a primary carcinoma of the ductus choledochus was found that had extended along the ductus hepaticus and ductus cysticus and involved the gall-bladder. There were secondary nodules in the tumor. After a careful microscopical study it was considered possible that the primary mass was in the middle of the ductus cysticus. The third patient, a woman of 54 years, at the age of 34 had had an attack of abdominal cramp associated with icterus and vomiting. At the age of 53 years she had had a similar attack followed at frequent intervals by others. She was emaciated, there was tenderness in the epigastrium, the liver could not be palpated, and the patient was deeply jaundiced. She died, and at the autopsy carcinoma of the ductus choledochus and ductus cysticus with suppurative cholangitis and cholelithiasis were found. There was some atrophy of the kidneys and infiltration of the areas surrounding the pancreas and gall-duets. The carcinoma appeared to have arisen from the upper end of the ductus choledochus. Some necrosis upon its surface had extended into the ductus cysticus and finally had stopped in the gall-bladder. The fourth patient, a coachman, 50 years of age, had had pain for 5 months below the umbilicus. There was persistent sweating and itching in the body. He was jaundiced and had lost weight. There was a nodular mass extending from the symphysis to the umbilicus. The liver extended 3 fingerbreadths below the border of the ribs. A cystic tumor, probably the gall-bladder, was found laterally from the umbilicus. A diagnosis of cholelithiasis was made, operation was performed and the liver was found hyperemic with fibrous masses upon it. The gall-bladder was enlarged and adherent at the omentum; it contained half a liter of pus and some stones. The patient died the following day, and at the autopsy carcinoma of the lower portion of the ductus choledochus with stricture of the duct was found. This was situated in the lower third and apparently had arisen from the glands in the wall of the duct. The stricture was brought about partly by infiltration of the wall of the duct by the tumor mass, partly by the inflammatory swelling of the periportal glands which had compressed the duct. Miodowski has collected from the literature altogether 37 case-histories of this condition, making altogether 41 cases, 26 in men and 14 in women, and one not given. All cases occurred in patients over 30 years of age, and 51 in patients between the ages of 40 and 70 years. These were situated, 16 times in the duodenal end of the choledochus, 7 of these being limited to the papilla: 11 times at the upper end of the choledochus; 6 in the lower half; in 8 cases definite data are not given. The tumors were usually small, occasionally papillary in character, and sometimes infiltrated. In general, when the histological picture is given, it was found to be that of a cylindrical cell carcinoma. Abscesses of the liver were present in 6 of the patients, and 4 had suppurrative cholangitis. In 8 patients an enlarged colicaneous spleen was noted. In 4 cases there was slight ascites. In only one patient was there any dilatation of the duct of Wirsung. Metastasis to the liver was mentioned in 18 patients; metastasis by the neighboring glands was comparatively rare, apparently only one in 7 patients. In the 41 patients gall-stones were found 15 times. Of the symptoms, jaundice occurred in all the patients but one, and the symptoms usually associated with it were present. Hemorrhages from the gastro-intestinal tract were rare. Abnormal
sweating as mentioned in 2 instances. The prognosis is extremely unfavorable. Operation appeared to offer little hope. He then reports a case of secondary carcinoma of the ductus occurring in a man, 44 years of age, who was admitted to the hospital, with a history of having suddenly vomited 5 weeks before, had cramp-like pains in the stomach, with loss of appetite and constipation. He had had icterus for 10 days, was emaciated, the abdomen was enlarged, and there was some tenderness just below the xiphoid cartilage. The diagnosis was doubtful, and exploratory laparotomy was performed. A large quantity of fluid was found in the peritoneal cavity, and a hard, nodular tumor was found at the opening of the liver which had also involved the ductus choledochus and ductus cysticus. He finally developed melena and died. A primary tumor was found in the cecum which had evidently given metastasis along the duct. The character of the tumor was not that found in the tumors of the gall-bladder, but resembled that of carcinoma of the colon. Finally, in a postscript, he mentions another case occurring in a man of 59 years, who had had colic-like pains in the right upper portion of the abdomen. These had improved, but had recurred, and the patient became extremely emaciated. Tumor of the pancreas was suspected, but alimentary glycosuria could not be produced. An operation was performed, the gall-bladder was found distended and connected with the small intestine. Nothing was found in the choledochus. The patient died 7 days later. At the autopsy a tumor was found in the ductus hepaticus which had reached the size of a goose-egg. It resembled, in microscopical structure, an adenocarcinoma.

Spindle-Shaped Dilatation of the Esophagus in its Lower Section.—V. Zusch, in Deutsches Archiv für klinische Medizin (Band 73), discusses this condition. The commonest cause is, of course, spasm of the cardia, for which the following diagnostic points exist: A nervous or hysterical disposition; varying ability to swallow; occasional sudden transient dysphagia; variation in the results of sounding the esophagus; loss of power of erucation or vomiting, which is not present in paralysis of the esophagus; the return of water poured into the esophagus from a second sound after the first sound has been passed into the stomach, which does not occur in carcinoma of the cardia; and the fact that, if through a fenestrated sound water is poured into the esophagus, it ultimately reaches the stomach, whereas in cases of diverticulum part is retained in the esophagus. Other causes are esophagitis and atony of the esophagus. He discusses the history of this condition, tabulating 8 cases collected by Fleiner and adding 6 others that he has obtained from the literature. He then reports 7 additional cases in great detail, for which he gives the following summary of the diagnostic symptoms: There is a history of obstruction in swallowing from time to time; return of the food to the upper portion of the esophagus, especially at night, giving rise to coughing; evacuation of the esophageal contents, a sort of pseudo-vomiting, although true vomiting occurs rarely or not at all in these cases; pain, usually occurring at the time of spasm and located just back of the sternum; it is sometimes a tearing, sometimes a pressing, pain. In the case of a boy, 3½ years old, it occasioned convulsions. The careful analysis of the contents of the esophagus and stomach contents showed that the former rarely contained free HCl. and the total acidity was diminished, whereas the latter contained free acid and the total acidity was fairly high. Lactic acid was usually present in the esophageal contents, but absent in the stomach contents. When the tube is introduced into the esophagus and the water poured into the funnel from a considerable height, the water rushing into the esophagus suddenly stops, proving that there is closure above as well as below the dilated portion. By this procedure the site of ectatic portion can be determined. The introduction of the sound into the stomach was usually difficult and sometimes only accomplished when the patient assumed curious positions, indicating abnormality in the structures of the esophagus and stomach. Occasionally it is useful to close the external end of the sound. The second swallowing sound is usually absent or very much delayed. The employment of bismuth followed by a Röntgen-ray examination was unsatisfactory. Percussion failed to show any definite area of dulness. In all the patients there was atony of the stomach, and in practically all the symptoms dated from childhood. In one patient after eating, there was profuse secretion from the nose; in another bradycardia. In another case the patient was able to swallow by means of certain respiratory
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 movements, and in another there was a peculiar form of eructation and vomiting. Zusch believes that the diagnosis is to be based upon the characteristic history, the recognition of a cavity above the stomach, the contents of which differ from the stomach contents physically and chemically; the recognition of the bipolar closure of this cavity and the ability to exclude organic stenosis of the cardia. He reports 2 additional cases reported in Fleiner's service, discusses rumination, which was present in the second of these, and reports 2 other cases in which this symptom was present. A differential diagnosis of this condition involves recognition of the absence of the evidences of a cicatricial stenosis of the esophagus; the exclusion of carcinoma by the long duration of the symptoms: the fact that benign tumors early give rise to dysphagia; that there is no evidence of the growth of fungi, and that the obstruction is so deep as practically to exclude external tumors pressing upon the tube. Sclerosis of the aorta sometimes gives rise to these symptoms and must be very carefully excluded by a general examination. Occasionally ascites, tympanites and tumors of the abdomen, causing slight nicking of the esophagus at the point at which it penetrates the diaphragm, are present. These conditions are, of course, readily recognized, and in case of spondylitis the same things may occur. The most difficult diagnosis is that from diverticulum of the esophagus, concerning which Zusch gives a careful discussion. The prognosis is relatively good, although there is a marked disposition to deterioration. The treatment consists in careful sounding with a thick soft sound, avoiding everything that would irritate the stomach: lavage of the esophagus: and, in the early stages of the treatment, feeding exclusively through the stomach-tube. It is also important to wash out the esophagus just before bedtime so that there may be no stagnation during the night. If a catarrhal process is present, the patient should swallow small quantities of alkaline water through the day. If any gastrointestinal disorder is present, it should be carefully treated. The treatment is slow, requiring half a year or more. No operative method has as yet proven of benefit.

**Pus Examination in Middle Ear Suppuration.**—At the eighth annual meeting of the American Laryngological, Rhinological and Otological Society, W. C. Phillips presented a paper on the above subject. *A résumé* of this, with the discussion that followed, appeared in the *Laryngoscope* for October, 1902, from whose pages we quote. Micro-organisms such as the micrococcus lanceolatus, the pneumohacillus of Friedländer, the streptococcus pyogenes, the Klebs-Löffler bacillus, the tubercle bacillus, the bacillus of influenza, the diplococcus intercellularis meningitis and the staphylococcus aureus, albus and citreus are found in pus from the middle ear. Experience indicates that the staphylococcus, either alone or in combination, is the most virulent. Any of these organisms may enter the middle ear through the Eustachian tube and may be present even in the antrum without producing any morbid process. It has been demonstrated that they may also be found in the circulation without causing pyemia or septicemia. It is evident that other factors, such as alterations in the resisting power of the individual or in the nature of the local pabulum, must be present to excite a morbid process. W. H. Haskin said that the tubercle bacillus is seldom found in middle ear disease, that the smegma bacillus is often present and is frequently mistaken for the tubercle bacillus. E. B. Dench and Phillips agree that, in doubtful cases the presence of streptococci in mastoid complications would decide them to operate.

**Cardiac Effects of Operations Upon the Middle Ear.**—At the meeting of the American Otological Society, held July 15, 1902. H. O. Reik read a paper on this subject, which was reported in the *Archives of Otology*, October, 1902, from which we quote. His experiments on dogs and other evidence leads him to the conclusion that heart failure, which so often attends operations upon the tympanum, is due to irritation of the sensory nerves and a disturbance of the vasomotor apparatus. These nerves, when stimulated, always show a depressing effect, and usually a cardio-inhibitory action; he thinks that complete anesthetization prevents or partially weakens the transmission of such an influence by these nerves. It was pointed out that stimulation of a sensory nerve usually causes a rise of blood pressure, and the only other known exception to this rule is found in the nerve supply of the testicle.
Infection From the Middle Ear Pursuing an Unusual Route and Causing Meningitis.—A. Knapp (Archives of Otology, October, 1902) reports in detail a case of purulent phlegmon of the sigmoid sinus without thrombosis, in which death occurred from meningitis. After a study of the case, he concludes that the infection presumably extended from the antral wall, posterior to the horizontal semicircular canal to the dura, causing pachymeningitis, then involving the posterior wall of the (sigmoid) sinus, the anterior remaining healthy. That thrombosis did not occur he ascribed to the enormously dilated condition of the sinus. Extensive operative measures were employed, but the normal condition of the front wall of the sinus, uncovered during operation, and the fluid state of the blood completely masked the pathological process present in the posterior wall.

Thiosinamine.—In volume 3 of the "Practical Medicine Series" is an abstract of J. C. Peck's paper on this subject, which appeared in the Laryngoscope, June, 1902. He observed in his own case that subcutaneous injections without mechanical treatment did not improve chronic catarrhal otitis media, except partially to relieve tinnitus. The passage of bougies was facilitated when thiosinamine and electrolysis were used. When this treatment was employed, general improvement ensued. Before using thiosinamine, careful inquiry should be made as to the presence of chronic tuberculosis, malignant growths, scars of operations for hernia, etc.: having a marked power of dissolving cicatricial tissue, its use would be contra-indicated in these cases. According to "Merck's Manual," 1901, page 92, thiosinamine is soluble in water, alcohol and ether. It may be administered subcutaneously or by the mouth; the dose being ½ grain, two or three times a day, increased slowly to 1½ grains. It must be continued over a long period of time.

Electrolysis in the Eustachian Tube.—N. H. Pierce (Laryngoscope, January, 1903, page 30) gives his experience with this mode of treatment in twenty-one cases. The electrical current came from an Edison street circuit of 110 volts, through a Victor shunt-controller. Fifteen to 30 volts were required to obtain 2 to 5 milliamperes with the negative poles attached to the Eustachian bougie, the positive pole being attached to the wrist on the side opposite to the tube operated on. Gold bougies were used. Contact lasted 3 to 10 minutes, but lengths of contact and strength of current varied with the patient and with resistance encountered in the tube. Silver catheters, insulated with rubber tissue, were preferred. In his cases acute inflammatory processes were first cured and then the patients were treated, the parts being cicatrized and the strictest cleanliness observed. Ten were cases of otosclerosis, 8 were catarrhal, one was due to nervous muscular change of the tube, the other was suffering from syphilitic stenosis of the tube. Taking into consideration the effects produced by other methods, the author, after pointing out the painfulness of the procedure and the dangers that may occur, such as the production of acute inflammation of the middle ear, the breaking off of the bougie in the tube, and the possibility of wounding the carotid, ends the paper with the following conclusions: (1) In otosclerotic disease electrolysis is useless. (2) In the great majority of cases of catarrhal disease it has no advantages over other methods of treatment. (3) In a certain few cases, in which there is probably a soft exudate near the isthmus, it may be regarded as of some value.

When to Ligate the Internal Jugular Vein in Cases of Otitic Sinus Thrombosis.—H. Jones, (Lancet, August 23, 1902, abstracted in "Practical Medicine Series," Vol. III, page 188), advises as follows: (1) When the clot in the sinus is firm at both ends, though broken down in the middle, and there is little or no cord in the neck, remove the softened part in the middle and treat as an open wound. (2) If the sinus is found permeable, though obviously infected, obliterate the sinus and divide the vein. (3) When the sinus has been cleansed and pyemic symptoms still continue or recur, there will be nothing gained by ligating the vein if the jugular bulb is sound and the infection occurs by way of the torcular end; if, on the other hand, the torcular end is sound and a cord is forming down the neck, the vein should be tied and divided.
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Two New Preparations, Biogen and Dermogen.—In Le Progrès Médical (January 10, 1903), Frenkel calls attention to these 2 new compounds, peroxides, one of magnesium, called biogen, the other of zinc, called dermogen. They decompose when acids are added, forming a neutral salt with the metal of the peroxide and hydrogen dioxide, accompanied generally with a certain quantity of ozone. The hydrogen dioxide is very unstable, soon becoming water and oxygen. Thus, in appropriate media both biogen and dermogen furnish oxygen. Biogen is a white powder, tasteless, odorless and almost insoluble in water. Dermogen is a faintly yellowish powder, tasteless, odorless and absolutely insoluble in water. Dermogen is used externally, setting free nascent oxygen upon wounds, when tartaric acid is added. Thus the production of oxygen can be regulated quantitatively. Biogen may be given internally, in doses of 5 grains 3 times daily, without any disagreeable effects. The dose varies with the age and constitution of the patient. It is of value whenever oxygen is needed by the organism. In the stomach biogen is broken up into oxygen and salts of magnesium, by the action of the gastric acids. The oxygen is then absorbed in the stomach, or passes through the gastric walls into the tissues. Its first effect is locally antiseptic and oxidizing. It is best given when the stomach is absolutely at rest, after digestion has been completed. Besides, biogen with an iodide, in an acid medium sets free iodine, in strictly calculated amount. When an iodide is added to biogen with acetic acid or alcohol, lodoform is produced.

Subcutaneous Injections of Atmospheric Air, in Neuralgia.—Marie and Crouzon report the results of their experiments upon the treatment of neuralgia by subcutaneous injections of atmospheric air, describing their apparatus in detail. The results of the injections were marvelous. A woman with severe sciatica got up and walked about immediately after the injections at the site of pain, though the pain had been intense before. In other cases, with lumbago, tabes, herpes zoster, neuralgia and neuritis, the results were equally striking. It is absolutely harmless and wonderfully efficacious. Chauffard reports similar results in a woman with intercostal neuralgia. (Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, December 18, 1902.)

On the Bactericidal Properties of Tears and the Fluid From the Anterior Chamber.—Rimovitch (Russki Archiv Pathologii, October, 1902) investigated the effect of the lacrimal secretion on bacteria. He found an entire absence of alexin, amboceptor and Pfeiffer's reaction in the tears of immunized animals. In the fluid from the anterior chamber he found specific immunins, but no agglutinins. These observations show that, contrary to the opinion of Nutall and Buchner, tears possess no bactericidal properties and that their protective function is purely mechanical: also that immunin and agglutinin are distinct substances.

On the Theory of Staining of Acidresisting Bacteria.—Nikitin (Russki Archiv Pathologii, October, 1902) investigated the conditions under which the members of the tubercle bacillus group lose their property to resist decolorization. He draws the following conclusions from a series of experiments: (1) Taking into consideration that the micro-organisms of the tubercle group lose their property of specific staining not only after treatment with acids and alkalis, but also under the influence of fat-solvents, we must accept the opinion of the authors who maintain that the cause of the resistance to acids resides in the fatty substances found within the bodies of the bacteria. (2) The tubercle bacillus apparently differs from all other acidfast bacteria by the special nature of the fatty substance which is less soluble in ether, alcohol and similar solvents. (3) The results of the preliminary treatment of the bacilli with acids and alkalis are determined by the degree of electrical disassociation of the reagent used. On the other hand, the process of decolorization with acids does not depend on the nature of the acid, but on its concentration, or the titer. (4) Glacial acid in combination with an alcoholic solution of acetone enables us to differentiate the tubercle bacillus from the other acidresisting bacteria. The decolorizing agent which the author found most efficient consists of 2 parts of glacial acetic acid and one part of alcohol-acetone (10:1).
Frambesia and Similar Diseases of the Tropics.—M. Glogner (Virchow's Archiv, Band 168, Heft 3) says that frambesia is a disease of the skin characterized by an eruption of round excrescences, usually appearing on the face, and not infrequently in the cavities of the mouth and nose, that gradually increase in size, may become confluent and are often surrounded by a hyperemic zone. Later necrosis occurs, and a grayish-yellow, sometimes offensive, crust is formed upon it. When this is removed, red excrescences can be seen beneath it. When, either as a result of remedies or time, the papule disappears, it leaves a small pigmented area that in the course of months becomes entirely depigmented. A scar is never formed unless the papule has been injured and caused to ulcerate. Other forms of this disease have been described. In Peru, for example, the so-called verruga Peruviana or maladie du Carion is a severe disease with prodromal symptoms, such as vertigo, headache, pain in the limbs, cough commencing with chill, etc. Patients frequently vomit, have diarrhea and bleed from the nose, and tumors of the skin may develop. The hemorrhages may be severe enough to cause death. In other cases the patients have coma, delirium, rapid pulse and respiration, and often icterus. The temperature may be normal or elevated. The patients are anemic, the spleen and liver are enlarged, and the lymph glands, lymph follicles and Peyers' plaques are enlarged. It appears that this disease has certain essential differences from frambesia or Yaw's, and there is some reason to suppose that the Brazilian bubo is also a different disease. Glogner had an opportunity of exciting 6 nodules from 4 patients. The tissue was hardened in Müller's fluid, and upon histological examination showed proliferation of the connective tissue, enlarged and dilated blood vessels, some extravasation of blood and proliferation of the epithelial cells which seemed to be fairly well preserved. There were some large cells with oval nuclei that evidently had been derived from the connective tissue. In 8 cases which he investigated there appeared to be a slight or considerable increase in the lymphocytes of the blood. No bacteria were found, neither were there any objects that resembled blastomycetes.

Remarks Upon the Nature and Diagnosis of the So-called Nervous Dyspepsia.—U. Strümpell (Deutsches Archiv für klinische Medizin, Band 73) discusses nervous dyspepsia, which occurs associated with a normal gastric secretion or when the secretion is disturbed, although he believes that we should accept a rather broader limit for secretory variations than is actually done. In addition to these changes in secretion, however, we should study very carefully the changes in the motor activity of the stomach and also the changes in the position of the stomach. However, we are still uncertain regarding the significance of any of these symptoms and particularly their relation to the nervous system. The manner of life of the patient is also of considerable importance. He also discusses the general physiological influence that excessively active physical representation exerts upon the functions of the body, and then the development of nervous perceptions as a result of psychical representations that correspond to an expected or feared sensation. This is commonly called autosuggestion. Finally, the will may be prevented in various ways, but particularly so as to cause interference with the taking of nourishment. He is very doubtful whether such a thing as a psychogenic dyspepsia exists, although he admits that in many cases a pure psychotherapy is efficient. He prefers to substitute the term—functional dyspepsia for the term nervous dyspepsia.

On the Casuistics of Diabetes Mellitus.—Mamodischky (Trudi Obchecestva Veterinarich Vratchey, 1902) reports a case of diabetes mellitus occurring in a dog. The disease is quite rare among canines, only 13 cases having been reported: 7 by Friedberger and Frener and 6 by Schindelca and Eichorn. In the case reported by the author the symptoms were those commonly observed in man, namely, polyuria, polydipsia, polyphagia and autophagia. The urine contained large quantities of sugar. The animal finally died, and the autopsy showed parenchymatous and interstitial nephritis, parenchymatous and interstitial hepatitis, and some atrophy and pigmentation of the spleen. The condition of the pancreas is not recorded.
ABSTRACTS.

Three Epidemics of Dysentery in Barmen, Germany, in the Years 1899 and 1901.—H. Kriege (Deutsches Archiv für klinische Medizin, Band 73) reports 3 interesting epidemics of dysentery. He believes that the bacillus discovered by Krogen is the cause, but, at the same time, that we must accept a certain amount of individual predisposition. The statistics that he has obtained indicate that the disease is more common among the poor than among the rich. It is most common in the first 5 years of life; it then becomes relatively common after 60 years of age. The mortality is greatest before 5 and after 60 years of age. The disease appears to be more severe in adults than in infants. The mortality was 11% in general, but in the hospital, where presumably the average severity of the cases was greater, it was 16.4%. The characteristic symptoms were almost invariably present. Fever, however, was often lacking, and the temperature was not abnormal high. In 2 patients there was severe polyarthitis, in neither of them suppuration occurred. In one patient there was peritonitis, and in another pyemia. Phlegmonous infiltration, decubitus and abscesses were observed. In 3 patients abortion was produced, and in 2 others pregnancy was not disturbed. Occasionally albuminuria was present, but rarely nephritis. A careful study of the geography of the town, which lies in a narrow valley, showed that every year the area extended in which dysentery was common. Certain houses appeared to be particularly predisposed. For example, in one house there had been cases during each of the 3 epidemics, and 66 houses had suffered during 2 epidemics. Only 16 times were the same families affected in the 67 houses, so that the infection was not in the family, but in the houses. In one case a man, his wife and 5 children were attacked by the disease; one daughter escaped and she had had the disease 2 years before. Three persons had dysentery twice. A certain amount of protection is, therefore, obtained by an infection. The cause of the first epidemic could not be determined. The cause of the spread of the epidemic appeared to be chiefly direct contagion. It is curious that this did not appear to be recognized by the general public, and but few precautions were taken. There also seemed to be a certain amount of transmission as a result of carelessness in washing infected clothing and bed linen. The method of combating the contagion consisted in distributing literature to the people, careful disinfecting of the infected spots and of the wash (it was found that the antiseptic solution was sometimes only applied after the laundry work had been completed), and, whenever possible, the isolation of the patients, although this was exceedingly difficult, and not more than one quarter of the patients could be persuaded to go to the hospital. In several cases it could be determined that convalescents had carried the epidemic to other regions.

Acute Rheumatic Endocarditis in the Aged.—Parisot and Hoche report in full the case-history of a man of 75, who had frequent attacks of rheumatism, affected by acute articular rheumatism complicated with endocarditis, bronchopneumonia and death in asystole. Such a complication is rare in elderly persons, since the arteries and cardiac valves have generally undergone senile changes, sclerosis especially. The condition is most serious on account of the degeneration of the myocardium common to old age, so that therapeutically but little can be done. (Revue Médicale de l’Est, December 15, 1902.)

On the Fate of Carbohydrates in the Intestines of the Suckling.—There has been much discussion as to the occurrence of digestion of carbohydrates in the intestine of infants, some authors maintaining that the results apparently indicated that any such digestion is in part due to bacterial fermentation, while others think that carbohydrates are well digested. I. Hedenius (Archiv für Verdauungskrankheiten, Band VIII, 4/5) goes thoroughly over the literature and then describes some results that he obtained with various forms of carbohydrate-foods in infants. He reaches the conclusion that in late infancy, after giving free quantities of carbohydrate, little carbohydrate can be found in the feces; and that the feces do not become especially acid, the latter point indicating that the carbohydrates do not ferment excessively. He found that a child, about 2 months old, rapidly showed an increase in its power of digesting carbohydrates. In general, he found that with the simple preparation less carbohydrate and less acid are obtained in the feces than when more complicated carbohydrate-mixtures are used.
On the Treatment of Ulcer of the Stomach With Olive Oil.—K. Walko
(Cent. für innere Med., November 8, 1902) states that he has had most ex-
cellent results from the use of olive oil in gastric ulcer. The oil has a ten-
dency to reduce the acidity of the gastric juice, it quiets irritation and it
makes the bowels more regular. It also acts as a protective for the ulcer.
With fresh ulcer, Walko gives the oil by the dessertspoonful and then lets
the patient wash out his mouth with any pleasant mouth-wash. The dose
is gradually increased to 50 cc. If the patient has much nausea from this,
the author gives from 100 cc to 200 cc, in fine emulsion, through the stomach-
tube. The treatment would, he thinks, be just as useful in duodenal as in
gastric ulcer. He reports a series of cases that demonstrate the effects of
the treatment.

On the Diagnosis of Multiple Stenoses of the Intestine.—Schlesinger (Zen-
trabl. für innere Med., Jan. 10, 1903) describes 2 cases in which he was able,
in spite of the absence of tumor, to make the diagnosis of multiple stenoses
of the intestine. In both instances the patient was a young person who for
years had had attacks of colic of increasing intensity, accompanied with
constipation and with local spasms of the intestine. The attacks always
disappeared coincidently with the relaxation of the local contractions, and with
visible parietal waves in various parts of the abdomen and loud gurgling
sounds. These attacks were repeated several times, and the phenomena in
relation to the bowel always appeared in the same parts of the abdomen.
The “stiffening” of the intestine indicated an obstruction lying on the distal
side of the “stiffening;” and, when observed in several regions of the abdo-
men and always at the same points, it indicated stenoses in these various
places. In these 2 patients operation showed, in one instance, 12 stenoses,
and in the other, 3. The stenoses were tuberculous in nature. One patient
recovered entirely; the other died as the result of the operation. In the diag-
nosis of the condition the author mentions the following 4 points: (1) The
repeated observation of “stiffening” of the intestine in regions lying at a dis-
tance from each other, a rigid portion of the intestine not being palpable be-
tween these stiffened parts of bowel; (2) the fact that these portions of the
intestine are approximately in the same location at the different times of
observation; (3) the disappearance of the contractures each time, together
with gurgling sounds, and (4) a history of tuberculosis or of syphilis.
SOME TIMELY FORMULAE.

Psoriasis.—Dr. George H. Fox, in his Photographic Atlas of Diseases of the Skin, states that he has used the following prescription in psoriasis for many years and has found them very serviceable:

Chrysarobin, 10 parts
Salicylic acid, 10 parts
Ether, 15 parts
Colodion, q.s. ad. 100 parts

M. This may be painted over the patches every day or two until the scaling has disappeared, and smooth white spots are left. The great advantage of this preparation is that all staining by the chrysarobin is obviated.

Pityriasis.—Dr. Fox suggests the following treatment for pityriasis of mild type. Some bland preparation calculated to soften the skin and relieve the itching should be used. The internal derangement responsible for the eruption should be remedied. For the roughness of the skin, this lotion may be prescribed:

Sodium borate, 3 dr.
Glycerine, 1¼ dr.
Rose water, q.s. ad. 6 oz.

Infantile Diarrhea With Green Stools:

Lactic dilute acid, 4 min.
Tincture lemon, 1 min.
Syrup, 2 oz.
Water, 2 oz.

M. S.: A teaspoonful thrice daily after feeding.

Acne.

Sublimed water, 1½ oz.
Spirits of camphor, 4 oz.
Distilled water, 2 dr.

M. S.: Externally.

Herpes Progenitalis.—Aronstam (Medical Times, July, 1902) says that the treatment of this condition consists in the application of a boric acid wash containing a little alcohol, followed by the use of the following ointment:

Acid boric, ½ dr.
Zinc oxide, 1 dr.
Pulv. amyл., 1 dr.
Vaseline, 1 oz.

M. S.: Apply on cotton as directed.

Chronic Dysentery.

Magnesium sulphate, 30 gr.
Sodium sulphate, 30 gr.
Ferric sulphate, ½ gr.
Quinine sulphate, 2 gr.
Water, 2 oz.

M. S.: One dose. Repeat 4 times daily.

Muscular Rheumatism.—In muscular rheumatism the salicylates are seldom of any benefit. Gentle rubbing and mild counter irritation are always indicated. The following formula has given great satisfaction in French hospitals:

Spts. of camphor, fl. 1½ oz.
Spts. of turpentine, fl. 1½ oz.
Chloroform, fl. 2 dr.
Menthol, 1 dr.
Balsam of Peru, fl. 1½ oz.

M. S.: Apply with gentle friction.
Mixture for Catarrhal Pneumonia.—Yeo (Manual of Medical Treatment) recommends the following mixture for catarrhal pneumonia:

- Ammonii chloridi 80 gr.
- Syrupsi scillae vel senegae 3 dr.
- Liquoris ammoniae acetatis ad. 4 oz.

M. f. mist. A dessertspoonful in water every 3 hours. One or 2 drops of tincture of aconite may be added to each dose, carefully watching the effect.

For Pain in Chronic Valvular Disease.—Whitla uses the following formula for this affection:

- Tincturae digitalis 2½ dr.
- Potassii iodidi 3 dr.
- Spiritus ammonis aromatici 4 dr.
- Succus scoparifl 1½ oz.
- Tincturae digitalis 2 dr.
- Infusi senegae q. s. ad. 6 oz.

M. f. mist. A teaspoonful in 2 tablespoonfuls of water 4 times a day, after food.

Diuretic Mixture in Heart Disease.—Whitla gives this formula to be used as a diuretic in heart disease:

- Potassii iodidi 1½ dr.
- Spiritus ammonis aromatici 4 dr.
- Succus scoparifl 1½ oz.
- Tincturae digitalis 2 dr.
- Infusi senegae q. s. ad. 1 oz.

M. f. haustus. To be taken every 4 hours.

Cardiac Stimulant and Diuretic Combined.—Bruce gives the following combination:

- Potassii acetatis 20 gr.
- Tincturae digitalis 10 m.
- Tincturae scillae 20 m.
- Liquoris strychninae hydrochloridi 4 m.
- Infusi senegae q. s. ad. 6 oz.

M. f. mist. A tablespoonful in water every 4 hours.

For Mitral Disease, With Bronchial Catarrh and Dropsy.—Balfour uses the following in the treatment of this condition:

- Tincturae scillae 2 dr.
- Tincturae digitalis 2 dr.
- Aqueae cassiae q. s. ad. 6 oz.

M. f. mist. A tablespoonful every 4 hours.

Diuretic Calomel Powders.—Bamberger gives the following combination for diuretic calomel powders:

- Hydrargyri subchloridi 3 gr.
- Extracti opii pulveris 1/6 gr. ad. 1/4 gr.
- Sacchari albi 5 gr.

M. f. pulv. To be taken 3 times a day for 3 days; then suppressed for 3 or 4 days, and renewed, if well borne. Use a chlorate of potash gargle at the same time.

For Bronchial Catarrh of Cardiac Origin.—Bamberger uses this combination in the treatment of this condition:

- Quininas sulphatis 8 gr.
- Acidi benzoici 3 gr.
- Sacchari albi 75 gr.

M. et divide in pulv. 6. A powder every 2 hours.
FORMULÆ.

For Nervous Hyperacidity of the Stomach:
Strontii bromidi (pure) 3 oz.
Aqua menthæ piperitæ f. 15 oz.
M. S.: Teaspoonful twice daily in milk at meal time.

Amenorrhea.
Quininæ sulph. 1½ oz.
Ext. nucis vomicæ 12 gr.
Olei sabinæ ½ oz.
Aloes socotrin. 8 gr.
Cantharidis 24 gr.
M. ft. pil. No. 48.
S.: One pill 3 times daily.

Parotitis.
Tinct. belladonnae
Tinct. aconiti
Tinct. opii
Ichthyol
Plumbi iodidi 4 oz.
Ammonii chloridi 30 gr.
Adipis 1 dr.
M. S.: Apply 3 times daily and cover with cotton-wool dressing.

For Whooping Cough in Adults.
Bromoform 15 parts
Tinct. of gelsemium 16 parts
Syrup of lactucarium 120 parts
Powdered gum arabic a sufficiency
M. S.: Three or four teaspoonfuls to be taken in the course of a day.

Irregular Heart Action.
Pulv. digitalis 10 gr.
Pulv. colchici sem. 20 gr.
Sodii bicarb. 30 gr.
M. et ft. pil. No. 20.
S.: One 3 or 4 times daily.

Aortic Incompetence With Congestion and Edema of Lungs and Bronchial Catarrh.—Balfour recommends the following combination in the treatment of this condition:
Ammonii carbonatis 1 dr.
Tincturæ hyoscyami 4 dr.
Potassii iodidi 1 dr.
Tincturæ digitalis 1 dr.
Infusi calumbæ q. s. ad. 6 oz.
M. f. mist. A tablespoonful every 4 hours.

In Hypertrophy With Aortic Regurgitation.—Da Costa recommends the following combination to be used in the treatment of this condition:
Tincturæ aconiti 1 m.
Tincturæ veratri viridis 3 m.
Tincturæ zingiberis 7 m.
Aqua 1 oz.
M. f. haustus. To be taken 3 or 4 times a day.
Hyperemesis.
Creosote, ¼ min.
Muriate of cocaine, 1/20 gr.
Cerium oxalate, 2 gr.
Tincture nux vomica, ¼ min.
M. S.: One dose. Repeat every half hour until relieved.

Neuralgia.—A pill made after the following formula, given 3 times a day, is recommended for neuralgic conditions:
Iron tartrate, 2 gr.
Quinine sulphate, 2 gr.
Tartartic acid, ½ gr.
Ext. nux vomica, ½ gr.

An Antiseptic Mouth Wash.—The following is an excellent formula according to Merck’s Report:
Formalin 5 m.
Tinct. benzoin, fl. 3 oz.
Tinct. myrrh., fl. 1 dr.
Oil of peppermint, 3 m.
Oil of anise, 2 m.
Oil of cassia, 1 m.
Oil of cinnamon, 15 m.
Alcohol, fl. 2 oz.
M. S.: Use as a mouth wash once or twice daily.

Convulvulus Soldanella as a Purgative, Cholagogue and Anthelmintic.—M. Lhopitalier (Etude des Liserons Indigenes) states that the resin of convulvulus soldanella has an aromatic odor somewhat resembling those of ambergris and vanilla. It does not cause dryness of the throat or expectoration as jalap does. In a dose of from 12 to 18 grains it is a drastic purgative of great value, equally efficacious with jalap and scammony, but without their irritant effects. It is also a cholagogue to the same extent as the former, but in consequence of its lesser solubility in alkaline media, especially saliva, it is less acrid. It is also anthelmintic to the same degree as jalap. The author gives the following formulae:

1. Emulsion of soldanella:
   Resin of soldanella, 12 gr.
   Sugar,
   Powdered gum arabic, of each 90 gr.
   Orange water, 30 min.
   Syrup of quince, ¼ oz.
   Water, enough to make 3 oz.
   M. et. ft. emulsio.
   S.: To be taken at one dose.

2. Compound tincture of soldanella:
   Inspissated juice of convolulus sepium, 10 gr.
   Soldanella root, 15 gr.
   Bryony root, 5 gr.
   Alcohol, 8½ oz.
   Macerate for 8 days and express. Filter. The dose is from 2 to 3 drs.

3. Hydragogue pills:
   Powdered digitalis, 15 gr.
   Inspissated juice of soldanella, 15 gr.
   Powdered bryony, 10 gr.
   M. To make 20 pills. Four may be taken in the 24 hours.
   The resins of the convulvus order, e. g., scammony, jalap, convulvulus sepium, soldanella, convulvulus arvensis, etc., according to Chevallier, if emulsified with gum arabic in place of yolk of egg, produce their purgative effects without colic.
Dr. C. E. de M. Sajous' volume on the functions of the ductless glands is one of the most remarkable books published in recent years. For fourteen years the author devoted much of his time to labors of research and the results obtained have been shown in a book, which, if accepted by the profession, will revolutionize medicine.

Dr. Sajous bases his arguments on the assumption that there is an affinity of adrenal extract for oxygen, and that it is the carrier of oxygen to the tissues, whence follows the erection of the adrenals into a position of commanding physiologic importance. The oxygen-laden adrenal extract, termed adrenoxin, is identical with the "oxidation ferment" found in the plasma by several observers, and with the Lepine's "glycolytic ferment." Oxygen travels via the plasma through various unrecognized plasma channels, e. g., the hollow, tubular "axis cylinders" and the dendrites of the nerves, and in the neuroglia fibrils, which are plasma capillaries, and which contain a fluid identical with plasma in staining reactions. The immanent source of all nerve energy is the reaction between the myelin surrounding these plasma tubes and the contained plasmatic oxygen. In the muscles, the myosinogen represents the contractile substance which, upon combining with the oxygen of the plasma, liberates energy of contraction, the function of the nerves being merely
regulative. Fluctuations in the temperature of the blood are due to variations in the amount of its fibrinogen, which combines in fixed ratio with the plasmatic oxygen.

The adrenals are connected with the anterior pituitary body via the solar plexus, splanchnics, and the cervico-thoracic ganglion. This pituitary body is the most important organ in the economy, being the governing center of the adrenals, and, through them, of all oxidation processes. The efficiency of this pituitary body is maintained through thyroid action, the stimulating principle being the thyroidal iodine compounds. Instead of being due to a direct action on the blood or cellular elements, "symptoms of infection or poisoning are all manifestations, more or less severe, of overactivity or insufficiency of the adrenal system. Indeed, the physiological action of remedies was also traced to the anterior pituitary body." Cholera, cholera infantum, and poisoning by arsenic and by toxalbumins, and the intoxications, are all "syndromes due primarily to adrenal insufficiency." Pulmonary tuberculosis is due primarily to lowered adrenal function, and all the remedies for it are adrenal stimulants. Syphilis, too, is due to adrenal insufficiency, and mercury is a powerful adrenal stimulant, and iodine is "nature's own stimulant." The majority of drugs, toxins, and physiological toxalbumins stimulate the adrenals in small quantities, and paralyze them in larger amounts. In tetanus, epilepsy, hydrophobia, septicemia, and eclampsia, sedatives and depressomotors may easily do harm by depressing adrenal action, and the success of Baccelli's carbolic-acid treatment of tetanus and of the Pasteur treatment of hydrophobia by injection of extract of desiccated cord, is owing to stimulation of the adrenal system. The element of specificity in each disease is an expression of the particular way in which each drug or toxin affects the adrenals, some stimulating first and then paralyzing; others, like hydrocyanic acid, overwhelming them at once.

The posterior pituitary body is the chief functional center of the nervous system. It is the anterior pituitary body's co-center in sustaining metabolism, and it is an important feature of the morbid process in influenza, hay fever, hysteria, catalepsy, and other obscure affections. The spleen and pancreas unite in furnishing trypsin to the blood. Its main function in the blood is the destruction of toxic albuminoids. Phagocytosis is the preponderant immunizing factor, but it is trypsin
which reduces the toxic albuminoids to inert cleavage products in the digestive vacuoles of the leucocytes. Ehrlich's views become simplified, his amboceptor being adrenoxin, and his complement (Buchner's alexins, Metschnikoff's cytases) being trypsin. Fibrinogen, however, plays a preponderant rôle also in this matter, the process requiring the cooperation of the three factors, trypsin, adrenoxin, and fibrinogen, for trypsin is sufficiently active only in the presence of given proportions of adrenoxin and fibrinogen. Thus in typhoid fever, fibrinogen is missing, whereas in diphtheria, it is trypsin which is lacking in the blood, and the dominant active principle of diphtheria antitoxin is trypsin. The white blood cells have functions exceeding in importance those heretofore ascribed to them, even hypothetically. The neutrophiles are traced from the solitary and agminated follicles to the cavity of the intestine, where they ingest proteids; and through the villi, and the mesenteric and portal veins where they absorb trypsin. They form peptones, myosinogen, and fibrinogen, and distribute these to all tissues, the muscles, and the blood itself. The eosinophiles are daughter cells of the neutrophiles, mitosis occurring in the liver. They are traced to the pulmonary alveoli, where they participate in the formation of the nucleated epithelium. Their product is hemoglobin. The basophiles take up fat and change it into myelin, which they distribute to the nervous system.

From this brief summary some conception may be gained of the extent of Dr. Sajous' investigations. He hopes to evolve a system of "immunizing medication," whose purpose it will be to arrest diseases during their incipency through stimulation of the adrenal system.

Dr. Sajous has embodied his ideas in a handsomely printed book of over 1,000 pages, published by the F. A. Davis Company, of Philadelphia. A second volume, which is promised in the near future, will bring out more fully the author's ideas on "immunizing medication."

ALCOHOL IN MEDICINE.

Apropos to the recent expressions on alcohol and inebriety in this journal, the following brief review of Dr. Blackader's article on the true action of alcohol as a therapeutic agent, in the Montreal Medical Journal, may be of interest:
In so far as it can be determined by experimental research, Cushny has shown that the physiologic action of alcohol is that of a narcotic, and not a stimulant to the nerve centers; that it is a stomachic, and that it may under certain conditions act as a food. This latter assertion is based upon the law of the conservation of energy. It has been proved by exact research that in doses not exceeding $72\frac{1}{2}$ drams less than 2 per cent. is excreted unchanged from the body of a healthy individual. It is, therefore, plain that the potential energy of the alcohol must be transformed into kinetic energy in the body, either as heat or as internal or external muscular work. That this does occur has been further proved by estimating and comparing the total energy obtained from a diet containing no alcohol with that obtained from a diet in which 500 calories are furnished by alcohol, the results obtained corresponding exactly.

The effect of alcohol upon mental processes has been shown by Kraeplein to render all purely psychic acts less accurate; and he has further shown that the only increase of power obtained is in the transformation of an idea into movement. This observer has also demonstrated the fact that the impairment of mental power following the use of alcohol last from 12 to 24 hours.

Quoting Sir William Broadbent on the use of alcohol in medicine, the sound rule is laid down that all stimulants—the word being used in its common interpretation—should be withheld until it is absolutely clear that they are necessary.

As to the employment of alcohol as a beverage, Blackader quotes from the editor of the Practitioner, the testimony of such men as Sir Samuel Wilkes, Sir H. Thompson, Professor Sims Woodhead and Dr. Edmonds, each of whom found in his individual experience that he could only accomplish the best of which he was capable by foregoing alcohol in every form. It is interesting to note in this connection that it has been shown by statistics that teetotalers have a somewhat longer expectation of life than others. The writer concludes this interesting résumé with the aphorism that "there are those who, like Cassio, have very poor and unhappy brains for drinking, or who, like Dr. Johnson, can abstain but cannot be moderate."
At the annual meeting of the Essex District Medical Society, held in Newark April 8, fully 200 persons were present, including several women who have taken the degree that entitles them to membership in the organization. The election of officers preceded the annual address of the retiring president, and a banquet followed at the close of the business session. Dr. James T. Wrightson, the president, took for his subject, "Treatment of Disease and Its Prevention, as Evidenced by the Attitude of the People of Essex County."

The officers chosen were as follows: President, Dr. Walter S. Washington; vice-president, Dr. Richard Newton; secretary, Dr. Archibald Mercer; treasurer, Dr. Charles T. Bennett. Delegates were named to represent the society at the next meeting of the Medical Society of New Jersey and a number of new members were elected.

Dr. J. Edward Stubbert, of New York, gave before the William Pierson Medical Library Association, of Orange, April 6, "A Historical Sketch of Some So-called Consumption Cures." Dr. Richard C. Newton, of Montclair; Dr. Thomas S. P. Fitch, of Orange, and Dr. Ralph Hudson Hunt, of East Orange, composed the lecture committee.

Diphtheria has been epidemic in Rahway.

Reed & Carnrick, the enterprising Jersey City manufacturing chemists, have recently issued a series of anatomical charts which are models of art. The charts are six in number, each representing a different part of the human economy. The work of the artist and engraver is the superior of that seen in most anatomical works. The credit of the idea is due to the president of the firm, Dr. Edwin Leonard, Jr., who is as progressive as he is original. Dr. Leonard is using all ethical means to bring the products of Reed & Carnrick before the profession, and that his labors are successful is evinced by the growth of the firm's business.

The Essex County Homeopathic Hospital, at Sussex avenue and Third street, Newark, has been opened for the reception of patients.

The building contains nine rooms, and is believed to be adequate for the purpose intended, for the present, at least. Dr. Sleight said the building had been leased for one year, with the privilege of renewal. The association has no intention of establishing the hospital permanently on the present site. Dr. Sleight said that, should a new hospital be erected, a site nearer the center of the city would be selected.

The physicians who have been active in establishing the new hospital are: Dr. B. H. B. Sleight, Dr. D. G. Conkling, Dr. W. S. Baker, Dr. F. H. Monroe, Dr. G. W. Harrison, Dr. C. H. Wintsch, Dr. E. Hill Baldwin, Dr. P. C. Bunn, Dr. G. Herbert Richards and Dr. Charles H. Shelton. The incorporators of the institution are Drs. Sleight, Wintsch, Burnett, Grover and Beggs.

Dr. G. Herbert Richards and Dr. E. V. Moffatt have been elected surgeons of Jersey Commandary, Knights Templar, of East Orange.

Dr. Martin Waldstein, of South Orange, has purchased a new residence at 127 Ralphston avenue.
Dr. W. M. Hepburn, of Freehold, has been elected vice-chairman of the board of trustees of Carnegie Library.

The Oppenheimer Institute has opened a branch in Atlantic City, at 2901 Pacific avenue. Atlantic City is a most attractive and desirable place of residence, and if the business men and others interested in its welfare could only fill the gap in the Atlantic Coast Railway, so that it would be more accessible from New York city, the city would boom. Atlantic City is too good a place for Philadelphia to keep as its own private resort. With all its natural advantages, it should prove an ideal place for an institute.

Dr. Arthur H. Dundon, of Plainfield, has been appointed medical examiner for the Metropolitan Insurance Company in the city and in the borough.

At the annual meeting of the Gloucester County Medical Society, held in Woodbury, the following officers were elected for the ensuing year: President, Dr. Joseph M. Husted, of Clayton; Vice-president, Dr. William Brewer, of Woodbury; Secretary and Treasurer, Dr. George Evans Reading, of Woodbury; Reporter, Dr. Wesley Grant Simmons, of Swedesboro; Censors, Dr. Harry A. Stout, of Wenonah; Dr. Luther M. Halsey, of Williamstown; Dr. James Hunter, Jr., of Westville.

Among the visitors were Drs. Iszard and Wingender, of Camden; Dr. Henry W. Elmer, of Bridgeton, and Drs. Hare, Judson Daland and Mordecai Price, of Philadelphia.


Dr. E. T. Oliphant was elected Permanant Delegate to the Medical Society of New Jersey, and Drs. C. S. Heritage, Harry A. Stout, S. F. Ashcraft, Howard A. Wilson, M. J. Luffbarry and J. G. Edwards were elected as Annual Delegates.

The engagement of Miss Edith B. Towar and Dr. Howard S. Forman, of Jersey City, has recently been announced. Dr. Forman, who is the son of the late Dr. Samuel R. Forman, lives at Bergen and Jewett avenues. He has practiced his profession in Jersey City since being graduated, and is also prominently identified with the First Presbyterian Church.

Dr. Walter S. Leaming, postmaster of Cape May, died March 29, from pneumonia and Bright's disease. He had been ill for about two weeks. He had been postmaster since December, 1901, and was prominent in Republican politics. He was born at South Seaville, in 1854, and was graduated from Jefferson Medical College and the Pennsylvania Dental College of Philadelphia. In 1888 he was a member of the State Assembly and served as Senator in 1889, 1890 and 1891. He served as president of the City Council in 1893, 1896 and 1897 and was City Treasurer in 1899. He was a son of ex-Senator Jonathan F. Leaming. He leaves a widow and three daughters. He was a Mason, a member of the United Workmen and a Heptasoph.

Dr. John J. Nevin is prominently mentioned as a democratic candidate for mayoralty honors in Jersey City.

Dr. Campbell, of Millburn, has been chosen president of the Board of Health and health physician.

The body of Dr. George Marsland, a former Arlington physician, who died February 21, at the City Hospital, Newark, and which has since been in the vault at the Arlington Cemetery, was recently interred in a grave in the presence of Miss Agnes Marsland, of Washington, D. C., a daughter of the dead man, and representatives of the New York Bankers' Associa-
tion, of which Dr. Marsland was secretary from 1883 to 1887.

At the time of Dr. Marsland's death, the whereabouts of his daughters, who had, with the mother, been separated from him for the past twenty years, could not be learned.

Miss Marsland said that her mother died some years ago, and that her sisters were living in England.

Dr. J. M. Maghee, of West Orange, has been vacationizing at Atlantic City.

Dr. Edward Matthie was appointed City Physician for the old Fourth Assembly District, Jersey City, to succeed Dr. Henry, who resigned.

The division at the Jersey City Hospital is at an end, and peace now prevails. Dr. Walter Taylor, the house surgeon, who has been at variance with the officials and attaches, has sent in his resignation, and it has been accepted.

The opticians have succeeded in having passed the bill authorizing the Governor to appoint a commission of four qualified opticians to serve as a State board of examiners. The bill provides that all opticians desiring to practice in this State shall pass an examination and that a license shall be granted to all who pass a successful examination on payment of the stipulated fees.

Governor Murphy has nominated for managers of the Home for Feeble Minded Women at Vineland, John J. Cleary, of Trenton; Annie E. Gile, of West Orange, and Caroline B. Alexander, of Hoboken.

Dr. J. L. Chamberlin, of Sergeantsville, and Miss Mae Lennard, of Baptisttown, were married at the home of the bride March 25. The couple will reside in Sergeantsville, where the doctor has a large practice.

The Paterson Orphan Asylum, the Catholic Orphan Asylum, the Paterson General Hospital, and St. Joseph's Hospital, each benefit to the extent of $25,000 by the death of William Laverack, a jeweler of Paterson.

Dr. Robert M. Curtis, of Paterson, is enjoying a Mediterranean tour.

The twenty-third annual report of the trustees of the Newark Charitable Eye and Ear Infirmary shows that 25,513 patients were treated gratuitously during the last year, of whom 4,646 were new cases. There were 1,074 surgical operations and 161 patients were treated in the wards. The report further shows that since the establishment of the infirmary 543,761 visits have been made to the institution by 105,621 patients, an average of something more than five visits for each patient.

Dr. William Loewanthal and Dr. Edward T. Taylor, of South Orange, recently returned from visits to Atlantic City.

The Hooper Cooper Society, of Bayonne, elected Dr. John Cook as medical examiner. There are 280 members in the society.

Dr. Wellington Campbell was chosen chairman of the Millburn Township Committee at its meeting for organization. Dr. Campbell was also made the township representative on the Joint Sewer Commission.

The charges of cruelty and mismanagement preferred against Charles H. Deacon, superintendent of the County Insane Asylum at Mt. Holly, after a thorough investigation, have been declared unsupported by the committee appointed by the Board of Freeholders to make inquiry.

The committee recommends the eliminating of the asylum from politics and suggests that the superintendent and physician be appointed for an indefinite period.

Dr. A. W. Church, who for some time past made his residence in Jersey City,
died March 13, of acute appendicitis, in St. Francis’ Hospital. He was operated upon immediately after his arrival at the hospital as the case admitted of no delay. Despite all the surgical skill brought into use, he continued to sink until the end came a little over three hours after the performance of the operation.

Dr. Church, who was 32 years old, was a graduate of Edinburgh, Scotland University, and he also held a degree issued by Columbia College Medical School. He practiced for some time in Waretown, N. J., and when his father died a year or two ago, he came into considerable money and real estate.

Dr. Church, who was unmarried, was a nephew of the late Dean Church, who was a canon of St. Paul’s Cathedral, London, England. Before he went to the hospital he executed a will making W. H. Rees, a young Jersey City lawyer, chief beneficiary.

Mayor C. B. Holmes, M.D., has been appointed borough physician of Linden by the Borough Council.

Dr. Edwin M. Ward has been elected president of the Bloomfield Board of Health.

E. Roland Mulford, of Bridgton, a member of the graduating class in the medical department of the University of Virginia, went to Washington late on the afternoon of March 20, with Miss Mattie J. Anderson, of Charlotteville, and at 10 at night they were married.

Mr. Mulford is exceedingly popular among his fellow-students. He is a member of the T. I. L. K. A. Ribbon Society and also of the Pi Mu and Sigma Chi fraternities. In the fall of 1900 he was a substitute guard on the varsity football eleven and in the game with the Carlisle Indians in Washington made the tackle that was instrumental in scoring the only points made against the redskins.

Dr. Sherburne R. Merrill, 81 years old, died at his home in Paterson, March 16, after an illness of two weeks, from a complication of diseases and old age. He is survived by his widow and one son, Dr. John R. Merrill.

Bloomfield Lodge, B. P. O. Elks, has elected Dr. Joseph C. Saile exalted ruler.

Dr. Norman Lester Horne, of Jersey City, and Miss Alfaretta Strang, of Texas, were married March 16. Dr. Horne, who was a house officer in Christ Hospital, met his bride while she was a nurse there.

Dr. and Mrs. Edwin Betts, of Newark, have returned from a trip to Atlantic City and Washington.

Dr. J. Allen Osmun, of 588 Broad street, Newark, has been in California several weeks visiting his son.

Dr. J. G. Broughton, of Bloomfield, has been enjoying the climate of Florida.

Dr. Frank H. Wolven, a popular young resident of Bloomfield, is expected home from the Philippines in a short time.

Dr. J. S. Smith, of Bayonne, entertained fourteen members of the Bayonne Medical Society at his residence, March 19. It was the occasion of the doctor’s regular monthly meeting. Dr. S. R. Woodruff, of West Twenty-second street, read a paper on “Bronchial Pneumonia in Infancy,” which subject was later discussed by Drs. Brooks and Heinzleman. Dr. Smith provided a collation and cigars. Dr. Brooks, of Avenue C and Forty-third street, will entertain the doctors at their next meeting.

Dr. Morgan Wilcox Ayres, of Upper Montclair, has returned from Lakehurst, where he has been spending several weeks.

What is said to be the first “bloodless” surgical operation performed in New Jersey took place in the Home for Crippled Children, in Newark, April 3. The subject was Dorothy Dare, three years old,
daughter of Thomas Dare, of Maplewood. Since her birth the hip bones of the child have been malformed.

The operation required three-quarters of an hour, and the little patient is now encased in plaster casts.

Dr. Dexter D. Ashley, head surgeon of the Post-Graduate Hospital, of New York, and Dr. Sidney A. Twinch, of Newark, were the operators.

Dr. J. Morgan Jones has been appointed a deputy health inspector of Jersey City.

Dr. Leslie D. Ward, of Newark, has returned from a 10,000 mile railroad trip.

Former Assemblyman Dr. James Doty died March 28, in Basking Ridge, after a long illness due to paralysis and softening of the brain. He was 72 years old. In 1871 he represented Somerset County in the Assembly. Many years ago he was appointed a Master in Chancery by Chancellor Zabriskie, and was the last layman to acquire that distinction. Dr. Doty was a member of the class of '48 at Princeton and was a member of the Cliosophic Society.

Dr. and Mrs. George W. Talson, of Glen Ridge, have returned from Florida.

Dr. H. Dearborn, of Elizabeth, a physician of the Emergency Hospital, in attempting to board a train for New York, lost his hold on the hand rails and fell under the cars. His left hand was crushed.

Governor Murphy has made these appointments:

Board of Managers of State Hospital for Tuberculosis—Dr. Elmer Barwis, of Trenton, and Dr. W. S. Jones, of Camden, reappointed.

State Board of Medical Examiners—Dr. Edward Hill Baldwin, of Newark; Dr. John J. Baumann, of Jersey City, and Dr. John W. Bennett, of Long Branch, reappointed.

Managers of the State Village for Epileptics—Theodore Foote, of Vineland, and James J. Bergen, of Somerville, reappointed.

State Board of Health—Henry W. Ulmer, reappointed.

State Board of Veterinary Examiners—Dr. William Herbert Lowe, of Paterson.

State Board of Dentistry—Dr. Frederick G. Barlow, reappointed.

State Board of Pharmacy—George H. White, reappointed.

Dr. Paul T. Kimball has been very ill with blood poisoning. Dr. Kimball was poisoned by scratching his thumb slightly while dressing a wound. He has a large practice in Lakewood, among the fashionable residents, as well as being called in many hotel cases.

He is the family physician of George Gould. He is a member of the Country Club and is a crack golf player.

Dr. and Mrs. Layton Osmun, of Glen Ridge, are now residing in California.

Dr. and Mrs. C. M. Slack, of New Brunswick, have been spending several weeks in Daytona and Jacksonville, Fla.

Dr. Theodore H. Boysen, former Mayor of Egg Harbor City, one of the most prominent physicians of Atlantic County, died at his home, March 4, after a two weeks' illness. He was 49 years old.

Dr. Boysen was born in Ohio and located in Egg Harbor about twenty-six years ago. He served several terms as Mayor and School Superintendent. At the time of his death he was secretary of the Egg Harbor Building and Loan Association, which he founded eighteen years ago; a member of the Board of Health and honorary president of the Aurora Singing Society. He was also a member of the various secret societies of this city. A widow and seven children survive him.

The Morris County Medical Society has elected the following officers: President, Dr. J. W. Farrow, of Dover; vice-presi-
dent. Dr. Harry O'Riley, of Morristown; treasurer, D. James H. Douglass, of Morristown; secretary, Dr. H. W. Kice, of Wharton.

Dr. Edward Sutton and his driver, of Clifton, narrowly escaped being killed at German Valley, March 14.

The Postal Telegraph Company had a force of men putting six additional wires on their line across the public highway. As the doctor and driver were passing under the partly stretched wires, they broke, falling across the horse and carriage. The horse, getting tangled up, became unmanageable and ran away. The wires dragged the occupants out and threw them violently to the ground. The carriage top was severed as by a knife by the wires.

Dr. Sutton was picked up in a semi-conscious condition, and was found to be severely injured about the head, face and body as well as internally. The driver escaped with a few injuries, which are believed not to be serious. The frightened animal ran two miles before being caught, and the vehicle was a complete wreck.

At the Franklin M. E. Church, March 20, Dr. G. B. Philhower lectured on "Medical Facts for Laymen," under the auspices of the Men's Association, of Nutley.

At the recent meeting of the Grand Lodge of the Legion of the Red Cross, Dr. Wallace McGeorge, of Camden, was elected warden.

Dr. H. A. Pulsford, of South Orange, lectured March 13 before the Orange Mountain Medical Society in the Free Library building. Dr. J. S. Bruen, of Montclair, subsequently entertained at luncheon.

Dr. Benjamin Miller Van Syckel died suddenly at the residence of his mother, Mrs. P. J. Van Syckel, in Newark, March 15. Death is attributed to heart failure, and while the end was sudden, it was not unexpected, as the physician had been ill for several years and had given up practicing some time ago. Dr. Van Syckel was born in Newark about forty-six years ago and was educated at Rutgers College. After he graduated he studied medicine in New York. Soon after receiving his diploma he spent two years in Europe.

On his return he opened an office in Lenox avenue, New York, where he established a large practice. Close attention to his work undermined his health and caused a general breaking down of his nervous system. He is survived by a widow, a daughter and a son. The mother and daughter are in Italy, where the latter is being educated, and the son is studying at Cornwall-on-the-Hudson.

Mrs. Anna Sutorius, widow of the late Dr. William Sutorius, a well known army surgeon, died in East Orange, March 13, aged 81.

Dr. Irving Cronk, of New Brunswick, recently joined the Royal Arcanum.
THE PRESENT STATUS OF THE THERAPEUTIC USES OF THE X-RAYS.

By J. EDWARD STUBBERT, Ph.D., M.D., of New York City, Professor of Pulmonary Diseases in the New York Post-Graduate Medical School and Hospital; Visiting Physician Loomis Sanatorium, Liberty, N. Y.

Since the discovery of the X-rays or the so-called Röntgen rays, the scope of their usefulness has been rapidly expanded. A little more than six years ago it was supposed that their usefulness was and would be confined to the possibilities of surgical diagnosis, and no idea was entertained that they would be of value either as a diagnostic agent in non-surgical cases or as a therapeutic force in diseases of any class.

In 1897 the writer published a series of seventy-three cases showing the accuracy between the results arrived at in diagnosis of pulmonary diseases by ordinary means of physical diagnosis and by radiographs. Since that time various writers have demonstrated the value of the X-rays as a diagnostic agent, not only in diseases of the lungs but of the heart and other viscera.

Williams, of Boston, published probably the most valuable book we have upon the subject, showing that the scope of usefulness of the Röntgen rays for diagnostic purposes was far wider than had been supposed by the most ardent of their advocates. Before this time, as has been stated, their usefulness in various forms of surgical disease and injuries, foreign bodies in any portion of the body, fractures, dislocations, etc., had been so thoroughly demonstrated as to admit of no further discussion. The medical profession was not as willing, however, to accept the fact of their usefulness as a diagnostic agent in diseases not particularly included within the realms of surgery. To be sure, they were willing to concede that urinary or biliary calculi might be shown in a skiagraph, as it was assumed that the comparative density of these substances would naturally throw a shadow upon the screen, but gradually it became a recognized fact that other diseases, such as arteriosclerosis in its early stages, the various deposits in the bones, as well as tumors in the stomach, could be accurately defined.

More slowly, but none the less surely, has been impressed upon the professional mind the fact that diseases affecting the pleura and the lungs, such as thickening of the former, empyema, pleurisy with effusion, pneumothorax and cavities of the lungs themselves could be so clearly outlined upon the fluoroscope screen as to be apparent to the most skeptical observers. Then it was proved that not only all more or less dense consolidation of pulmonary tissue could be recognized, but that small areas of the most incipient forms of tubercular infiltration could, by the practised eye, be readily recognized.
At the present time, however, the therapeutical advantages of the Röntgen rays are exciting more acutely the members of the profession than their now well-established diagnostic powers. Lupus, erythematosis, epithelioma, chronic eczema, vascular nevus, favus and sycosis have all been proved to yield readily to a more or less extended exposure to the action of the X-rays, and, as far as now known, recurrences have not taken place in any considerable percentage of cases treated.

Sarcoma has been shown to disappear rapidly under exposure of fifteen to twenty minutes three or four times a week, and this not only applies to those tumors on the surface of the body, but also to those involving the more deep-seated organs.

Carcinoma, when so located, has to be reached by the rays either directly or indirectly and is inhibited in growth and is in some instances entirely disseminated.

Tubercular peritonitis, in the chronic form especially, is always relieved and in some instances held in check for many weeks by judicious exposure of the abdomen to the X-rays; although, as far as the writer knows, there is no case at present on record of this disease having been radically cured in this manner.

Its therapeutic value in tubercular conditions of the tonsils or pharynx has been practically demonstrated; in fact, it is no longer a disputed point that, whenever a tubercular process is superficially located so as to make it possible to apply the rays directly, not only can the process be absolutely inhibited, but a radical cure expected. In tubercular larynx, while there are no satisfactory records at the present time, there are isolated cases which tend to show that the disease could be arrested in this manner. In the first place, it is impossible to reflect the rays so as to expose the larynx through the pharynx, and therefore it is necessary to pass the rays through the outer and healthy tissues of the neck. One case of cure in this manner has been reported by Scheppegrell, of New Orleans, and the writer has among his records an instance in which prolonged local treatment failed to arrest tubercular infiltration of the larynx, which, however, disappeared very thoroughly after exposures of the X-rays applied three times a week for fifteen minutes at each sitting.

Naturally the profession is looking always anxiously for some more efficient and successful treatment of pulmonary tuberculosis and because as yet we have no recognized uniform treatment for this disease. We know, as has been before stated, it is now an undisputed fact that lupus or tuberculosis and carcinoma, as well as carcinomatous growths located superficially, can be and are successfully eradicated by the use of the Röntgen rays. There are also many instances on record of deep-seated carcinomatous and sarcomatous growths having been not only relieved but cured in the same manner; therefore, reasoning by analogy, the profession has a right to believe that some forms of tuberculosis may be at least benefited by the employment of the same agency. The anatomical construction of the lungs would naturally make it more difficult to attain such results as might be looked for. At the present time.
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while a few observers have recorded apparently satisfactory results, at least inhibition of pulmonary tuberculosis by the use of the Röntgen rays, it would be unwise and unscientific to claim anything definite for this method of treatment; but, on the other hand, not to cease investigations along this line. What can be said truthfully at the present time is that the Röntgen rays seem, from the sparse records at our command, to inhibit the tubercular process, diminish expectoration, reduce sepsis and diminish in number the pus cocci, notably the streptococci lanceolatus. There is no evidence at all at present that the number of the tubercle bacilli was affected by the action of the rays.

Temperature is naturally reduced with the disappearance of the cocci and sepsis. In one case among the writer's records not only the radiograph but the physical signs showed that, in an apparently hopeless case, not only was the above-mentioned action plainly shown, but fibrosis was established in softened areas.

**Technique.**

The technique of the Röntgen rays as a therapeutic agent requires even a more accurate knowledge and careful observation of the rules than in diagnosis. There is apt to be a wide difference of opinion between the results produced by the action of the coil, or static machine. It is, however, I believe, a well-established fact that their harmful effects are much more apparent when their power is evoked by coil rather than the static current. Burns are much more frequent when the coil is used. Moreover, in addition to the specific effect of the X-rays themselves, the ozone generated by the static machine is of definite value to the patient in improving the nutrition.

The time of exposure required, however, in using the static machine is nearly three times that necessary in the exposures by coil. A tube of high penetration is required in all cases. In treating external growths the patient should be placed about eight inches from the tube. When internal diseases are to be treated, the tube may be brought closer to the body, say about four inches or five inches distant, when the rays are to pass through healthy tissues to diseased tissues below, as notably in diseases of the peritoneum or uterus or abdominal organs through the abdominal wall. In this case, however, it will be necessary to observe great caution lest the patient be burned. This may be obviated to a certain extent by moving the tube from one part of the abdomen to the other so that on alternate exposures different portions of the abdomen are exposed or different points may be exposed five minutes at a time at each sitting. As soon as the patient complains of an itching sensation or burning or the epidermis begins to be sunburned, the tube should be shifted so as to expose another portion of the body for a few days. Even with these precautions it will be impossible, in a large number of cases, to avoid blistering superficial portions of the body in cases treated for very long at a time.

Some operators have been bold enough to declare that the most beneficial results are to be obtained after the blistering has appeared. The writer does not subscribe to this statement, but acknowledges it is impossible, in the majority of instances, to avoid such blistering.
Burns of a deep character are unnecessary but not always avoidable, and in treating malignant growths, if the joints should lie between underlying healthy tissue, the tube treatment should be stopped as soon as any evidence of a burn appears. When the rays are passed through channels, such as the vagina, rectum or mouth, to test the rays the tube should be brought as closely as possible, say within one-half inch, of the mouth of the speculum introduced into the passage. In other words, as closely as can be without discharging the electric current. When treating malignant growths of the uterus, it is better to place the patient in the dorsal position and to use a cylindrical speculum of as large a diameter as possible, and secondarily to dilate the cervix so as to introduce at each side the intra-uterine speculum passing the rays directly through the endometrium.

In treating recurrent disease in the vault of the vagina in cicatricia tissue, possibly the knee-chest position may be found more convenient. The Cleveland speculum being used to elevate the posterior wall of the vagina, together with the writer's bridge passed across the buttocks under the external pole of the speculum with a thumb screw, which allows the gradual elevation of the posterior wall of the vagina until the diseased area is thoroughly exposed.

When the subject has not much adipose tissue it is well to give alternate treatments through the vagina and the abdominal wall.

Prostatic disease is best treated through the rectum, using a short speculum with a bevelled end, the short end of which is placed in the rectum.

Tumors involving the submaxillary and pharyngeal regions are best treated alternately externally and by the mouth. In the latter case a long metal speculum with a considerable bevel is introduced and held in position by the teeth.

A new tube has lately been invented by Caldwell, of New York, which impinges the rays at the end of a long disc-like tube which may be introduced into any of the cavities of the body. This in turn is surrounded by a two-inch tube filled with water, acting as a water-bath to prevent heating of the tube and burning of the surface with which it comes in contact. The writer has used this on several occasions, but has not as yet been satisfied that the therapeutic results are as powerful or satisfactory as when the ordinary large tube is used at a greater distance, and the rays transmitted through a metal speculum.

One of the most satisfactory therapeutic uses of the X-rays is the almost immediate relief from pain, which in itself is such a boon as to demand their use even in fatal cases in which we have no hope for cure but in which we wish to alleviate the condition of the patient.

The rapid cessation of discharge and the drying up of pus, and, finally, not less remarkable than the relief of pains is the almost immediate cessation of hemorrhage.

In fibroid growths we have no satisfactory data tending to show that the X-rays are of any value in the way of decreasing the growth. The only beneficial result that has been seen has been cessation of hemorrhage in internal fibroids and tuberculosis of the lungs.

25 East 45th Street.
TEMPORARY EXPEDIENTS IN THE PRIMARY TREATMENT OF FRACTURES.

By THOMAS H. MANLEY, M.D., of New York City.

The treatment of fracture necessarily begins from the time the case comes under the surgeon's care. The task immediately before us at this time involves practically two things.

The first is to place the limb in a comfortable position, and the second is not to apply such pressure by bands or braces as will hinder the fullest freedom of the circulation.

For fractures attended with no displacements, whether they implicate a joint or not, no splinting of any description is necessary, although in many a well-padded band adds to the patient's comfort. Heavy folds of gauze make a capital splint at the beginning.

In every description of fracture through any part of a bone shaft, attended with displacement, some description of mechanical support is called for, as movements of the limb above or below must be prevented by a firm substitute for the broken band of bone. This is provided by passive and active agents. The former include altitude and rest of the limb or a steady support on a pillow, or in a sling. One of the latter supports may be a well-lined fracture box, a mass of cotton or wool with some kind of solid retention material overlaid, as such will permit of frequent inspection and the application of remedies over the site of injury.

Reduction.—Sometimes it is a difficult matter to reduce a fracture immediately. When this is possible and can be effected without undue violence, it should be accomplished; but what is objected to is employment of extreme force as a primary measure in all cases. We should often be content to wait until inflammatory reaction has subsided and the swelling has become reduced before we proceed to the next step, being cautious after reduction not to be led into the common error of attempting perfect "fixation" by the needless use of firmly maintained pressure. Gangee pointed out, united by "primary union," provided no pressure is employed on any part of the limb.

Now, many fractures occur without any displacement, visible or tangible, and, hence, there are no fragments to replace, and, furthermore, which no description of mechanical adjustment can accurately secure in their restored position without imperiling the vitality of the limb or entailing serious impairment to the general health.

There is no question but that in all fractures contiguous to joints, resulting from great violence, the implication of the arthritic structures, of the circulation and the nerve-limbs is one of the most serious phases with which we have to deal. This associate state of lesions of the soft parts is what constitutes "complicated fractures."

Sprain Fractures.—"Sprain fractures" constitute a considerable proportion of these cases, in which arthritis, synovitis, neuritis and phlebitis are not only a very troublesome co-incident condition to treat during osseous repair, but they linger long after the union of bone is completed.

Co-incident or Consecutive Complications.—Complications, or sequelæ, may ensue during treatment or after; generally from conditions inherent
to the injury, but we should not forget that these are unpleasant manifestations of impairment in function or even loss of a limb, entailed through want of knowledge or a misapplication of those principles which should govern us in our management of these cases.

Obsolete Principles.—It must be obvious to any one who has given the subject of fractures serious thought, that many of the principles which guided the surgeon in fracture treatment before the era of anesthetics and antiseptics, are now antiquated and obsolete.

Before that epoch the attendant applied all his energies to adjust the fragments that no deformity should follow, even though he took a chance of asphyxiating the limb and inducing gangrene, because he knew well that, should distortion or reflection follow, the patient would never submit to the agony of a corrective operation. Nor would he himself be very willing to take the chances of an osteotomy or resection of bone. But now this is all changed, and our first concern should be to see well to it that the circulation is unhampered and that the nerve trunks are not compromised and that everything favors reaction with the full nutritive activity of the limb. All this is essential, though some risk may be taken on the side of securing the most perfect primary repair of the broken bone. The vitality of the limb, then, first; its healthful restoration second, and its perfection of outline third. The one aim is a primary line of action in all severe fractures. Later, after union is complete, such osseous defects as ensue, leaving deformity or impediment in function, may be safely and securely removed by consecutive surgery, none of which is more gratifying in its results than that performed in healthy bone tissue.

Permanent Adjustment.—Many uncomplicated fractures do very well which are immediately splinted; the fragments are reduced, or approximately reduced, the lack of cohesion between the fragments being temporarily compensated for by a well-padded mechanical support. In any complicated fracture extensively involving the soft parts, contiguous with the osseous structures, immediate firm splinting may not only imperil the limb, but it certainly retards repair. To avoid this it should be recognized as a fixed principle not to brace the limb by any splinting material until aseptic process of repair has begun, and this, as Ollier's experimental researches and ordinary clinical observations have proved, is proper only on the subsidence of inflammatory reaction, a period ranging from 48 hours to 10 days after the injury.

The Period for Permanent Adjustment in Open Fracture.—Now the time has arrived when we must return to the question of splinting; but there are many types of fracture in which any description of firm adjustment is inimical to the well-being of the limb; in practically all types involving the bone shaft, in the advanced stages of osseous solidification, some variety of splinting is generally indispensable. This is rendered necessary because the bond of union through it has been relatively perfect, it is fixative, contiguous, weak and pliable.

Stimson claims that union is not of sufficient strength in a fractured femur to support the body until the seventy-fifth day. At all events, when the leverage action of the muscles is called into play, when they recover tone and as nervous strain is put on the limb, its tendency to deflection is great until complete ossification is effected. This is more
Conspicuous in the femur than in any other shaft, although we will sometimes observe it in any of the long bones.

> Independent of provision against displacement or deflection in union, properly adjusted support imparts a sense of security and comfort besides reaches the ambulant treatment of the limb, a most gratifying change to the patient.

Plaster Casts as Immobile Dressings in Fracture Therapy.—During the past thirty years plaster materials have come largely to displace splints or braces in the adjustment of broken bone shafts. Plaster-of-Paris starch, glue and potassium salicylate have been adopted, but among them gypsum alone has been gradually preferred to all other plastic materials those qualities which commend it being its cheapness, its availability its resistance, porosity and its property of quickly setting. When it was first introduced into this country it was believed by many that it would displace every description of splinting and revolutionize fracture therapy. It was soon found, however, that it had serious drawbacks and did not fulfill the purposes expected of it. It was evident that, unless applied with caution and skill, it was a dangerous material to employ indiscriminately as a primary dressing; that it became loose easily, that a closed fracture might become an open one under it, that the fragments might undergo concealed and marked displacement. Its early removal increased jarring of the limb; it was heavy, hard and unyielding. Nevertheless, in hospital practice, judiciously applied and opened early, it serves well as an excellent substitute for other more expensive materials. In complicated or open fractures it is of infinite value, particularly when expensive mechanical adjustments cannot be secured.

Its great claim when it first appeared was that it immobilized the fragments, and this was the sine qua non in fracture treatment, both of which have been proven fallacies. For a time its employment became so general that it became so crystallized into an axiom, that he took a chance of a malpractice suit who did not “put up” his patients' fractures in plaster-of-Paris. The modern industries have so abundantly supplied us with such a variety of superb cheap splinting materials that plaster is in less demand. Among these, and the most satisfactory, is the wood-fiber splinting material, invented by Dr. E. S. Tracy, of Boston. It consists of a center or core of coarsely woven muslin with outer incorporated layers of wooden fiber. The material is light, strong, and adjustable in various sizes to every shaft fracture. Next to this comes felting, a highly valuable material for many cases. Besides these, there are many other materials lately utilized with advantage in the latter stage of fracture treatment. In the great majority of cases, however, wooden splints of paper consistence and construction, well padded, meet most requirements.

In every stage of fracture treatment the frequent change of dressings, re-adjustment of supports and moderate movement of the joints leave a sense of increased comfort and, moreover, materially aid reparative processes. Championniere advises frequent changing of the dressing, kneading the muscles and passive joint action daily in all uncomplicated cases.

Transportation of the Injured After a Fracture Attended with an Extensive Disorganization of the Soft Parts.—The premature or injudicious
transport of one suffering from a badly mangled limb, over a long distance, in an improperly constructed vehicle, enhances the gravity of the case.

In modern times our hospital ambulances, with padded bottoms and rubber tires, fulfil a useful purpose in conveying the injured from the field of accident to house or hospital; but there is always more or less jarring over the pavement in sudden stops and starting, disquieting and painful to the patient.

Under ordinary circumstances to transport, over a rough road in a vehicle, more than two miles, a man who has sustained serious injury, is fraught with danger and should not be permitted if it possibly can be avoided.

We may perhaps make an exception to transport over long distances in railway injuries, when the patient is placed in a well-equipped hospital car under the continuous supervision of a surgeon until the destination is reached. Except in the far western parts of our country, there is no trunk line which is not amply provided with hospitals, at distances less than fifty miles apart, or one hour's run by a fast train. Many railroad corporations have taken special pains to teach their train hands "the first aid to the injured"; but let us not overlook the fact that the most essential of all aids after injuries of great gravity are rest and tranquility of the patient. Meddlesome interference by amateurs is dangerous experimenting. The importance of sparing the patient the dangers of transport after serious wounds is found emphasized by all our noted writers on military surgery, and even in civil life we are frequently reminded of these dangers by our public functionaries, in coroner's cases, in which the verdict has been "death caused or accelerated by the careless or injudicious transport of the deceased."

There are at times cases of grave fractures coming under our observation which call for decision in the question of transport. Those in whom, although a limb has been badly mangled, yet the loss of blood has not been great, nor in whom there is evidence of serious internal injury or ominous shock.

Alcoholics.—With this class, having subdued hemorrhage, if there be any, our first attention should be directed to the patient; he should be placed in a comfortable position and given restoratives and narcotics to invite reaction and relieve pain. There is no doubt but that it is much to the ultimate advantage of the patient if we could eschew opiates or alcoholics after serious injuries, but, if there is a state of impending collapse or agonizing disaster, duty impels us promptly to give relief and revive the patient. Under these circumstances alcoholics always have my preference. Unlike the hypodermic use of morphine, they will not jeopardize the life of our patient by their toxic action, because a large dosage quite invariably induces free emesis. It requires no skilled, experienced hand to administer alcoholics, and it is to be had in some form almost everywhere.

In the shock of trauma, alcohol usually exercises a dual action of simultaneously sustaining the vital powers, while it modifies or suppresses pain.
TETANY AND ECLAMPSIA IN CHILDLIFE.

By RUDOLPH HECKER, M.D., of Munich, Germany.

(A Translation.—Concluded.)

Tetany and Gastro-intestinal Affections.—The relation of tetany and disturbances of the digestive tract is not yet quite clear, and there are many opposing views concerning this relation. We encounter the same difficulties in judging the statistics bearing upon the question as we do in rachitis, because the subjects that are considered, patients in the children's hospitals and polyclinics, present a large percentage of gastro-intestinal diseases, and a combination of tetany with them, therefore, is not difficult. Escherich admits a connection between the two diseases in some well-established cases only. Indeed, he classifies these as a separate group, which he calls symptomatic tetany, as opposed to idiopathic tetany or "tetany of rachitics." He proposes the latter designation simply to indicate the outward symptom without meaning to imply a causal connection. At any rate, the conditions are rather obscure, and enlightenment is to be expected only by an improvement of our chemical and bacteriological methods of investigation. Fischl gives the association of gastro-intestinal affections with tetany as 66%, Ganghofner as 81%, Kirchgässer as 75%. Cassel reports that, in 60 cases of manifest tetany, acute or chronic intestinal disturbances were pre-existent 36 times. The majority of authors are of the opinion that the intensity of the spasms of tetany depends upon the existing condition of the dyspeptic disturbance; for instance, very frequently certain therapeutic measures (removal of diarrhea or constipation) were followed by disappearance of the symptoms of tetany, as Ewald and Jacobsen have shown almost experimentally in their case of chronic tetany: Every time the patient became constipated, the spasms of tetany reappeared. It is very probable, however, that the intestinal disturbance, in all these cases, is not causative, but is only coincident with tetany, as otherwise the rapid decrease of cases of this disease in summer, just at the time when the majority of intestinal catarrhs occur, would be entirely incomprehensible.

The relations between tetany and eclampsia will be referred to later.

Forms of Manifestation of Tetany. Escherich (Traité des Maladies) distinguishes two clinical varieties of tetany: (1) An intermittent form, in which the muscular spasms disappear and only those latent symptoms, associated with laryngospasm, are present (typical example: Tetany of rachitics); (2) a persisting form, in which the contractures predominate and last for days or even for months; the irritability of the nervous system, however, is much less pronounced, so that latent symptoms may eventually be entirely absent.

The affections described as flexibilitas cerea, arthrogryposis and pseudotetanus are generally included in this group. In the first form the entire body is in a state of tonic, wax-like rigidity; in the second only the hands and feet are affected; in the third the trunk and legs. This pseudotetanus is distinguished from traumatic tetanus by the fact that the upper extremities, and particularly the muscles of mastication, are not
affected, and also by the uniformly favorable course. As latent symptoms are generally absent in all these forms, it appears doubtful whether they should be considered as examples of tetany.

The line of differentiation between the various forms, intermittent and persistent, symptomatic and idiopathic, and the tetany of rachities, is not sharp; and, therefore, it may be better not to enter too much into dogmatism, but, as Kirchgässer proposes, to emphasize the exclusive occurrence of the affection at a certain age and to classify all these forms as idiopathic tetany of childhood (children's tetany). This group would then be co-ordinate, as an independent subdivision of tetany, to the other principal forms of tetany (cobbler's tetany, puerperal tetany, etc.).

Regarding the clinical appearance of tetany it may be emphasized that the children affected by it are usually very irritable, easily frightened, cry much, show distinct emaciation, so that they weigh less than normal. A large percentage also presents the symptoms of more or less recent rachitis. It is true, some authors maintain that the state of nutrition of the affected children is good, but it seems that frequently the pasty type with swelling over the whole lymphatic apparatus is represented which Paltauf has designated as status lymphaticus.

The reports as to the sex of the affected children are too contradictory, as yet, to be of value. The average duration of the affection, according to Loos, is three weeks; according to others (Kirchgässer), four to five weeks. Variations as to the intensity of the disease are very frequent during this time. The prognosis is generally favorable, but the occurrence of attacks of laryngospasm or eclampsia requires more reserve.

Causes and Nature of Tetany. When inquiring into the causes and character of tetany we venture upon the field of hypotheses; but this is sufficiently cultivated to be worth while investigating.

Regarding the pathological anatomy we know next to nothing. The only positive facts we are aware of are the presence of inflammatory changes in the ganglion cells of the anterior horns of the spinal cord which Bonome and Cervesato claim to have found in two cases of severe tetany, complicated by eclampsia and laryngospasm.

Kirchgässer had the opportunity anatomically to examine two cases of tetany, one each of laryngospasm and flexibilitas cerea, but he found nothing else than the (degenerative) changes in the spinal marrow which were previously described by Zappert as often occurring during infancy, and nothing, in his own opinion, which could be explained as the immediate cause of tetany. Cases of this affection come to autopsy very rarely, and, therefore, we may probably designate this disease as functional for some time to come. Kassowitz's view, according to which the inflammatory hyperemic condition of the skull bones in rachities causes an inflammation of the cerebral cortical centers, is rather too mechanical, and cannot be sustained, principally because cranial rachitis is not always demonstrable, furthermore because a genuine hyperemia of the cranial bones is found very rarely. But, on the other hand, pallor of these bones is frequent at the autopsy on a child who suffered from tetany.

I have already referred to the rôle of gastro-intestinal diseases as
TETANY AND ECLAMPSIA—HECKER.

causes. In cases in which these are present it is probably the question of an oligohydria of the brain (diarrhea) or of direct toxic effects (auto-intoxications). The latter, particularly, are very much in favor at the present time; but too few convincing urinary findings exist (sometimes indican, acetone, mucin), and, again, the rarity of the affection in summer, when the majority of intestinal intoxications occur, argues against the assumption.

The coincidence of tetany with rachitis, the frequent occurrence of both during the same period of life and at the same season of the year favor the presence in both of a common causal factor, and this, according to corresponding opinions, should be looked for in the poor air in the dwellings of the poor during the winter. This "respiratory toxin" leads to injury of nutrition, circulation and humors, but also to injury of the nervous system, which is so sensitive in children, and in which it creates an abnormal increase of irritability, which, in turn, is the determining factor in the nature of tetany.

This theory, upheld principally by Escherich and Ganghotner, explains a good deal, thus the coincidence with rachitis, the frequency in spring and in small children, the familial, often apparently infectious character; but a good many questions remain unanswered.

Thus, for instance, it is not at all proved that rachitic or tetanic children actually always live in poor dwellings. Furthermore, why is it that, of the many rachitic children who are positively known to grow up in unhygienic surroundings, such a small percentage becomes affected by tetany, while the "respiratory toxin" is not able to produce tetany in the great majority? Again, if tetany develops, often the milder cases of rachitis are affected by it. How can it be explained, furthermore, that the condition of nutrition of such children is often emphasized to be particularly good, while poor dwellings are apt to produce emaciated, anemic specimens?

Probably, just as the bacteria alone are not sufficient to explain the etiology of the infectious diseases, so, here, not only are the external enemies to be held responsible, but there is also always something lacking within the organism, namely, the special disposition of the individual. It seems to me that the subject of heredity has been considered too little in investigating the causes of tetany. Especially alcoholism in the father, which in all other nervous affections plays so important a rôle, should, in my opinion, be taken more into consideration.

But climatic influences, too, should be regarded. The frequency of tetany in Austria and in Berlin, the almost total absence of the disease in other cities, such as Munich, has, as yet, not been explained.

Further investigations in localities with many cases of tetany should be carried on in this direction.

Diagnosis of Tetany. The presence of manifest tetany is proven by the above-named tonic contractures with the characteristic position of the hand. The assumption of latent tetany is justified only upon demonstration of one of the two obligate latent symptoms (Trousseau's or Erb's phenomena). If only facultative latent symptoms, mechanical hyperexcitability, facialis phenomenon or laryngospasm are present, it becomes necessary to look for a latent symptom. The demonstrated constancy of the galvanic increase of irritability will, in the future, in
the absence of Trousseau's phenomenon, become indispensable for the
diagnosis of tetany.

It is necessary incidentally to mention a symptom which has some-
times given rise to a confounding with tetany. This is the muscular
rigidity manifested by a flexion which is regularly observed in chil-
dren during the first weeks of life, and which causes the extremities
continuously to be held in a more or less marked flexed, contracted posi-
tion. This myotonia is a physiological symptom and should be con-
sidered simply as a continuation of the intra-uterine position of the body.

This myotony occurs pathologically intensified under certain con-
ditions—if we follow the deductions of Hochsinger—for instance, in
chronic intestinal affections, in atrophies, and especially in hereditary
syphilis. In milder degrees one sees only an increased general flexion
hypertonia, in which at the same time the so-called fist phenomenon
is to be produced. By pressure upon the internal bicipital groove the
hand assumes the fist position, i. e., the thumb is bent inward and the
phalanges are flexed in all joints, the tips of the fingers either touch the
wrist or do not quite reach that far; severer degrees present the picture
of permanent tonic flexion spasms of the musculature of the extremities,
epecially of the hands and feet (constant spasms). This myotony of
nurslings offers no recognizable connection with the seasons, has nothing
to do with rachitis, never occurs intermittently, never presents simulta-
neously a galvanic and a mechanical hyperexcitability nor facialis
phenomenon, but it represents an affection of the first four, at most eight,
weeks of life, distinctly to be separated from tetany.

ECLAMPSIA.

We shall treat of eclampsia only because it has often been brought
into close relation with tetany and because several new viewpoints re-
garding its etiology have appeared recently. I refrain from entering
more closely into the clinical and pathological considerations of this
affection in order not to repeat what is well known, and I content myself
with referring to the appropriate chapters in the text-books on pediatrics.

While the conception of the affection is comparatively firmly estab-
lished—different from tetany—in other respects, such as the relation of
eclampsia to other diseases, we have to deal with more suppositions than
we do in tetany.

Eclampsia, clonic spasms which are accompanied by disturbances
of consciousness interrupted by varying intervals, by no means repre-
sents an independent disease—as does tetany—and is not at all a uniform
distinct pathological picture; it may occur in a number of affections as
a special manifestation. It occurs most frequently as a sequel to diseases
of the brain or spinal cord, gastro-intestinal disturbances, certain
anomalies of metabolism, infectious diseases and, not least, in the course
of genuine tetany.

Until we have a better classification, we have to adhere to the dis-
tinction between eclampsia due to organic disease (symptomatic
eclampsia) and functional eclampsia. In the former group we include
those convulsions that originate from an anatomically demonstrable
lesion of the central nervous system, especially the cerebral cortex,
such as are known to accompany meningitis, encephalitis, tumors
and scleroses. The second form includes all those cases for which an
anatomical substratum has not yet been proven. The differential diagnosis may in some cases present difficulties, but will generally be possible if we are able to observe the child during a time in which it is not subject to spasms.

Eclampsia, Tetany and Epilepsy. To judge the connection between tetany and eclampsia, Cheadle has once maintained that laryngospasm, tetany and convulsions are to be considered as positive, comparative and superlative of the status convulsivus. Fischl has broadened this thesis in stating that, beside laryngospasm, tetany and eclampsia, epilepsy represents nothing but a different intensity of the same process the nature of which is the increased irritability of the central and peripheral nervous system. The dictum in this form is certainly very assailable. In the first place, it is an absolutely unproved hypothesis of Féré (who, it is true, is an authority on epilepsy), that eclampsia is nothing but an epilepsy which has healed early; but then it is not permissible to speak of "eclampsia" in general. The condition is rather as follows: It is possible that eclamptic attacks may occur in the course of tetany (Fischl found this to be the case 20 times out of 109 cases, 18.3%). They are then noticeable as clonic convulsions, occurring in rapid succession, and appearing sometimes at the height of a laryngospastic attack, at others independently; their number and severity increase and decrease parallel with the other manifestations of tetany. They always form a grave complication of the disease and frequently lead to death. Cheadle's dictum, therefore, is valid only in the meaning of Escherich. Tetanoid conditions and latent tetany occur as an attenuation of the "typical" morbid picture of tetany; the combinations with carpopedal spasms and with eclampsia as an intensification of the same; as "typical" are considered cases of latent tetany and laryngospasm.*

The causes of eclampsia are twofold, according to present conceptions, reflex and hematogenous. The latter especially (among which auto-intoxications should be counted) are being held more and more responsible, while the rôle of the former is almost ended since the foundations of Soltmann's reflex theory have been shaken.

According to this theory—very ingeniously elaborated—a certain physiological spasmophilia or increased reflex irritability exists during infancy. Such a supposition appeared to be founded upon experiments on newborn cats and dogs, which proved that the psychomotor cortical centers of these animals were devoid of any excitability by electric currents. But these cortical areas contain obstruction centers for the motor tracts. Soltmann, believing he found simultaneously in the child during

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*This opinion was expressed by Escherich in 1897 and also in the monograph in Traité des Maladies, and it is not quite comprehensible, if Thiemich (Jahrbuch für Kinderheilkunde, Band 51, Heft 2, S. 239), who confirms these facts, interpretes Escherich's description as though the latter author only had reference to asphyxial convulsions and never mentioned the graver forms or excluded them as not belonging to tetany.

These asphyxial convulsions are due to the surcharging of the blood with CO₂ during spasm of the rima glottidis, and may, therefore, also occur in tetany, but they should be well differentiated from the latter.
the first weeks a decreased reflex irritability, between the fifth and ninth months an increased reflex irritability of the peripheral nerves in comparison to the adult, considered it obvious that each irritation which during this period acted upon the motor nerves was bound to cause a much more intense effect, owing to the absence of the central obstructions, than at a later period of life. "Therefore," says Soltmann, "an insignificant irritation during this time is very apt to give rise to an eclamptic attack."

But the foundations of this hypothesis are not tenable. Although in the newborn of certain animal species those cortical areas cannot be irritated, in other species it was possible to demonstrate a distinct irritability, and it is, therefore, not admissible to reason from dogs and cats to man. On the contrary, in cases of encephalocoele it is possible to cause a direct electrical and mechanical irritability of the cortical centers. Regarding the irritability of the peripheral nerves it is true that, according to the researches of Westphal, Jr., and Mann and Thiemich, it is materially reduced during the first eight weeks of life; but then follows, not, as Soltmann assumes, a period of hyperirritability, but a gradual but continuous transition into the normal irritability. Finally, as emphasized by Fleischmann, even the severest irritations (burns, hot iron, trauma, etc.) in small children will often not be sufficient to cause convulsions.

With the assumption of a physiological spasmodilia the dogma of reflex causes of eclampsia becomes generally refuted.

The hematogenous causes, i.e., factors which may cause the occurrence of spasmodigenic toxins in the blood, embrace principally, according to Thiemich, abnormal contents of the intestines, respectively intestinal bacterial toxins, certain anomalies of metabolism (chronic hypernutrition, especially exaggerated fat and milk nutrition), disturbed functions of the liver, in which putains, dianimes, acetones and ammonia can usually be demonstrated in the urine, acute infectious diseases, carbonic acid intoxications in pulmonary affections and, finally, also the oligydracia of the blood occurring in intestinal affections. The experimental production of which in the animal (injection of a hypertonic NaCl solution) causes spasms.

For a more detailed consideration of these questions, at present more of a theoretical than of a practical importance, I refer those interested to the reports of Lange and Thiemich on "Spasms in Childlife," read at the Munich Congress of Naturalists.

Therapy of Tetany, Eclampsia and Laryngospasm. Little has been contributed to this chapter in recent years. The remedies we administer are doubtless efficacious in many instances; in others they fail absolutely, so that we are forced to experiment in every case. The same rules apply to tetany and eclampsia as well as to laryngospasm.

If a gastro-intestinal affection is present at the same time, its immediate treatment is imperative, no matter whether we take it to be the cause or not. Calomel (0.01-0.02 in 4 to 6 doses), strict diet (tea or gruel) and eventually high lavage of the intestine with 0.6% saline solution offer the best guarantees for success. A change, best a temporary reduction, of diet is indicated in every case, even in the absence of demonstrable intestinal symptoms. Besides, the administration of
phosphorus has become generally acknowledged to be indicated. Indicated especially in pronounced rachitis, it is also properly given to non-rachitic children as a remedy which will reduce the irritability of the nervous system. It is given in doses of 0.01 gm. to 100 gm. sweet oil or cod-liver oil, one teaspoonful per day. Of the narcotics only chloral (one teaspoonful every one to two hours of a 2% solution, eventually as enema) or sodium bromide are to be considered. All other remedies, including thyroid gland preparations, have proven themselves to be unreliable or ineffectual. The attack itself, especially the laryngospastic and eclamptic, is best aborted by chloroform narcosis, in the second place chloral hydrate should be employed. Besides, a bath—not too warm—with aromatic additions (chamomile, fennel) is always advisable.

If we bear in mind that the respiratory toxin which we supposed to be an etiological factor, the bad air in the rooms of the poor in winter, it is obvious that under all circumstances an improvement in the hygienic conditions of the home of the patients should be aimed at. Sufficient airing of the rooms and bedding, cleanliness of the floors, furniture and windows, removal of moist clothing, better care of the skin may to a certain extent be sufficient to counteract foul air; but generally these measures are *post festum* and, therefore, are principally of prophylactic importance.

Gentlemen, my theme is not exhausted with the above remarks, but I did not intend to give you a monograph on tetany, I only meant to try and condense the present state of our knowledge of this peculiar affection and to rekindle interest in it.

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SOME THEORIES AS TO THE CAUSATION OF CANCER.

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Such an intimate acquaintance has the world had with malignant epithelial neoplasms, that a familiar household name has been given them. "Karkinos" or crab was the name used by Galen to signify such sores of the breast as were characterized by malignancy, by tendency to return after being removed, and by rapidity of growth. The Germans call cancer "krebs," which means crab. Sanscrit—"karkata" and "karkataka," used in the same sense, meaning crab, applied to cancers. In Hindustanee "kark" (crab) is used in the same sense. All of these people had in their mind a description of the disease as well as a name for it.

From the examinations of Bischat, Lobstein and others, Laennec supported the idea that cancers were heterologous, in other words, that they were different from the cells of the body. J. Müller locked horns with him, for he demonstrated that the cancer cells were identical with the normal, physiologically acting cells of the body. It was the brilliant and many-sided Virchow, however, who, finally, established beyond contradiction that the cancer cell, as well as all tumor cells, were identical with the cells of the body, and who gave a new meaning to homologous
and heterologous—making homologous mean tumors that grew among similar and heterologous mean tumors that grew among dissimilar cells from themselves. But he defended the idea, and for his whole life believed that cancers were of connective tissue origin.

This theory of his was energetically and bitterly opposed by such men as Tiersch and Waldeyer. Virchow’s reputation was so well known and his defence was so masterly that only in the last few years have scientists given up the connective-tissue-origin theory. There are to-day but few, if any, pathologists who do not believe that cancers are of epithelial origin.

Of the many opinions as to the causation of cancer that have been advanced since the time of Galen, the ones that have had the most facts to support them are: 1, the Parasite; 2, Tiersch’s theory; 3, Cohnheim’s; 4, Hauseman’s; 5, Ribbert’s; 6, Wakefield’s; and 7, the Bacteriological.

Virchow overthrew the parasite idea when he established the fact that all cells of tumors find their prototype in the human body. Before discussing the other theories as to exciting causes, it might be well to discuss briefly the usual place of finding cancers and to mention some of the predisposing causes.

It has been noted, after many years of investigation, that cancers select certain organs for their primary growth in order of their frequency, the uterus (vaginal portion); outer skin (lip, ear, eyelid, cheek, extremities); female breast (much seldomer, the male breast); stomach (pyloric end, seldomer the cardiac, and rarely the fundus); rectum, oesophagus; ovaries, outer genitalia; penis; scrotum; clitoris; labium majus; vagina; prostate and bladder; testicle and epididimus; abdominal viscera (particularly the pancreatic head); small intestine; gall bladder; gall ducts; liver; thyroid gland; kidney; bronchi, lungs; tube; ureter; vesicle seminalis; ventricles of brain; dermoid cysts; bone, etc.

Almost every patient suffering from a cancer, particularly where the cancer is superficial, will give the history of some injury to the affected part. So prominent is this fact that at one time it was generally believed that direct violence was the cause of cancer. The causative effect of age will be discussed later. Sex as a predisposing cause cannot be elaborated any more than mentioning the facts that men are more subject to injury, if that be a cause of cancer, while women bear and suckle the babies. Race seems to have something to do with the appearance of this dread pathological lesion. Hygienic surroundings and contact no doubt have their bearing, and a run-down condition certainly does.

Carcinomas occur usually in old people; Tiersch used this fact as the foundation upon which he built his theory. He believed that the initiative for cancerous growth came from the epithelium, but that a lessened resistance on the part of the connective tissue stroma helped. He theorized that this lessened resistance was due to a poor blood supply, which would be the case of those suffering from sclerotic arteries and the like, consequently cancers were found almost exclusively among the older people.

Cohnheim explained the tendency on the part of the cancer cells to proliferate as due to the embryological nature of their cells. He believed that all tumors originated in the same way by assuming that more cells were manufactured than were necessary for building the organs of tissues of the embryo: so long as the normal physiological cells were actively
doing their allotted duty and were healthy, the embryological-excess-cells had no chance to grow. Just as soon as the physiological cells ceased to multiply to increase the size of the organ or tissues, but more particularly when the tissues began to degenerate from age, the embryological-excess-cells commenced to assert themselves and being embryological in character, their growth was rapid. From Cohnheim’s theory, we would naturally expect to find tumors either about puberty or in old age or whenever the body got into a run-down condition. This theory was substantiated by a series of experiments conducted by Leopold, who attempted to grow a piece of cartilage taken from a full grown guinea pig in the abdomen of another. The experiment failed. But when a piece of cartilage from an embryological guinea pig was used, an enchondroma was grown.

Houseman, of Berlin, who knows more about tumors than any living man, in my opinion, explains the origin of tumors by the theory that certain epithelium undergoes a retrograde metamorphosis, taking on the growth characteristic of the embryological cells, and losing in part, if not wholly, their secretive and other properties. They, in this way, have gained growing powers at the loss of their differentiating and functioning properties. This is known as the “anaplasia of cells.”

Ribbert assumes that the first changes in beginning carcinomas take place in the connective tissue, which for some such reason as chronic inflammation or hypertrophy, cuts off certain epithelium from its accustomed associates. These cells, not being in their usual place and having now no especial function to perform, grow to be tumors.

A more recent theory of Wakefield might be mentioned at this point. He believes that gelatiniform tissues as observed in neoplasms and elsewhere, invariably represent a stage of degeneration of tissues once healthy, the said degeneration bearing no relation whatever to the embryology of the tissues. The conditions responsible for the increase in the involved tissue is a retardation of katabolism. He also believes that tissues are subject to tumor formation in inverse ratio to their katabolic digestibility, this digestibility being aided by an alkaline medium.

To illustrate these theories in a practical way, Cohnheim’s would be a man who was born with the desire to steal; this desire was kept in subjection for fear of punishment by laws formulated by his neighbors for their mutual protection; opportunity presenting in such a way that he thinks he will not be caught, he steals, the habit then grows on upon him until presently he is found out, punished, and looked upon by his neighbors as an outcast—a tumor.

Houseman’s theory is the citizen that allows his passion to take away his energy and desire to work; he degenerates into the bum found at every almshouse, who gets fat at the expense of the community.

Ribbert’s idea of cancer causation might be likened to the cancer quack, who began legitimate practice with bright prospects and many friends, but who, because of the desire to get rich quickly, cut himself off from the honorable practitioners, by this very cutting off losing the desire to uphold the dignity of the profession, to further the good of his fellow doctors and of the community as a whole, and expended all his energies in amassing a fortune, preying as does the tumor on the organism of the commonwealth.
Wakefield’s theory is the man that accumulates a fortune by failing to pay his debts. All of us could be tumors of this kind in a short time if we could only get credit.

Many different bacteria as causes of cancer have been described; with none of these except the blastomycetes of Leopold have I any personal knowledge, so, as the time is limited, I shall call your attention to these alone.

Geheimrath Leopold, of the Frauen Klinik, Dresden, along with his assistant, Dr. Rosenthal, began investigations to ascertain if there were a causative bacterium for cancer early in 1894; not until 1900 did he read his paper before the Medical Congress at Paris, publishing his complete investigations to the world.

The material examined was taken from body-warm cancers, removed from various parts of the body; scrapings from the innermost portions were taken with aseptic precautions. These scrapings were examined upon an especially constructed warm microscope stage in sterile beef tea, normal salt solution, or blood serum. Among fatty degenerated cancer cells were found particles with double contour, some of which were filled with yellow pointed or long drawn out particles, highly refractive. These particles seemed to have a peculiar motion; all did not move at once, the motion began at the periphery. After they had been moving some time, suddenly a particle pushed through the covering membrane of the cell, the others followed, but no lesion of the cell wall was to be seen. Other particles formed, and this cycle of procedure would continue for hours. It was not necessary to keep the temperature constant for this process to take place.

In 1898 Leopold reported that he had observed a hanging drop made of freshly prepared carcinomatous tissue in sterile bouillon for 200 consecutive days.

In 1900 the same observer showed pure cultures of blastomycetes obtained from human cancers, likewise tumors in animals, which were produced by pure culture of these same blastomycetes obtained from human cancers. The blastomycetes obtained from the tumors of the animals were identical in appearance, in staining peculiarities, and in growth with those obtained from human. To make the circle complete, the blastomycetes derived from the animal cancers must be injected into and produce tumors in other animals or in man, which shall likewise contain blastomycetes identical with the others.

The procedure of growing these blastomycetes was first to find them in the sterile bouillon, then aseptically and with care to infect a tube of neutral gelatine. In this tube there was a mixed infection. The second contained a few other germs. The fourth tube gave a pure culture of blastomycetes. These blastomycetes stain with the usual coloring fluids. Hemotoxylin and fuchsir or eosin can be used with best results.

Many animals were infected with pieces of fresh tumors. A white rat was infected with a piece from an ovarian cancer; after 61 days the rat died of numerous tumors. The microscopical diagnosis was adenocarcinoma with many blastomycetes. In the case of a guinea pig infected with a cervical cancer, the liver was covered with epithelial tumors and contained blastomycetes. A rat injected into the testicle with a pure cul-
ture of blastomycetes derived from an ovarian cancer, after 195 days died, filled with numerous tumors. These proved to be round and giant-celled sarcomas with numerous blastomycetes.

To recapitulate, Leopold was able to, 1, to see blastomycetes in scrapings made from body-warm cancers, and to study them; 2, to make pure culture; 3, to inject a pure culture into the testicle of a rat that died of tumors in which were found numerous blastomycetes; 4, to make pure culture of the blastomycetes found in the tumors of the rat.

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THE DIAGNOSIS OF CUTANEOUS CANCERS.

By F. H. BEADLES, M.D., of Richmond, Va.;
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There can be no question that the establishment of an accurate diagnosis is essential to the successful management of morbid growths of the skin. It is a common error that the sole requisite for determining such a diagnosis is the exhibition of the affected portion of the integument, and that the physician shall be able, by merely viewing the surface for a few minutes, to pronounce definitely the nature of the disease and determine the therapeutic measures to be adopted. But much more than this is essential, as much so as in the investigation of diseases involving any other organ of the body.

Three almost indispensable aids in obtaining a correct diagnosis are: a good light, a good eye and a microscope.

If possible, secure a history, past and present, of the physical condition of the patient, his parents and his children. Note his age and occupation and whether married or single. Unless these facts are taken into consideration, the management of the case must be haphazard, unscientific and culpable.
The principal diagnostic points of cutaneous cancer are: 1. The advanced age of the patient. 2. The beginning of the disease as a wart, mole, nodular or scaly patch. 3. The usual slow progress of the disease. 4. The single character of the growth. 5. The striking appearance of its border, which is of a pearly hue with roll-like elevations or a hard elevated infiltration. 6. The scant, and in the later stages viscid, discharge frequently streaked with blood. 7. The situation of the affected portion, usually the nose, eyelids and frequently involving the other portions of the face.

The conditions which simulate cutaneous cancer are: Syphilis, lupus and Baelzer's disease.

The syphiloderm, which bears a most striking likeness to a skin cancer, is the tubercular ulcerating form. Its distinguishing features are: 1. Its more rapid growth. 2. Its multiple lesions, consisting of several superficial ulcerations, rarely round in shape, but segmented or irregularly circinate. 3. The presence of tubercles which have not undergone destructive changes. 4. Its usually free discharge of a distinctly pustular character. A pronounced symptom of a syphilitic ulceration is a strong tendency to reparative cicatrization, due partly to the exhaustion of the infective poison and partly to an insufficient but modifying treatment.

Lupus vulgaris is a disease which usually develops in youth and rarely after the age of thirty-five. It presents a tubercle of a reddish-brown color and of a soft consistency. In the earlier period of its career it is more diffuse than cancer, while in the ulcerating stage its edges are often bordered by non-ulcerating papules. The presence of the tubercle bacillus is revealed by the use of the microscope.

Baelzer's disease was, for a long time, rather confusing to me, as the literature on the subject is rather limited. It is a chronic affection of the mucous glands of the lip, marked by an indolent swelling and infiltration of the periglandular tissue, and a slow ulcerating process extending from above downward. There is also present a catarrhal inflammation of the mucous membrane of the lip.

The distinctive points of the disease are: 1. The absence of general systemic disturbance. 2. The absence of implication of the neighboring lymphatic glands. 3. Its ready response to simple treatment, as the application of tincture of iodine.

X-RAYS IN THE TREATMENT OF SUPERFICIAL CANCERS.

By ALFRED L. GRAY, M.D., of Richmond, Va.,
Professor of Physiology in the University College of Medicine.

That the Roentgen ray is an agent of the most powerful therapeutic value in at least some forms of skin disease, has, by all who have had any considerable experience in this method of treatment, ceased to be a matter of doubt.

Of the graver forms of skin affections, the treatment of which by radiotherapy has proven successful, I mention especially lupus vulgaris
and erythematous, psoriasis, xeroderma pigmentosum, eczema resisting other therapeutic agents and epithelioma.

Since the subject assigned to me is limited, I shall briefly discuss the treatment of the more superficial forms of cancer. The forms in which the most uniformly good results have been reported, have been those forms amenable to treatment by excision with the knife, the application of caustic pastes and of the actual cautery. This fact caused the belief that in order to obtain beneficial results an actual "burn" must be produced, consequently in the treatment of cases by the X-ray, the length of exposure necessary for a tube of definite resistance to produce this effect was ascertained, and an attempt was made to produce a burn of gradually increasing severity until a certain depth was reached. This was indeed a most tedious and time-consuming method of cauterizing. Further experimentation, however, has demonstrated conclusively the fallacy of this theory. The exact modus operandi of the rays on the diseased tissues has furnished a subject for much speculation, some being of the opinion "that the effect is produced by the projection of molecules into the tissues; some, that electrical discharges or waves emanating from the tube are the active agents; some that the tissue elements are made to vibrate in a manner different from their normal molecular motion with a resulting molecular disintegration; some, that the ultra-violet ray is produced "within the tissue by a process of interference"; others, that ozone is liberated in the tissues by the X-rays.

The most generally-accepted theory is that the "rays are composed of negatively-charged corpuscles or electrons." The theory of the bactericidal action of the rays has been practically abandoned. Whatever be the correct theory, the fact remains as shown by recent experiments of Dr. Ellis, of the Jefferson Hospital, that a distinct and marked degeneration results in the diseased tissues subjected to the action of the rays, resulting in a replacement of the malignant tissue by fibrous or adipose tissue, and this change may be produced without subjecting the patient to the suffering and inconvenience, not to mention the scars resulting from sloughing of tissue incident to a burn.

Our object being to produce a cure tuto, cito et jucunde, if the cure is as certain and the after appearance of the diseased area better, we may sacrifice rapidity for safety, pleasantness and good cosmetic effect. The idea of producing an actual destruction of tissue by the so-called X-ray burn has therefore been abandoned. Authorities differ in the amount of "reaction" desirable, but it seems generally preferable to make the exposures long enough to produce a slight hyperemia, as is seen from exposure to the sunlight, and as in the case of exposure to sunlight, a subsequent "tanning."

It is not my desire to go to any length into the technique of the treatment of these cases, but a few practical points may be at least referred to. The healthy skin surrounding the diseased area must be protected by some substance more or less opaque to the rays. The materials most commonly used are lead foil and rubber sheeting (1/16 to 1/4 inch in thickness). An opening is cut into the protective sufficiently large to expose the diseased area and a small band of healthy skin surrounding it. Rubber is to be preferred, as it does not attract electricity, and the patient is there-
fore less liable to slight shocks that are sometimes experienced when foil is used. Short exposures should be made at first, five to ten minutes or less, at a distance of eight to ten inches from the anti-cathode or platinum plate. These should be made every third day for a series of four or six exposures, and an interval of ten days or two weeks allowed to elapse in order to determine whether or not the individual possesses any unusual susceptibility to the rays. After this the length of exposures should be gradually increased if no ill effects are present, and the distance from the tube reduced to six inches or less.

The effects of treatment become manifest within time limit varying from almost immediately to six or eight weeks, and should be kept up as long as any improvement whatever is noticeable and for some time after healing is apparently complete. The first effect is relief to a greater or less extent of pain. Then follows lessening of the discharge, if such be present, a drying up of the diseased tissue and scaling off in the form of a crust, the lesion contracting at the periphery, and an ultimate _restituto ad integrum_ with scarcely a resulting scar.

As in every other diseased condition there are cases of external cancer that defy this as well as all other forms of treatment. Thrice happy would we be if we possessed a single remedy that would be an absolute specific in every case of any disease. If then, in a malady of such a serious nature as carcinoma, wherever its location, we discover an agent that effects a cure in a large percentage of cases, is it not worthy of a most careful and thorough consideration?

The cases least favorable for treatment by radiotherapy are those that have progressed until the whole system has to a great extent lost its vigor and the vitality of the tissues is so impaired that their reparative power is forever gone. However, this is an almost indeterminable problem, as has been shown by the recovery of many cases considered hopeless. Is there any case, then, that is not worth the trial?

It is well to bear in mind that not infrequently, from too short exposures, the diseased tissues are stimulated and the progress of the malady hastened. The remedy should, therefore, be faithfully and skilfully administered lest evil rather than good result.

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THE MAD DOG NUISANCE.

Mad dogs in New York are too common for comfort. Hardly a week passes that the newspapers do not chronicle the wild flight of a frothing, snapping canine through the crowded streets, biting unsuspecting victims along its trail.

It was not long ago that the son of one of New York's best known physicians died from rabies, and several deaths have been recorded from that disease of late.

The city ordinances of New York require every dog when on the street to be accompanied by a responsible person, and to be in constant control by means of a leash not more than four feet long. This ordinance is not enforced. A measure is now proposed requiring all dogs to be securely muzzled while on the street or in public places. This proposal has aroused the vigorous opposition of the Society for the Prevention of Cruelty to Animals, and the president of this association has taken his case into the columns of the daily papers. He says, according to Medical News, that the muzzle is necessarily "inconvenient" to a dog, and may be so "distressing" that a dog may "tear at the muzzle with such violence as to lacerate its whole face and actually tear the claws out of its own feet." In one instance the president has seen a dog behave in this manner.
No one would desire to belittle the value of the work done by the S. P. C. A. There are many cases where the organization has been of real value, but when human life must be sacrificed to the "convenience" of dogs it would seem time to call a halt.

The learned president of the society with the long name, claims, according to the newspapers, to have made a "long and extensive study" of the subject of rabies, and he has reached the marvelous conclusion that rabies is very rare among dogs, and much rarer among men. Erudite president! What a wonder he would have made had his attention years before been turned from stray dogs and homeless cats to scientific investigation. Pasteur and Koch would have remained in obscurity, and the germ theory would doubtless have been unborn and unsung.

Rabies is unusually prevalent in New York, Chicago and Baltimore. In this city the New York World has taken up the fight against unmuzzled dogs, and it is presenting masterful arguments in favor of the proposed measure. In view of the righteousness of the World's cause, and recognizing the great power exerted by the press, it is the duty of local physicians to encourage the paper in its efforts to rid the city of a dangerous menace.

**DRUG ADULTERATION.**

The adulteration of drugs by unscrupulous persons in the drug trade is assuming gigantic proportions. The danger attending such substitution is too well known to comment on. The following clipping from the Niagara Falls Gazette of April 27 is only one of numerous cases brought to our attention:

"Among the numerous entries of drugs entered at the custom house in this city during the past week was an entry of 200 boxes labeled 'Bayers Trional.' The boxes were to all appearances genuine trional boxes, but a chemical analysis of the drug showed that the contents of the boxes was acetanilid.

"The two drugs are much alike in appearance, both being coal-tar preparations, but an ounce of trional costs more than two pounds of acetanilid. This accounts for the substitution.

"But there is a very serious side to the subject. The two drugs, while similar in appearance are vastly different in their effects, acetanilid being
extremely dangerous, and liable to cause death, if prescribed as trional, it being used in very much smaller doses—owing to its action on the heart.

"The matter has been brought to the attention of the Canadian Government, and action will be taken to bring to justice those who are responsible for the attempt to supply American druggists with fraudulent drugs."

Concerning the adulteration and substitution of drugs the American Medicine, in an editorial on January 31, says:

"Drug adulteration is a peculiarly infamous bit of scoundrelism of which both the medical and pharmaceutic professions should make an end. Whatever may have been the ultimate motives and whoever may be blame-worthy, the recent examinations of 373 samples of one drug obtained from different stores in New York City, of which 315 were found adulterated, reveals a condition of the drug trade that is startling."

It is to be hoped that the United States Government will heartily co-operate with the Canadian authorities in suppressing this evil.

**PROGRESSIVE JOURNALISM.**

That the Medical Record is being run along progressive lines has been fully amplified during the past few weeks. It carried a full report of the International Medical Congress at Madrid, sent by cable, and on the day the American Medical Association adjourned it went to press with a report, telegraphed from New Orleans, covering nearly nine pages.

The introduction of Associated Press methods into medical journalism is novel, and shows the trend of the times.

Such progressive action cannot but find favor in the eyes of the profession, and speaks volumes for the gentlemen who conduct the Record.

**THE AMERICAN MEDICAL ASSOCIATION.**

The 54th annual meeting of the American Medical Association was held in New Orleans May 5-9. Dr. Frank. Billings, of Chicago, opened the exercises with the President's address, "Medical Education in the United States." The oration in medicine, "Social Conditions in America in Their Relation to Medical Progress," was delivered by Dr. J. M. Anders, of Philadelphia; and the oration in surgery, "Cancer and Immunity," given by Dr. A. F. Jonas, of Omaha.
Dr. Billings favored eliminating a large number of the medical colleges of the country, so that the yearly graduates in medicine would number only 2,500, instead of 10,000.

The papers presented to the association, while advocating nothing extremely radical, were rather better than usual.

The most important action taken was the adoption of the principles of medical ethics.

It is alleged that the adoption of the standard will wipe away all differences and bring the whole profession into accord.

The code of ethics defines the duties of physicians to their patients; professional service of physicians to each other; the duties of physicians in regard to consultations; the duties of physicians to each other and to the profession at large; the duties of physicians in case of interference; differences between physicians' compensation and duties of the profession to the public.

Relative to the duties of physicians to their patients, the utmost secrecy is entailed, and the physician must disclose none of the private affairs of the patient, no infirmity of disposition, or flaw of character observed during medical attendance. Timely notice should be given of dangerous manifestations to the friends of the patient and to the patient himself, if necessary. The patient should not be abandoned if incurable.

Every physician should identify himself with an organized body of his profession, and it is recommended that medical societies should be organized in every county and should place themselves in affiliation with their State societies, and these in turn with the American Medical Association.

Physicians must be temperate in all things; must not resort to public advertisement or private cards promising radical cures; must not publish cases or operations in the daily print or suffer such publications to be made; must not invite laymen to operations; must not boast of cures and remedies.

They must not hold patients for surgical instruments or prescriptions; accept rebates on prescriptions; accept or promote the use of secret medicines or give a certificate attesting their efficacies.

Physicians should not treat themselves or their families, but should be willing to give their services to any brother physician or member of
his immediate family. In case of poverty and in certain public duties the services of physicians may be given free. Some general rule should be agreed on by each medical society as to the minimum charge, and it should be a point of honor of all physicians to hold to the rule.

Physicians must not pay commissions to any one who recommends them. In the case of differences between physicians the question in dispute should be left to the arbitration of impartial members of the profession.

In cases of pestilence, the physician must remain at his post of duty. It is the duty of the physicians to warn the public against all quacks and charlatans, and to make sure that pharmacists do not usurp the position of physician.

These officers were elected: President, Dr. John H. Musser, Philadelphia; Vice-Presidents, Dr. G. C. Savage, Tennessee; Dr. I. A. Dyer, New Orleans; Dr. C. I. Hall, Missouri; Dr. G. F. Jenkins, Iowa; Treasurer, Dr. Henry H. Newman, Chicago; Secretary, Dr. Geo. H. Simmons, Chicago. Drs. W. H. Welch, of Maryland; Myles F. Porter, of Fort Wayne, Ind., and M. L. Harris, of Chicago, were elected on the Board of Trustees. The 1904 meeting will be held in Atlantic City, N. J.

New Tendencies in Therapeutics.—In this address at The Egyptian Medical Congress, Bouchard (Presse Médicale, No. 105) dwelt on the absurdity of dosing with 6 gm. of sodium salicylate, for instance, to cure a single joint lesion. If the diseased part weighs 50 to 100 gm. in a man of 120 pounds, for instance, then only 5 to 10 mg. find their way to this diseased part and cure it, while the remaining 500 mg. are not only useless and superfluous, but directly injurious. He has been proclaiming this principle for some months and now brings details of cases showing that the proportionate fraction of the general dose, injected locally, will heal a local rheumatic arthritis. He has also been successful in the same way with pleurisies and even in rheumatic pericarditis. In the latter affection a local injection of 10 mg. reduced the temperature from 39° to 37.6° C., and the friction sounds vanished after the second injection in one case. Benedikt has reported the cure of severe peri- and myocarditis in the course of acute articular rheumatism by local injections of phenic acid, but Bouchard has not been so successful in endocarditis. He has cured by local salicylic medication painful muscular contracture of the adductors of the thigh, injecting it into the insertions of the tendons. Also sciatica and the neuritis of zona. In inflammation of a serosa he does not inject the medicine into a closed cavity but into the diseased tissues or the vicinity. He also has attempted this method in the treatment of the fulminating pains of tabes, but without results, although successful with local medication in syphilis as an adjuvant to general treatment. He has witnessed the subsidence of gummata and neuritis after local injections of 1 to 6 cc. of potassium iodide or 0.2 mg. of mercury bi-iodide. He reiterates that wise therapeutics tends more and more to supplement or supplant general with local measures either for their antiseptic action or for their stimulating influence on the antitoxic reaction.
ABSTRACTS FROM THE BEST JOURNALS.

DERMATOLOGY.

The Treatment of Lichen Planus.—The Revue Pratique des Maladies Cutanées, etc. (March, 1903) recommends the following treatment for lichen planus. This affection is characterized by an elementary lesion which consists of a small, dry, polygonal papule which is flattened and has a shining surface. The color is often a sombre red. On the surface may be seen, more particularly with a hand lens, grayish streaks formed by the horny layer. The papule may be umbilicated in the center. The itching may in some cases be absent, but in others it is of an extraordinary intensity and accompanied with nervous or, indeed, mental disturbances. In rare cases the disease is acute and widespread. In such cases, according to some authors, the use of arsenic is dangerous.

A valuable means of lessening or curing the itching in cases of lichen planus with intense pruritus is hydrotherapy, lukewarm baths being preferred. Local treatment is of great importance. The indications are to relieve the itching and to effect a disappearance of the lesions. When the itching is widespread and the eruption superficial, one may employ sapolan with good results. But, if the lesions are more deeply seated, it will be found necessary to employ reducing agents such as pyrogallic acid, chrysoarabin or corrosive sublimate. Unna advises the following ointment:

- Corrosive sublimate: 0.50-2 grams
- Carbonic acid: 20 grams
- Zinc oxide: 100 grams
- Benzoated lard: 400 grams

In circumscribed cases of lichen planus Leistikow uses the following formula:

- Carbolic acid: 5-10 grams
- Corrosive sublimate: 1-5 grams
- Cresohte: 2 grams
- Collodion: 50 grams

In this strength the corrosive sublimate is a caustic. The method of Lassar, consisting in touching the papules with the fine point of a galvanocautery, is warmly endorsed when the eruption is not extensive.

Arsenic is generally admitted to be of distinct value in lichen planus. It is to be used in ascending doses until an effect is obtained. When, for one reason or another, arsenic is not used, one may employ antipyrine, citrophen, quinine hydrochlorate or belladonna to act on the nervous and pruriginous phenomena. Brocq also employs ergotin.

Acids Internally in Pruritus.—Prof. H. Leo, of Bonn, (Sèmaine Médicale, XXII., No. 51) recommends a trial of hydrochloric or sulphuric acid in all cases of generalized pruritus of obscure origin, whether there be alkalimuria or not. Some time ago he was called to a man suffering for more than a year from very intense generalized pruritus. Nothing abnormal could be discovered save an alkalinity of the urine due to an increased elimination of phosphates; so the doctor ascribed the pruritus to hyperalkalininity of the blood. Accordingly he prescribed a 50% solution of hydrochloric acid in doses of 10 drops every 2 hours. As a result the pruritus diminished in intensity, and the urine became clearer. After several days a 1½% solution of sulphuric acid was given, a tablespoonful every 2 hours, and still later the strength was increased to 2½%. The pruritus soon disappeared completely. Dr. Leo has applied the same treatment with success in another case of generalized pruritus and in a case of vulgar pruritus. In these 3 cases the urine was alkaline; but in 3 other cases it was of normal reaction before instituting the treatment, and yet the results were very satisfactory. Of course, there were some instances in which no success was had.

The Treatment of Lupus Vulgaris by Phototherapy (Method of Finsen).—François (Bull. Soc. Méd. d'Anvers, June, 1902, from Dermat. Centrabl., March, 1903) concludes from the treatment of 30 cases of lupus that the Finsen apparatus is to be preferred to all other forms of phototherapeutic apparatus; that every fresh lupus is curable by means of the light therapy, when it is carefully, regularly and
energetically carried out. The advantages of the method are the even and deep action, painlessness, absence of purulent reactionary inflammation, permanence of the cure, and the cosmetic excellence of the resultant cicatrization. This is an important desideratum in lupus of the face. The results of the light-treatment in lupus vegetans, lupus hypertrophicus and vascular and sclerotic lupus are uncertain.

Lichen Planus of the Mucous Membranes.—In Tchlenoff’s case (Medizinische Obozrenie) the patient exhibited typical lichen planus on face and neck, and the same lesions were also prominent in the mouth. He reviews the similar cases on record and observes that lichen planus has been noticed on the mucosa of mouth, throat, anus and urethra. It may develop at these points primarily and without appearing on the skin, but it is usually secondary to cutaneous manifestations. The prognosis is generally favorable, especially under prolonged and energetic administration of arsenic.

SEROTHERAPY.

Diphtheria Antitoxin Intravenously.—Dr. D. L. Cairns (La Semaine Médicale) has treated 20 cases of diphtheria by means of intravenous injections of antidiptheritic serum, and has found this method more efficacious than the subcutaneous. The effect shows itself chiefly in the rapid disappearance of the symptoms of toxemia and of the glandular swellings, as well as by diminutions of the agitation and dyspnea when these exist. He says that the intravenous method is particularly indicated in the serious forms of diphtheria, such as are characterized by epistaxis and cutaneous hemorrhages, by considerable involvement of the lymphatic glands, and by an excessive pallor of the skin; also with pulmonary complications or with very marked manifestations of toxemia.

INFECTIOUS DISEASES.

Jez's Extract in the Treatment of Typhoid Fever.—The extract is made from the organs of animals injected 2 or 3 days before with typhoid bacilli. Subaldi (Guzzetta degli Ospedali) was much impressed with the rapid improvement that followed its use in two exceptionally severe cases of typhoid fever. As much as 200 cc. can be injected without disturbances. The heart and pulse are favorably affected, as is also the nervous system. It induces copious urination and the temperature subsides. The extract is given by the spoonful every 2 hours. Its effect is manifest by the second day, and by the third day two liters of urine were voided. In a third case the extract was given in hopes to abort or cure a prostatic abscess in the course of typhoid fever, but no appreciable benefit was derived. The patient succumbed.

Treatment of Typhoid Fever With Copper Arsénite.—Haslam (Western Medical Review, March, 1903) has found that this drug, in doses of 1/100 grain every hour, exerts a decided influence in patients suffering from enteric fever. After several administrations the tongue softens, becomes moist and clean, and similar changes take place in the pharynx, esophagus and in the whole alimentary canal, at the same time the general condition of the patient exhibits evidence of improvement. The drug can be given either in tablet form or in solution.

TUBERCULOSIS.

A Flank Movement in the War on Phthisis.—In no country has the effort to restrict tuberculosis (according to Medicine, March, 1903) attracted more widespread attention among the laity than in France. The French are thoroughly alive to their decreasing birth-rate and enlarging death-rate and consequent diminution in population. The German sanatoria for the treatment of tuberculosis were strongly commended by the French delegates to the recent Congress on Tuberculosis in Berlin. During the last six months there has been an active propaganda carried on in France, in which the government has been urged to establish sanatoria. The newspaper, Figaro, has raised over $300,000 for the establishment of a sanatorium upon the same lines as those followed in Germany. It was a severe shock administered to those who are hoping to diminish the ravages of tuberculosis
when Dr. Albert Robin, in a lecture before the Sorbonne (Chicago Tribune, January 11, 1903) announced that all that has so far been accomplished in the fight against tuberculosis is in vain, and that medical science and philanthropy are on the wrong track. Robin is quoted as stating that tuberculosis, once established in the system, is incurable. Of 36 tuberculous patients who leave the sanatorium, 19 relapse after 6 months and 10 after one year; only 5 out of 36 are saved. He urges a change in tactics, claiming that in France alone the necessary endowment for 100,000 beds would cost more than one hundred million dollars, and this would only provide for about one-fifth of the tuberculous patients in France. We see nothing in the statements of Robin that is new. It has long been known that sanatorium provision for all the tuberculous cases of a community is out of the question, but, because the problem is a large one, is it to be regarded as insoluble? Because all of the patients cannot be placed under the best conditions in their combat with the disease, shall it fail that none shall be so treated? The recognition that tuberculosis is a contagious disorder, being spread largely from patient to patient, and that care in the treatment of the sputum will materially diminish the danger of infection, and that improvement of nutrition is the underlying basic element in the treatment—these facts, once widely known among the laity, will result in a marked diminution in the number of cases of tuberculosis. The establishment of a few public sanatoria will be an object-lesson to the community in the management of this disorder. While it is a hopeless problem to provide for all the tuberculous, yet the few that would be provided for would do vastly more in teaching the community the proper management of such cases, and save many lives. It is not the stamping out of tuberculosis, for that is probably impossible, but it is the diminution of its ravages that is to be aimed at. This is surely well within the domain of modern sanitary science, notwithstanding the pessimistic utterances of Professor Robin.

**Dyspepsia in Consumptives.**—The apparently pretubercular dyspepsia is described by Paquin (Memphis Medical Journal, February, 1903). He does not think that it absolutely precedes tuberculosis, and insists on the importance of strength rather than gain in weight as a favorable symptom in the prognosis. He thinks we should look on persistent indigestion with the greatest solicitude and watch the victims closely, so as to place them, if possible, in the condition to defeat the greatest plague of man—consumption.

**SURGERY.**

The Treatment of Dupuytren's Contracture.—The treatment of few, if any, of what may be termed minor surgical affections (Jour. Amer. Med. Ass., February 28, 1903) has been attended with such difficulties as that of Dupuytren's contraction. The clinical picture of this obstinate condition is sufficiently well known to all engaged in surgical dispensary practice. Gradually and without pain the fingers of one of the hands are drawn toward the palm, the contracture progressing gradually until several fingers, possibly the entire hand, are almost entirely useless. The ring finger of the right hand is generally first affected, and as the disease advances the little finger and the middle finger are also affected. The thumb and index finger are seldom involved. All the structures of the flexor surface of the hand, muscles, tendon and skin have been considered possible factors in the production of this condition, but Dupuytren, after long observation and careful study of the tissues, was the first to show definitely that the seat of the disease is in the palmar aponeurosis, and this has been thoroughly established by repeated subsequent observers. Examination of tissues removed shows that the progress is one of chronic hyperplastic inflammation with scar tissue contraction. As the process progresses, not only the aponeurosis, but frequently also the skin, the ligaments and joints themselves are involved. The course of the disease is extremely chronic, from 3 to 10 years being required before the contraction is complete. The difficulties of treatment have been all the greater because so little is known as to its etiology. Injuries of the palmar fascia, particularly by those who use the tools of some trade continuously, rheumatic affections, general sclerosis and nervous origin have all been suggested as possible causes; however, constitutional treatment has proved of little avail in these cases. Malgaigne and some of the earlier surgeons, believing that the contraction was primary in the
muscles, resorted to division of the tendons, thus producing a state of affairs worse
than before. Sir Astley Cooper advised the more rational procedure of dissecting
out the contracted tissues with temporary or permanent cure in some cases.
Others have simply divided the contracted aponeurosis and skin and straightened
the fingers forcibly, but this has been usually followed by recurrence. Electrolysis
and various forms of apparatus for extension have also been tried. The latest
suggestion as to treatment comes from the clinic of von Bergmann, of Berlin.
Lecer, one of von Bergmann’s assistants, has treated 8 cases by removal of the
entire aponeurosis and overlaying skin, and covering in the defect with a flap with
a pedicle and a benefit wall or paraffin from the thorax. Results in the cases,
after 2½ years’ observation, were very satisfactory except in 2 cases, in which
there was keloid formation requiring a second operation. Many of the earlier
methods of treatment have given fairly satisfactory results and might perhaps be
advised before resorting to such radical measures, but for recurrent and obstinate
cases this procedure seems to be a reasonable and justifiable one.

HEMATOLOGY.

Serum Treatment of Leukemia.—Lucatelio and Malon (Gazzetta degli Ospedali)
state that in their investigations rabbits and sheep were inoculated with leukocytes
derived from patients with leukemia. The blood withdrawn was... Another to settle-
spontaneously, which allowed the leukocytes to be collected free from red corpuscles
or serum. The rabbits thus received 47 endoperitoneal injections of 5 to 10 gm.
of leukocytes in the course of 30 to 45 days. The sheep received 9 injections in the
external jugular vein at intervals of 2 to 12 days. The serum of the animals
thus treated displayed in vitro marked destructive action on human leukocytes,
and 3 patients with leukemia were treated with it by subcutaneous injections of
about 1 to 5 cc. of this serum, usually on alternate days. One patient, with 560,190
leukocytes before treatment, received 26 injections, and the leukocytes then num-
bered 375,726 per cmm. The enlarged spleen was also much reduced in size during the
serum treatment. The second patient was in a very advanced stage of the
disease, and no benefit was apparent from the 28 injections made. In the third
case the leukocytes fell only by 7,660 from the original figure of 500,960 after 11
injections, a total of 42 cc. of serum in 13 days. The proportion of uric acid in
the urine rose from 0.70 to 0.95, and the size of the spleen was very much reduced.
The injections caused no by-effects in any instance and were perfectly tolerated.

DISEASES OF THE HEART AND BLOODVESSELS.

The Gelatine Treatment of Aneurysm.—The Practitioner (March, 1903), com-
menting on this subject says: An interesting paper appears in the recently pub-
lished volume of Guy’s Hospital Reports, being a thesis for the degree of M. D., by
Dr. E. I. Claxton. The treatment of aneurysms by means of injections of gelatine
was introduced practically by Lancereaux and Pauleo in the year 1897. The
results claimed for the early cases of the method were very remarkable, and the
total number thus treated must be altogether very large. Many fatalities have,
however, occurred, the most notable of them being due to the appearance of tetanus
as a sequel. This is attributed to the presence of the spores of this organism in
commercial gelatine and the difficulty of rendering solutions of this substance ab-
solutely sterile. That such difficulty should be experienced seems curious in view
of the common, not to say invariable, use of gelatine in the manufacture of nutrient
media for the growth of bacteria in the laboratory. It is not, so far as we know,
found that tetanus bacilli develop with any frequency as contaminations of such
cultures. That these spores may be difficult to kill by a single application of
heat is easily admissible, but that they cannot be effectually removed by such a
method as that discontinuous sterilization is at least remarkable. Another objec-
tion to this mode of treatment of aneurysm is its extreme painfulness in many
cases, so that patients practically refuse to go on with it after a few trials. In ad-
ditions to these serious drawbacks, there appears to be considerable uncertainty
whether any real increase does take place in the coagulability of the blood as a
result of injections of gelatine. In the cases discussed by Dr. Claxton, it is not ad-
mitted that any real improvement took place in the aneurysms from which the pa-
tients suffered; and this writer concludes that the method should be discarded,
since it is undeniable dangerous and of very doubtful efficacy.
DISEASES OF THE NERVOUS SYSTEM.

Treatment of Sydenham’s Chorea With Arsenic.—Timasheff (Medizinskoe Obozrenie) describes his experiments with 26 cases of chorea. He found that an aqueous 1 per 1,000 solution of arsenous acid afforded the best results. He deprecates the large doses recommended by Comby, and seldom gave more than 3 teaspoonfuls a day, finding that the desired results were attained fully as rapidly as with the large doses. He thinks that more attention should be paid to the underlying cause of the affection. He was unable to detect any special relations between the duration of the disease and the length of the treatment or the prevention of relapses.

DISEASES OF THE NOSE AND THROAT.

Restoration of the Nasal Septum.—Kuzmin (Medizinskoe Obozrenie) makes two parallel incisions in the upper lip close to the median line, but not reaching to the extreme outer margin. A transverse incision close to the nose allows a rectangular flap to be raised, still connected at its base in the margin of the lip. The flap is then sutured to the nose in such a way as to give the aspect of the normal septum. After 8 to 10 days the flap is severed completely from the lip and the suturing to the nose completed. The edges of the wound in the lip are brought together and sutured. The cosmetic effect is very satisfactory.

PHARMACOLOGY.

Elimination of Iron in Health and Disease.—Bartoletti’s paper in Riforma Medica on this subject holds that subcutaneous injections of iron in health cause an increase for the first few days in the amount eliminated in the urine. As a general rule he found that the proportion was 2.89 to 2.14 on a mixed diet, and 5.19 on a meat diet, but the quantity of urine voided during the 24 hours must always be taken into account. The amount eliminated in leukemia is not appreciably less than that in health, reaching the minimum of the latter. In chloro-anemia the proportion is much reduced. There does not seem to be any regular proportion between the amount of iron in the blood and the amount eliminated, even in the same individual. The decrease in the proportion of iron in the blood in leukemia and chloro-anemia is not proportional to the decrease in hemoglobin. In short, he concludes that the laws regulating the elimination of iron are still totally unknown. The variations may be due to differences in the functional capacity of the kidneys.

MISCELLANY.

Dysentery.—Goltman (Memphis Medical Journal, February, 1903) has treated dysentery, as he claims, of the amebic variety, by local treatment and divulsion of the rectum. His conclusions are: (1) The treatment of dysentery, acute or chronic, by topical application is most rational. (2) Topical applications are useless unless large volumes of fluid are used to distend the bowel. (3) Topical applications, as usually made, are very painful in all cases, particularly in those that are acute. (4) Topical applications, to be thorough and far reaching, are unbearable to the patient, on account of the extreme pain they cause. (5) Anal division is a prime factor in facilitating the work of flushing the colon. Resistance to the escape of fluid is removed, and it markedly relieves the tenesmus. (6) Anal division, cauterization of ulcers through the proctoscope, passing a tube high up into the sigmoid through this instrument, and thorough distension and flushing of the gut, are absolutely impossible without the aid of anesthesia. (7) Anesthesia rather relieved than produced shock in Goltman’s cases. These patients seem to take as kindly to chloroform as women in childbirth. (8) In his judgment, one is more likely to overdistend and perforate the gut without anesthesia than with it.

Influence of Oxygen in Ether Glycosuria.—Seelig (Centralblatt für innere Medicin) states that, in his tests on dogs, ether invariably induced glycosuria during the inhalation and also for 3 or 4 hours afterward. The proportion was 8 to 10% in the more vigorous animals. He also found that with the simultaneous intravenous infusion of oxygen there was no glycosuria. He is now studying this interesting fact to determine whether the same measure will abolish or prevent glycosuria from other causes.
SOME TIMELY FORMULAE.

Inoperable Epithelioma of the Face.—Potato poultice, containing 1 to 100 solution of corrosive sublimate, to soften crusts, etc. Remove loosened tissues with galvanocautery and apply:

- Methylene blue
- Alcohol
- Glycerine

M. Touch stained parts with chromic acid solution; reapply blue solution. Dress with compresses wet with sublimate solution. Repeat every two or three days.

Cutaneous Epithelioma.—The best paste we have at present for this condition is that of Bougard:

- Wheat flour gm. 60
- Starch gm. 60
- Arsenous acid gm. 1
- Red mercury sulphide (cinnabar) gm. 5
- Ammonium chloride gm. 5
- Corrosive sublimate gm. 0.50
- Solution of zinc chloride gm. 245

M. The first six substances are separately ground and reduced to fine powder. They are then mixed in a mortar of glass or china, and the solution of zinc chloride is slowly poured in while the contents are kept rapidly moving with the pestle, so that no lump shall be formed. A thick layer of this is spread on cotton and left in position twenty-four hours, and then managed in every way as Marsden's paste.

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Marsden's Paste in Cancer of the Skin.

- Acidi arsenosi àa p. æ
- Pulveris acaciae

Mix with a few drops of water to form a paste at the time of application.

Marsden's Paste (modified).

- Acidi arsenosi 3 i
- Pulveris gummi arabici 3 i
- Cocainæ hydrochloratis gr. xviiij

M. Allen's Modification.

- Acidi arsenosi àa 3 i
- Orthoform

To be made into a paste of the consistency of rich cream or butter by adding water. Apply on a small piece of cloth, which is left on from eighteen to thirty-six hours, and repeated if necessary.

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In Painful Tuberculous Cystitis:

- Guayacol 5
- Iodoform 1
- Sterilized olive oil 100

M. S.: Inject one or two grams into the bladder once or twice daily.

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For Senile Cystitis.

- Extracti hydrangeæ 3 i
- Tincture gentianæ compositæ 3 iv
- Tincture staphisagriæ
- Tincture cannabis indica
- Syrupi aurantii q. s. ad. 3 iv

M. S.: A teaspoonful three times daily.
To Correct Defective Secretion in Cholera Infantum.

Hydrargyri chloridi mitis
Sodii bicarbonatis
Sacchari lactis

M. S.: Give every two hours.

At the onset.
Oleini ricini
Spiritus methæ piperitæ

M. S.: Give in hot milk.

For collapse.
Beef tea
Brandy

By enema followed by a warm bath.

If serious, ether or aromatic spirits of ammonia by hypodermic injection. Or rectal injection of starch and warm water. Broths (mutton, beef, veal) are better than peptonized milk; or give no food for 12 or 24 hours (occasional sips of hot water).

Rub chest and abdomen with whiskey or whiskey and water and wrap in cotton wool or flannel.

—T. Percy Elliott.

Diabetic Albuminuria, if Phosphatic:

Sodii arseniatis
Potassii iodidi
Aquæ destillatae

M. S.: Tablespoonful in a small glass of milk an hour before eating, morning and night.

As a tonic:
Extracti cinchonae
Quininae sulphatis
Extracti nucis vomicae

M. ft. pil. No. 1.

S.: One pill at breakfast and dinner.

After a fortnight.
Calcii glycerophosphatis
Magnesii glycerophosphatis
Extr. nucis vomicae

M. ft. cht. No. I.

S: One at breakfast and dinner daily.

—Robin.

Intestinal Catarrh in Infants, With Green Colored Stools:

Hydrargyri chloridi mitis
Pulv. rhei radicis
Conchæ præp. (G. P.)

M. ft. div. No. viii.

S.: One three or four times daily.

In more chronic cases:
Bismuthi subnitritatis
Sodii bicarbonatis
Pulv. tragacanthæ
Spt. chloroformi
Aquæ cari

M. T. d. s.

In severe forms:
Iodoformi
Naphthalini
Pulv. sacchari
Olei bergamí

M. ft. chart. No. xx.

S.: One in milk every hour.

—Comb.
Summer Diarrhea.—After castor oil or caomel:

Phenyl salicylate 3 l
Bismuth salicylate 3 ii
Oil of Gaultheria
Chalk mixture to make 3 l

M. S.: 3 l every two hours. Opium may be added if there is much pain.

—Griffith.

After exposure to extreme heat:

Pulveris Doveri
Hydrargyri cum creta
Pulveris rhei

M. S. Three or four times daily.

Or:

Bismuthi subnitrat's
Tinct. opii 3 ss
gtt. xx
Syropi ippecacuanhae
Syropi rhei aromatici
Listerini

M. S.: Teaspoonful once in three or four hours for a child ten or twelve months old.

—Liegruis.

Dengue.—For an adult at the onset:

Hydrargyri chloridi mitis gr. vi
Phenacetine 3 ss
gtt. xx

M. et div. in capsule No. ix. Three every three hours.

—Hamilton West.

Malarial Cachexia.—In addition to eight grains of quinine in capsule on an empty stomach morning and evening:

Liquor arsenici chloridi gtt. v
Tinct. ferri chloridi gtt. xv
Elixir

M. To be taken three times a day, after meals.

If the heart is feeble or arrhythmic:

Digitalin (cryst) 1

M. S.: Gtt. xv, to be followed by oxymel of squill and salts of potassium.

—in hepatic involvement:

Strychnine arseniatis q. s. ad. 100 cc.
Sterilized vertece

M. S.: Inject every other day.

Each syringeful contains three milligrams of the arseniate.

Quinine lactatis 20 gm.
Antipyrine 20 gm.

Aseptic vehicle q. s. ad. 100 cc.

M. S.: Inject also every second day.

Each syringeful contains 20 cgm. quinine salts and 20 cgm. antipyrine.

Also a daily cold douche.

—in Anasarca of Malarial Origin:

Compound spirit of juniper 0 l
Iron sulphate 3 ij
Potassium acetate 3 ss
Fluid extract of digitalis
Syrup of squill 3 ss

Dose, a tablespoonful three times a day.

In severe cases the patient is to drink also infusion of elder root.
For Ascites Associated With General Dropsy:
Ext. senæ
Magnesii sulphatis
Given in water every second day; or.
Hydrargyri chloridi mltis
Pulv. digitalis
Pulv. scillæ
For one pill. Three such daily.

Acute Bronchitis.
Ammonium carbonate
Sodium salicylate
Camphorated tincture of opium
Syrup of orange flowers
Syrup of tulu
Water
M. S.: A dessertspoonful every three hours.

To Allay Spasmodic Coughing:
Morphinae sulphatis
Chloralis
Emuls. oi. lini
M. S.: Teaspoonful an hour after meals.

In Bronchitis Following Influenza:
Tinct. nucis vomicae
Tinct. digitalis
Tinct. cardamomi comp.
M. S.: Teaspoonful in water four times daily.

In that depending upon the gouty state:
Vini colchici
Vini antimonii
Potassii bicarbonatis
Aqua distillatae
M. S.: Tablespoonful in water four times daily.

Cancer of the Breast.—In the ulcerative stage, to check offensive odor:
Potassii permanganatis
Aqua
M. S.: Apply as a lotion; or,
Acidi carbolici
Aqua camphoræ
Aqua
M. S.: Apply as a lotion.

In resulting cachectic state:
Syrupi ferri et mangani iodidi
M. S.: Teaspoonful three times a day.
MEDICAL HAPPENINGS IN NEW JERSEY.

The twenty-sixth annual report of the Board of Health of the State of New Jersey is at hand and is a monument to the industry and fidelity of the secretary, Dr. Henry Mitchell, of Asbury Park. It contains the usual vital statistics, reports of various officers and much other matter which will prove of interest to sanitarians throughout the State. Dr. Mitchell’s report, aside from the usual statistics of diseases, is subdivided under these heads: Notification of Communicable Diseases; Food and Drugs; Sanitary Inspection Service; Isolation Hospitals; Plumbing and Gasfitting; Cemeteries; Inspection of Streams; Sanitary Administration; Contagious Diseases of Animals; Medical Inspection of Schools; State Laboratory of Hygiene; Licensing of Dogs.

The reports of the local boards of health are quite exhaustive and show that the importance of proper sanitation is becoming more and more recognized by the municipal authorities. Much space is given to the report on inspection of streams and to legal decisions and opinions.

Dr. George M. Silvers, son of Dr. Elihu B. Silvers, of Rahway, died in Chicago April 15. The interment took place in Rahway.

Dr. C. H. Althans, chief of the chemical laboratory of Reed & Carnrick, Jersey City, will sail early in June for Europe. He expects to spend three months in German laboratories perfecting himself in the latest German ideas of scientific work.

Dr. and Mrs. H. A. Pulsford, of South Orange, have returned from a visit in Boston.

A Lorenz operation for dislocation of the hip was performed on two little children, aged respectively 3½ and 5 years, May 2, in the Home for Crippled Children, Newark. The operation was in charge of Dr. Sydney A. Twichin, visiting surgeon of the home, and Dr. Dexter Ashley, one of the staff of the Post-Graduate Hospital, of New York, and Dr. Lorenz’s American assistant.

A number of prominent local physicians witnessed the operation. This was the first operation of the kind that has been performed in this city, and considerable interest was felt.

Dr. English, of Milburn, has engaged Miss Mary S. Haver, of Round Valley, a trained nurse, to assist him.

U. H. Howell, who died in Vienna, recently, was the father of Dr. B. D. Howell, of Clifton.

Dr. Harry H. Cate, a homoeopathic physician, who has a sanitarium at Lakewood, left home April 21. He registered the same day at the Hotel Albert, New York, and after spending a few minutes in his room went out and has not been seen since. Half a dozen detectives are at work trying to find him. At 122-124 East Thirty-eighth street a pocketbook and Lakewood trip ticket belonging to the missing man were found, but the police have only been able to trace his movements up to 9 o’clock on the evening of Tuesday, the 21st. It is believed that Dr. Cate drew $2,000 from a bank.

Plans are out for a new residence for Dr. Mefford Runyon, to be built in Academy street, opposite the Columbia School.
NEW JERSEY MEDICAL NOTES.

Dr. C. H. McFadden is one of the directors of the newly organized People's Bank of Hackensack.

Dr. Frank E. Baker, Superintendent of Newark City Hospital, has resigned to take effect July. He has held the position ten years. In his annual report he says: There are now 240 available beds in the institution, and in them 2,444 patients had been accommodated during the year. Out of this number 2,245 had been discharged, cured or relieved. There had been 109 births and 203 deaths, and there had been an average of 172 patients in the hospital each day. The expense of maintaining the institution during the year had been $297,721.28. The ambulance had been called out 1,178 times.

Dr. and Mrs. J. A. Petrie, of Phillipsburg, have returned from Florida, where they spent the winter.

Dr. J. M. Husted, of Clayton, who attended nearly all the cases of diphtheria at that place during the epidemic last winter, was stricken with the disease. His was the worst case that has been reported.

A sanitary for inebriates will be established at Meyers Ferry, near Delaware.

The Riverside Hotel here, which is now operated as a summer boarding-house by the owner, will be enlarged, remodelled and refitted with modern improvements to make it a leading institution.

The enterprise is being backed by Dr. George Anderson, of Phillipsburg, and a Mr. La Clare, of New York city. The management will fall upon Dr. Anderson.

Dr. and Mrs. N. Frederick Feury (Alice Rulison Crossman), who were married April 15 in Jersey City, held a reception after the ceremony for a small number of relatives and friends at the home of the bride's brother and sister, Dr. and Mrs. Charles H. Purdy, 312 Montgomery street. They witnessed the launching of the cruiser West Virginia at Old Point Comfort, Va., and later visited Baltimore and Washington. They are now at home on Bergen avenue, Jersey City.

Dr. H. C. Scobey, of Long Branch, has been elected financial secretary of the Monmouth County Speedway.

After July 4 the following changes in the requirements of the State Board of Medical Examiners for a New Jersey license will go into effect:

The date of examination will be the third Tuesday and Wednesday in June and October; the academic requirements will be a certificate or diploma, issued after four years of study, either in a normal, manual training or high school of the first grade, in this State, or in a legally constituted academy, seminary or institute of equal grade, or a students' certificate of examination for admission to the freshmen class of a reputable literary college or an academic education considered and accepted by the State superintendent of public instruction as fully equivalent; the medical requirements will be four full school years of medical study, of at least nine months each, including four satisfactory courses of lectures of at least seven months each, in four different calendar years, in a legally incorporated medical college or colleges, prior to receiving the degree of doctor of medicine.

Candidates for examination, or for the endorsement of a license issued by a recognized examining board of another State, will be obliged, after July 4, to comply with the new standard of requirements for a New Jersey license.

Dr. Albert Wyckoff, of Belvidere, died April 14 in the 52d year of his age.

Dr. Augustus V. Wendel, of Newark, was married March 25 to Miss Katherine F. Klein, also of Newark. The marriage has been kept very quiet by the few friends who knew it. The ceremony was performed in St. Venantius Church, Orange. Dr. and Mrs. Wendel enjoyed an extended bridal tour.
Mrs. Alma A. Williston, M.D., by a vote of 12 to 3, has been appointed municipal physician by the town council of Phillipsburg, Warren County. Her rivals were two former physicians, whose salary was $200 a year. Dr. Williston’s salary was fixed at $300. In addition, the council will provide her with an automobile and will allow her $100 for medicines. She claims to be an immune, and declares that she has no dread of the prevalent diseases, such as typhoid fever, diphtheria and smallpox. Of the last named there are now several cases in the town.

Dr. Williston is probably the first woman doctor to be employed by municipal authorities in New Jersey.

Mayor Newton B. Smalley, of Plainfield, has appointed Dr. Arthur H. Dundon as borough physician. He succeeds Dr. Albert Pittis, who held the office for two terms.

Dr. Julius Salinger, assistant editor of the Philadelphia Medical Journal, has been enjoying a brief respite from professional duties in Europe.

Dr. J. N. McCormack, at present the secretary of the Kentucky State Board of Health, has been appointed to act as a national organizer for the American Medical Association. His work will be principally in the western States.

Dr. John H. Woods died on March 28, at Thomas, Okla., at the age of 101, from a stroke of paralysis. Up to the time of his fatal seizure he had enjoyed excellent health and was still actively engaged in the practice of his profession, having been in active practice for seventy-five years. He was the first probate judge of Douglas county, Kansas.

The Congress of American Physicians and Surgeons held its sixth triennial session at Washington from May 12 to May 14. The congress was formally opened with an address by Dr. W. W. Keen, of Philadelphia, at 3 o’clock on the afternoon of the 12th. The names of the constituent societies of the congress, of their secretaries and of the halls in which they met are given below: American Ophthalmological Society, Dr. S. B. St. John, Arlington Hotel; American Otological Society, Dr. Frederick I. Jackson, Arlington Hotel; American Neurological Association, Dr. Graeme M. Hammond, Arlington Hotel; American Gynecological Society, Dr. J. Riddle Goff, Columbian University Medical School; American Dermatological Association, Dr. Charles J. White, New Willard; American Laryngological Association, Dr. James E. Newcomb, Cosmos Club; American Surgical Association, Dr. D. P. Allen, Columbian University Medical School; American Climatological Association, Dr. Guy Hinsdale, New Willard; Association of American Physicians, Dr. Henry Hun, New Willard; American Association of Genito-Urinary Surgeons, New Willard; American Orthopedic Association, Dr. John Ridlon, Arlington Hotel; American Physiological Society, Dr. F. S. Lee, Columbian University Medical School; American Pediatric Society, Dr. S. S. Adams, the Raleigh; Association of American Anatomists, Dr. G. C. Huber (hall not yet selected); American Medico-Psychological Society, Dr. C. M. Burr, the Shoreham; American Association of Pathologists and Bacteriologists, Dr. H. C. Ernst. Columbian University Medical School.

At Montclair, N. J., a veterinary surgeon having in detention a dog, said to be afflicted with rabies, invited the school children of the town to view the incarcerated animal. This was done to eradicate the idea in the minds of many persons that a rabid dog is violent in demeanor, has frothing at the mouth and other alarming objective symptoms. The surgeon showed on the contrary that the animal is ordinarily quiet, but has dry, parched mouth and tongue, as would ordinarily be seen in a person suffering from a high fever.
Dislocation of the spleen is by no means as infrequent an occurrence as is commonly supposed. If in every instance of absent dulness in the splenic region the lower left thorax of the abdomen would be subjected to a scrutinizing examination the diagnosis of splenoptosis would not be so comparatively rare.

**SIZE, WEIGHT AND LOCATION OF THE NORMAL SPLEEN.**

There is no organ which physiologically varies so much in size and weight as the spleen. Its average length in the adult, however, may be put down as 12.5 cm., its breadth as 9 cm. and its thickness as 5 cm. The size of the normal spleen is influenced by the general nutrition. Its weight in the adult varies from 230 to 270 grams. At birth, the weight to that of the entire body is in the proportion of 1 to 359; during childhood its proportionate weight and volume is considerably larger, in adult life varying from 1 : 320 to 1 : 400. The organ atrophies as the individual advances in age, and its proportionate weight may decrease as much as to 1 : 700. There is a discrepancy of opinion among various anatomists as to the exact location of the spleen. It is situated deeply in the left hypochondriac region between the ninth and eleventh ribs, obliquely across; its posterior extremity is situated about two centimeters from the tenth dorsal vertebra, and it extends downward and forward to a point four or five cm. from the free end of the eleventh rib. The organ presents a convex external and a concave internal surface, on which the hilum, a vertical fissure, traversed at various points by blood vessels, lymphatics and nerves, is located.

Its external surface is in relation with the diaphragm which separates it from the ninth, tenth and eleventh ribs; the inner surface is in relation anteriorly with the fundus of the stomach, posteriorly with the left pillar of the diaphragm and the left suprarenal capsule, and inferiorly with the tail of the pancreas. Its upper thickened extremity is in relation with the diaphragm, with which it is connected by a peritoneal fold, the suspensory ligament; its lower pointed extremity touches the splenic flexure of the transverse colon. The anterior border, thinner than the posterior margin, is frequently notched; the posterior rounded border rests upon the left kidney. Besides the aforementioned suspensory ligament, the organ is held in position by another peritoneal fold, the gastro-splenic omentum, which connects it with the stomach.
The normal spleen is hardly ever palatable; it may be detected when enlarged or dislocated, or in instances of extreme abdominal relaxation. Palpation is best performed during deep inspiration while the patient is in the right lateral-dorsal or in the right side position.

Inasmuch as the upper third of the spleen is usually covered by the lung, percussion of that organ is limited to the lower two-thirds, which lie in proximity to the periphery of the body.

The spleen is best percussed while the patient is in the upright posture; however, when in the right lateral dorsal position fairly good results are also often obtained.

In the absence of anomalies in the adjacent organs the extent of spleen dulness as revealed by properly executed percussion, corresponds to the parietal portion of the spleen. The organ is pathologically enlarged when the vertical diameter of the area of dulness exceeds 9 cm., or when the dulness continues beyond the costo-articular line.

Under normal conditions even, the volume of the spleen, and consequently splenic dulness may be often diminished. However, a certain area of dulness may always be determined in the splenic region, provided the organ has not prolapsed or has been displaced upward, or the lung does not completely cover it, as is the case in extensive emphysema.

**ETIOLOGY AND PATHOLOGY.**

Dislocation of the spleen may be more or less pronounced; we may recognize three non-arbitrary degrees of splenoptosis.

The first degree when the total spleen or its greater part is still under the left costal area.

The second degree when it has descended into the left iliac fossa or to the entrance of the pelvis.

The third degree when it has descended into the pelvis or is floating in the right half of the abdomen.

Wandering spleen seems to be an exclusive affection of the female sex. Each one of the four instances which have come under my observation have occurred in multipare.

In almost every instance of dislocated spleen, the organ is also found enlarged, the increase in volume, mostly primary in character, being of etiological significance. The great majority of movable spleens have been or still are, malarial. The dislocation has been also observed in leukemia, in the presence of various kinds of tumors and in that of echinococcus cysts of the organ. On the other hand, there are some cases on record in which prolapsed spleen occurred in individuals who had never met with an accident and who had never been affected with malaria, enteric fever or any other infectious disease. In such instances we have to assume the congenital nature of the dislocation, especially when this is already diagnosed in early life.

Although a dislocated spleen may arise from the same causes which occasion general splanchnoptosis, and although it is nearly always associated with some enteroptotic condition, its enlargement and increase in weight is in most instances the primary factor in its own displacement and in that of the transverse colon and other parts of the abdominal viscera.
Repeated gestations, relaxed abdominal walls, tight lacing, etc., undoubtedly predispose to wandering spleen. I am satisfied, however, that most instances of this affection, in spite of the presence of these and other predisposing factors, occur only if the organ has attained abnormal size and weight. The normal spleen, even if pronounced splanchnoptosis prevails, usually retains its position; in the rarest of instances only has a normal spleen descended into the abdominal or pelvic cavity.

If displacement of the normal spleen which rests with its posterior border upon the left kidney were dependent as a rule upon Glennard's disease, and especially left-sided nephroptosis, its occurrence would be much more frequent. The fact that it is usually retained in its place if gastrop-tosis is present even to a considerable extent, demonstrates that eventual dislocation is due to elongation of its attachments, particularly the gastro-splenic omentum which must be the result either of the latter's congenital or acquired lack of resistance, or of trauma or of its own increased weight and consequent traction on the ligament. About twenty per cent. of the cases of splenoptosis occur without prolapse of the corresponding kidney. This in itself is evidence of its possible independent production. We understand this eventually when we recall the relation of the spleen to the left kidney. The resting-place afforded by the border of the kidney to the spleen is like an inclined plane, on which the spleen slides downward when the diaphragm is moving downward; that is, during inspiration, while the kidney remains in its fixed position. Synchronous with its descent the spleen becomes smaller by pressure and rotates on its longitudinal axis so that its upper border is turned forward. During expiration the spleen ascends about one centimeter, moves slightly backward, rotates and expands. The spleen in its normal state does not exert any undue pressure upon the kidney nor is its position depending in any measure upon that of the kidney.

SYMPTOMATOLOGY.

Subjective symptoms called forth by a dislocated spleen may be very indistinct, or may be absent in certain instances, while in others they may be of a more pronounced character. Their severity is dependent upon the physical condition of the spleen, the degree of its displacement and the position it occupies relative to the other organs in the abdominal or pelvic cavities.

A typical, uncomplicated case of the second degree, exhibits the following features:

Multipara; age, between thirty-five and forty years; pallor, emaciation (more or less progressive in character), abdominal integument thin and rugose, abdominal muscles flaccid. A dragging sensation and a feeling of heaviness in the abdomen often prevents the patient from walking and even from standing in one position for any length of time. Gastric disturbances are always present in some form or other. Palpating, we recognize in the suspended and superficial tumor, the enlarged spleen by its mobility, its peculiar shape, its blunt edges, its notched anterior border, and by the possibility of its replacement into normal position by proper manipulation. Acute pains, due to uncomplicated splenoptosis, are hardly ever experienced outside the menstrual periods. Individuals with floating spleens always suffer more or less before the appearance and during the
catamenial flow. The origin of these pains, however, is in almost every instance ascribed to other factors than to splenic displacement, and this is simply overlooked.

In complicated cases the same symptoms may prevail as in the uncomplicated condition, but they may be overshadowed by the phenomena of the complicating affection. Practically long-standing cases of second and third degree splenoptoses are more or less complicated. The severity of the symptoms in complicated cases, as a general rule, is dependent upon the degree of compression upon or dragging of the abdominal or pelvic viscera. The elongated gastrospenlenral omentum together with the splenic vein and artery form a pedicle from which the spleen, hilus upward, is suspended. Descending, the spleen may rotate several times on its own axis. The pedicle, however, may become twisted after the spleen has prolapsed. In this event, the organ, by the shortening of the pedicle, becomes again elevated to some extent—an occurrence often misinterpreted by the clinician.

An enlarged spleen may exert undue pressure upon the left kidney; that is, its increase in volume may prevent it from sliding up and down the kidney incline, and then its augmented weight bears heavily upon that organ. This abnormal condition will ultimately result in nephroptosis. While a loose or prolapsed kidney occurs with about 80 per cent. of all the cases of wandering spleen, it is not the cause of the latter, but must be often considered as one of the early consequences of the enlarged spleen. When the splenic ligaments are strong enough, and when the diaphragm and stomach to which they are attached do not alter their position, splenoptosis will never occur on account of nephroptosis or the prolapsed condition of any other visceral organ. A floating left kidney, however, coincident with wandering spleen, is always a more or less troublesome complicating feature.

Continued traction of the heavy spleen upon its pedicle causes this to elongate still further and to diminish in thickness. The longer the pedicle, the narrower and more atrophied the splenic vessels, the more incomplete the nourishment of the displaced organ, and the more imminent its death. Dragging of the enlarged organ may call forth detachment of the pancreas, gastric dilatation, hematemesis and even gastroptosis. Its weight may compress the intestines, producing their occlusion. By compression of the left ureter a wandering spleen may cause hydronephrosis and other disturbances. Resting upon or compressing the bladder, the uterus, or its adnexa, it may give rise to various disordered conditions of these organs. Pressing upon blood vessels and nerves, the wandering spleen may occasion paraesthesia or hyperesthesia in the pelvic region, but particularly in the lower extremities. A movable spleen attached to its pedicle only will not produce as prominent and persistent symptoms as one which, as the result of perisplenitis, has become fixed by adhesions in a certain part of the abdomen, where it continually drags or presses upon one and the same organ.

DIAGNOSIS.

A dislocated spleen is generally recognized without difficulty, if we remember the aforementioned three diagnostic points.

1. Absence of dulness in normal splenic area.
2. Detection of movable, spleen-shaped, blunt-edged parietal tumor, with notched anterior border.

3. The possibility of pushing the movable spleen into the direction of or into its normal position.

In the absence of normal splenic dulness, provided this is not obliterated by an overlapping lung, or by an increase in the volume of the left thorax by pleuritic effusion which pushes the spleen downward, or by peritoneal effusion, or hyperdistension of the intestinal tract with gases effecting its elevation, the spleen should be carefully searched for in the abdominal or pelvic cavities.

By its peculiar shape and contours and the possibility of its replacement into the normal space, when the typical area of splenic dulness can again be demonstrated, it may be distinguished from a wandering left kidney and from fecal and other tumors. The greatest difficulty in the recognition of floating spleen is experienced when it has been fixed by adhesions to some part of the viscera. The organ not being then freely movable any longer, may yet be clearly appreciable by its outlines. At any rate absence of dulness in normal splenic area plus the peculiar directly immobile tumor leave little doubt as to the latter's true nature. Still, a prolapsed spleen which had become adherent to the neighboring organs has been more than once mistaken for uterine fibroids or for other neoplasms or even for vesical calculus; and the splenic cysts and abscesses, occurring in the displaced organ, on more than one occasion have been diagnosed and treated for the corresponding conditions in the ovary.

**PROGNOSIS AND TERMINATION.**

If the enlargement of the dislocated spleen is due to malaria or some other affection which may be influenced by proper medication, the prognosis as to replacement of the organ, although a perfect cure ensues in a small proportion of cases only, is much more favorable than was supposed by the older clinicians. The outlook as to the life of the individual is favorable in the great majority of instances.

The large, irreducible spleen may undergo various alterations, the most frequent of which is atrophy. These changes are occasioned by obliteration of the splenic blood vessels, a condition as already pointed out, due to continued traction upon the splenic pedicle. Atrophy of the displaced organ seems the most favorable termination of this anomalous state. A floating spleen, after having been atrophied, causes much less disturbance than when it is increased in volume. In one or two instances, the atrophied spleen, devoid of all attachments, was found floating in the abdominal and pelvic cavities.

There is no doubt that death occasionally supervenes as the direct result of splenoptosis. A fatal termination of the condition by the production of incarceration of the bowels is not impossible. Death has been observed as the consequence of gangrene of the fundus of the stomach which had been occasioned by long continued traction upon its walls by the wandering spleen.

**TREATMENT.**

The treatment of splenoptosis should be instituted as soon as the condition is recognized, even if aggravating symptoms have not as yet
made their appearance. Complications are apt to arise at any time and occur sooner or later in almost every instance. Treatment should be aimed at the reduction of the enlarged organ and the diminution of its mobility. It is useless to attempt retraction of the splenic ligaments without reducing the splenic tumor in size and weight, for had it not been for the enlarged and heavy organ, the gastro-splenic omentum and the suspensory ligament would not have been unduly stretched and splenoptosis would not have occurred.

The cases most readily influenced by therapeutic measures are those which have arisen upon a malarial basis. Antimalarial and tonic medication, rest in the recumbent position and supports are frequently followed by more or less pronounced decrease of the splenic tumor, and if the case is not of a too protracted a nature, also by contraction of the relaxed ligaments.

As far as phenomena of compression or dragging are due to a floating malarial spleen, they will be reduced to a minimum or cease altogether under suitable treatment of the causative factor. Quinine and arsenic alone, combined or alternately, by the os or subcutaneously administered, are still the most reliable splenic drugs. In one of my cases of splenoptosis, I had to resort to the hypodermic injection of arsenic to effect a reduction of the caliber of the spleen. For hypodermic injection in malarial swelling, I generally use a 0.04 per cent. solution of potassium arseniate, administering it once a day, starting with 5 drops of the solution and increasing it to fifteen drops, which latter dose is continued until the organ has diminished in size, or until symptoms of arsenical poisoning make themselves evident. Diminution of splenic enlargement by hypodermatic injection in the proximity of the tumor gives quick results, especially when the swelling is a concomitant phenomenon of an infectious disease.

Iodin, hypodermatically employed, has given good results in cases of malarial infection, in which the spleen was greatly enlarged. Contraction of the enlarged malarial spleen is materially hastened if in addition to the medication, hydro-therapeutics and electricity are utilized. Frequent douching of the splenic region with cold water I find the most satisfactory hydro-therapeutic measure; application of cold by the ice bag is also of service. Faradization of the splenic tumor tends to stimulate its contractility. In prolapsed enlarged spleen hydrotherapy and electricity aid not only in reduction of the swelling, but if suitably applied may induce contraction of the splenic ligament.

The mobility of the spleen is best controlled by replacing the organ which by aforementioned treatment had diminished in size and weight, to its normal position and retaining it there by proper supports while the patient is kept on his back for a longer or shorter period. Abdominal bandages, accurately fitted, may afford support. If we recall that splenoptosis, like all other abdominal ptoses, occurs in lean persons, we can understand that an abdominal bandage, without inconveniencing the patient will hardly ever exert sufficient pressure to maintain the organ in its normal place. I find that zinc oxide adhesive plaster, the value of which in gastropoptosis and Glennard's disease has been extolled by Rose, if properly applied, will better maintain a wandering spleen in its normal position.
than any other device. In a case which I had under observation for some time, I secured complete immobility of the spleen by first running, as tightly as possible, three strips of plaster, each four centimeters wide, from the region of the ninth right rib under and around the left costal arch, so that the spleen became fixed above them. On top of these strips a wider layer of plaster was applied in Rose's manner, viz.: the wide part was placed very tightly around the abdomen above the crest of the ileum, the tapering ends drawn well upwards and backwards until they overlapped the spine. Additional pieces of plaster over the left hypochondrium afforded a still greater resistance. Zinc oxide adhesive plaster does not irritate the skin to any extent. The support was renewed occasionally. After the case had favorably progressed for some time an elastic close-fitting abdominal supporter was substituted for the outer broad layer of plaster, the supporting strips under the costal arch, however, were continued.

It stands to reason that recent cases of splenoptosis offer more chances for an ultimate cure than do those which have existed for a long period. Moreover, in protracted cases, the adhesions formed between the spleen and the adjacent organs produce immobility and prevent its elevation by a supporting device. As contraction of the spleen is always followed by more or less relief of the complicating conditions, an attempt should be made to cause its reduction in volume and weight when fixed by adhesions. When this cannot be accomplished, or when, after its achievement, the aggravating phenomena have not subsided, operative procedures must be resorted to. Laparo-splenectomy, by which the cause of the distressing features is removed, is generally well borne by the patient. Restoration to the normal state after splenectomy occurs, as a rule, in a comparatively short time. In most instances, the operation is followed by leucocytosis of longer or shorter duration. Extirpation of the spleen, however, is contraindicated in all the graver metabolic disorders, in advanced chronic diseases, in leucemia and pseudoleucemia, in hyperemic and amyloid spleen, etc. Splenopexy is a safer operation than splenectomy and I think it may be performed in many cases in which splenectomy should not be undertaken. Of course, not all operative cases of splenoposis are adapted to splenopexy, but whenever possible, preference should be given to the least radical and less dangerous procedure.

56 East 76th street.

MASTOID PAIN NOT DUE TO EMPYEMIA OR OSTITIS OF THE MASTOID CELLS, NOR TO SCLEROSIS OF THE MASTOID PROCESS.

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Otology has done for the mastoid process what abdominal surgery has done for the right inguinal region, and to-day severe pain behind the ear suggests to the average sufferer and his friends the possibility of postaural section as surely as severe pain in the abdomen brings to their mind's eye the picture of an appendix ready for the knife.
The post-nasal space, the Eustachian tube, the middle ear, the mastoid antrum, the mastoid cells, are but links of one chain. The careful physician, knowing that the link next the invisible antrum is the visible middle ear cavity, asks first of all, in every case of postaural pain, what is the condition of the middle ear. And in inflammatory conditions of the mastoid antrum and cells, it rarely happens that the middle ear fails to furnish valuable suggestive information. It has been my fortune to have seen during the past few months a half dozen cases where either patient's physician fully expected me to "open the mastoid" for the relief of the severe pain present both subjectively and on pressure in the mastoid region, and yet they were cases where no operative measures were indicated. I cannot do better than report, as briefly as possible, the existing symptoms in some of these cases.

Mr. A.; aged, 32; had, when I first saw him, been suffering for several days excruciating pain in the mastoid region. He carried his hand to the side of his head as though to shield it from the wind and his head over toward his shoulder as though some heavy weight were dragging it down. The pain had slight remissions, although it never entirely subsided. There was no history of a head cold. The patient's chart revealed for the greater part of the day, slight elevation of temperature. The pulse showed nothing abnormal, nor did the tongue. The hearing and ear drum in the affected side were normal. The throat conditions threw no light on the cause of the pain. The Eustachian tube was open. The mastoid region, normal in appearance, was very sensitive to pressure. The patient asked me if I thought this pain might in any way be due to syphilis. He had, years before, had a sore on his penis, the nature of which had been the subject of dispute among his physicians. No after symptoms had appeared. I admitted the possibility, and while waiting for developments, prescribed the iodine of potash. There were no developments. The severe pain gradually grew less, and in three or four days had entirely disappeared. A few months later, the gentleman again consulted me, this time in regard to his throat which was the seat of extensive late syphilitic ulcerations.

The next case was that of a young negro woman who for four weeks had suffered tortures with pain behind the ear. Here again, at the time of examination, the throat, the Eustachian tube and hearing were normal. The drum membrane was normal save for a faint blush in the upper part. There was no history of a sore throat or head cold. There was no decayed tooth, and this point I have thought worthy of mention here, inasmuch among the negroes reflex otalgia is common and apparently as a rule, much severer than among the whites. This pain is referred to the ear and not the mastoid region. I have, however, seen reflex mastoid pain as its source osteitis of the angle of the inferior maxilla. In the case in question, the pain behind the ear had come on at night about four weeks previous to her visit to me. There was at the time I first saw her, no remission of pain day or night. The mastoid region, though normal in appearance, was so sensitive that the patient would not, willingly, submit to the slightest pressure over its surface. The patient's voice was that of a person whose palate is paralyzed. As in Case I, there was a slight elevation of temperature without, however, demonstrable quickening of the
pulse or any evidence of systemic infection. This case, also, was entirely relieved in a few days, under the administration of the iodide of potash. The palatal voice disappeared.

That we had in these two cases to deal with gumma of the mastoid, there can be little doubt, the pain being comparable to the severe pain of the syphilitic gumma of the meninges.

One who has given much attention to the details of mastoid disease always suspects at first glance, in cases of intractable mastoid neuralgia unattended by marked febrile disturbance of purulent discharge from the middle ear, some form of sclerosis of the process, provided the history of the case tells of repeated attacks of middle ear inflammation, or examination of the drum membrane shows extensive destructive changes. This sclerosing process, whether it result in complete eburnation or complete vacuozation of the mastoid cell region, is but an evidence that the vitality of this region has been hard hit. Where, however, the drum membrane is normal, the hearing normal, where there has been no history of recurrent middle ear trouble, the careful aurist in the presence of mere pain of the mastoid, no matter how severe, rightly tries other measures and tries hard to find the cause before he advises an operation.

The next two cases had symptoms so similar they may be considered together. In both the pain was caused by la grippe. Both patients were young. Both I was requested to examine to see if mastoid disease was not the cause of the severe, constant pain and tenderness in the postaural region. In Cases I and II the surface of the mastoid itself was hyper-sensitive on pressure. In Cases III and IV the pain, although referred by the patient to the region back of the ear, was found to be evoked only when the region along the posterior part of the upper insertion of the sternecleido-mastoid was pressed upon. In both of these cases, the temperature curves were erratic, showing at times several degrees of fever; in both there were throat and nose symptoms; in both, the pain behind the ear was severe and did yield to external applications; in both, it had continued several days before I saw the patients. In neither case was there any visible evidence of middle ear inflammation, the ear drums in both cases being normal in appearance, and the hearing normal. The point of greatest pain on pressure was just over the exit of the mastoid vein, along the posterior border of the process.

The first two cases had what might well be called the "mastoid expression," so commonly is it seen in cases of otitis acuta of the mastoid process, that is to say of mastoiditis commonly so-called. In neither of the latter cases was there present this expression which is made up of facial expression, position of the head and body—I cannot put it into words but it is sufficiently characteristic for one who has seen it several times to be able thereafter to suspect the nature of the trouble before he examines carefully either the middle ear or the mastoid region. In examining these last two cases, I noticed that on moving the patients' heads, they would sometimes complain of a sharp, sickening pain in the shoulder or in the clavicular region. I at once suspected the postmastoid pain was part of an affection similar to the common "crick in the neck," and that it was but one of the little figures in the kaleidoscopic picture la grippe offers for the entertainment of us medical folk. In both cases the pain disappeared along with the general trouble.
These two cases are worthy of a moment's further consideration. Suppose there had been, in addition to these symptoms, a purulent middle-ear inflammation. Every indication for opening the mastoid would have been present: Fever, evidences on the tongue and in the breath of systemic infection, tenderness on pressure, a running ear, severe, constant unyielding, subjective pain. Indeed, we might well have suspected involvement of the sinus, considering the erratic fever curve and the point of greatest tenderness on pressure. And I believe that it has sometimes happened that in just such cases, the mastoid has opened and, to the surprise of the operator, nothing found to explain the symptoms. In just such cases as these, I have no doubt, operation has, from time to time, been advised, the patient and his friends have been told that an operation offered the only hope of a cure—no operation was, however, permitted. The patient got well, and the specialist's word was ever afterward subject to a discount by patient and family.

The next two cases were both sent to me for operation. Both had cervical tic douloureux, an affection as excruciatingly painful as its first cousin, tic of the fifth nerve. Both occurred in old people, one in a lady sixty-two, the other in a negro man seventy-five years of age. The former case had existed for three weeks when I first saw her. Her history is as follows: Early one morning, about three weeks previous to her visit to my office, the patient noticed a soreness, both spontaneously and to the touch, of the left auricle, more especially along the helix. About a week later, a pain comparable to that of a severe "crick" in the left side of the neck and left shoulder and left side of the head from the vertex downward. This pain had been constantly present since, varying, however, in intensity, being paroxysmally much worse from five o'clock in the afternoon until five o'clock the next morning. When I first saw Mrs. L., the whole mastoid region was excessively sensitive to the touch. At times the pain seemed to center in the upper portion of the mastoid region, and then the patient would suffer excruciatingly. Examination showed a normal temperature, normal pulse, normal hearing and middle ear, normal external coverings of the mastoid—no history of old middle ear trouble. Furthermore, careful palpation of the mastoid region revealed spots where the pain on pressure was greater than at other places, suggesting the nerve branch origin of this pain. One or two similar spots were found on the side of the head away from the temporal bone. At times, I found on questioning, the pain was as great in the left side of the chest and shoulder as in the side of the head. Morphine had failed to give patient more than slight, temporary comfort. Salosylate of soda in frequently repeated doses in a few days afforded entire relief. Whether there has been any recurrence I do not know.

The second case, that of the negro man, aged seventy-five, came to the Eye Infirmary from one of the counties in the State. From the patient's account, the pain began a year before. The pain, according to his account, made its appearance, as in the case of Mrs. L., first in the helix. It gradually grew worse until now, the whole right side of the body, also arm and leg at times, took part in the paroxysms. One interesting fact was visible in connection with the case. The region of the helix, anti-helix and scaphoid fossa was thickened until it was two or three times the size of
the corresponding region of the opposite ear. It suggested the othematous thickening we sometimes see. The old man’s mind was not altogether well balanced, and a more definite history could not be obtained at one time. The case, however, is interesting as an example of cervical tic in which the severest pain centered about the mastoid region. In this case, as in the others, the hearing and mastoid appeared normal. The drum membrane was apparently thickened.

The pain in the mastoid which at times we find accompanying diffuse or localized otitis externa, all aurists are familiar with. At times, these cases keep for the moment, the question open as to whether or not we have to do with a complicating mastoid inflammation. For example: Miss A. has a chronic otitis externa, accompanied by a free discharge while the closed condition of the canal prevents examination of its deeper portions. A furuncle forms, the inflammatory swelling caused by which, spreads to the tissues over the mastoid. The skin gets edematous. The patient becomes delirious from the pain. If now the physician be called in for the first time, and is able to get from the patient’s mother only the facts that “the ear has been discharging for a long time offensive matter, and that this morning she got delirious,” a complete and satisfying diagnosis cannot be made at the moment. Fortunately, the history of the case and the conditions present, rarely fail to make clear the nature and extent of the trouble.

I merely mention this class of cases as introductory to the case of Miss B., whose mastoid was, for a long time a source of many failures on my part to furnish relief. Miss B. is an anemic, poorly nourished, sensitive, partially deaf old maid. She had paid in her mastoid for months—not an excruciating pain, but pain enough to be the source of considerable discomfort to her and her physician. The deafness was due to a slowly progressing otitis insidiosa which, as one of its accompaniments, had a thickening of the skin, including periosteum, of the external auditory canal, referred by her to the mastoid was due.

Of course, it is possible we may be dealing here with a sclerotic form of mastoiditis, and the pain may be situated in the antrum whose lining membrane is undergoing the same changes to be found in the membrane of the middle ear, changes sufficiently pronounced, in this case, to be the cause of the neuralgia; changes which, in another and healthier person, would amount to nothing more than a vague sensation of discomfort. I do not think so, however, for though the pain be referred by Miss B. to the mastoid, it can be increased by slight pressure on the skin of the posterior half of the external canal, especially in its deeper portions. As Miss B.’s health improves, the mastoid pain grows less and, at times, almost disappears; during the slightest ill health, the pain increases. Again, in this case, the pain may be hysterical in character. Several interesting cases have been reported where the mastoid has been opened for the relief of severe pain which yielded to no remedies that were tried; and as these cases were mostly in young women, and as the operation itself afforded no relief, they were denominated hysterical.

I must mention here, if only by way of parenthesis, an affection at times carelessly attributed to the mastoid as its source, an affection often as painful as obstinate. I have reference to rheumatism of the atlanto-axidian capsular ligaments. Careful examination will always reveal the location of the trouble; the history of the case will suggest its nature.
A FEW POINTS ON THE TREATMENT OF GENITO-URINARY DISEASES.

By G. C. H. MEIER, M.D., of New York.

Since the promulgation of the idea that most, if not all, affections of the urinary tract are due to the influence of bacteria, the antiseptic treatment has gradually supplanted the other methods. Much of the treatment has become local, and it has been sought by the use of injections and irrigation with antiseptic solutions to destroy the various organisms which are concerned in the causation of urethral and bladder affections. It is also the custom nowadays to resort at once to these local measures instead of, as formerly, awaiting the subsidence of the acute symptoms. The idea is that the less time that is afforded the germs to multiply and invade the deeper parts of the mucous membrane the quicker it is possible to cure the disease. On the other hand, it must not be forgotten that by the use of injections or irrigation, unless practiced with great gentleness, the inflammatory process may be increased and thus the germs afforded more favorable conditions for their growth. Many patients are rather reckless in the use of hand injections, and unless they are taught by the physician how to make them it will often be better to abstain from their employment until the inflammation begins to subside.

As regards the antiseptic to be selected, this is a matter of individual preference. Some succeed better with one drug, some with another. While there are many advocates of the Valentine irrigation method with permanganate of potash solution, there are others who are strongly opposed to its use. It is the same way with the many silver derivatives that have been introduced within late years. In spite of the claims made for them none has yet been produced that seems to be equal to nitrate of silver in efficiency, and the only reason for using them is that they are less irritating, and therefore less dangerous. Personally, I find little to choose between them. My own preference is for protargol, simply because I was led to give it a trial soon after its introduction, and have since found no occasion to change for any other drug of this kind. If the strength is adapted to the acuteness of the inflammatory process, there is practically no risk of producing irritation. Besides it seems to me that a remedy designed to destroy bacteria which does not manifest any reaction whatever upon the tissues is liable to be inert; at least this has been the experience with all the active antiseptics in our possession.

My chief object in this brief paper, however, is to voice the opinion that in the endeavor to devise and perfect local measures the internal treatment has been too much neglected. There was a time, and that not so long ago, when diseases of the genito-urinary organs were chiefly treated by means of balsams, such as copaiba, and cubeb; but the large doses in which they were employed were responsible for many a case of chronic gastritis or even disease of the kidneys. I believe, however, that if carefully used in small doses there is still a considerable field for their employment in chronic affections of the urethra and bladder. The oil of sandal wood, if care be taken to secure a good quality, is certainly prefera-
ble to cubeds or copaiba, although sometimes the addition of cubeds to the oil seems to increase its efficiency.

A point of great importance in the treatment of urinary affections is to get the patient to take an abundance of water. This flushes out the entire urinary tract, and also dilutes the urine, rendering it less irritating. If carbonated waters are preferred it is well to advise the patient to let some of the effervescence subside before drinking them.

In subacute and chronic urethral and vesical troubles I have made considerable use of the formaldehyde preparations, and especially urotropin in cases of chronic cystitis in which the urine readily undergoes fermentation and contains pus and mucus. It is remarkable how the urine often clears up after a few doses of this remedy. On the other hand, I have noticed that in some cases it gives rise to quite some irritation, especially if it is to be administered in large doses, and hematuria and albuminuria have been reported from its use. Lately, I have become acquainted with another internal formaldehyde preparation, which is said to be even more efficient than ammonium formaldehyde, and is certainly more agreeable to take and better tolerated. Although my experience with this drug, helmitol, is not sufficiently extensive to warrant a detailed report, I am led to think quite favorably of it and deem it worthy of the attention of the profession. An excellent review of this urinary antiseptic occurs in American Medicine, of March 21, which I quote verbatim, since it gives a good idea of its chemistry and physiological properties:

"It is generally conceded that urotropin is one of the most valuable if not the most powerful urinary antiseptic we have. It owes its value to its decomposition with the liberation of free formaldehyde. Unfortunately, however, this decomposition is exceedingly slow in alkaline urine, so that the remedy fails in precisely those cases in which its action is most needed. Goldschmidt (Therapeutische Monatshefte, xvii, p. 36, 1903) describes a new form of this remedy which is constructed with the idea of overcoming the difficulty just named. Chemically, it is methylene citrate of urotropin, and is marketed under the name of helmitol. The addition of an alkali to its solution in a test-tube brings about the liberation of formaldehyde. The presence of free formaldehyde was also demonstrated in the urine after its internal administration. Goldschmidt found that beside the free formaldehyde a certain proportion of the antiseptic occurred in the urine still in chemical combination. It is very possible that this union possesses antiseptic properties. Helmitol has the advantage over urotropin of being more soluble, while its price is not excessive. In a large series of cases of cystitis, prostatitis and similar diseases, especially in those cases with a tendency toward alkaline decomposition, Goldschmidt found the remedy in doses of one gram two or three times a day of great value. He was unable to observe any effect from the remedy in cases of phosphaturia. The same is true of infectious diseases of the urethra."

I subjoin a few histories of cases to illustrate its action as far as such has been observed by me.

Case I.—J., 50 years old; chemist; addicted to alcohol; suffering from symptoms of enlarged prostate; frequent tenesmus, especially at night; urine slightly alkaline and containing pus and mucus. Examination of the
urine showed considerable granular casts. An unfavorable case for operation. The patient had been using a catheter without antiseptic precautions. He was now directed as to its proper use, and helmitol administered in doses of ten grains, four times daily. The urine gradually cleared up and the tenesmus became less marked, and although at present the patient is still compelled to get up once or twice at night, he is very much improved. The drug did not appear to have any effect upon the co-existing kidney disease.

Case II.—M. S.; aged, 32 years; subacute urethritis. The patient had been doctoring himself, using an injection prescribed by a druggist. When seem by me he complained of frequent, painful urination, finding it difficult at times to hold its urine. Examination showed this to contain an abundance of mucus and pus. Owing to the marked irritation present it was thought best to abstain from any local treatment, and the patient was directed to drink an abundance of plain water, and helmitol prescribed in 15 grain doses, three times a day, in a goblet of water. A rapid improvement occurred, the urine becoming less turbid on the second day, and was almost clear at the end of a week. Deep injections with protargol solution were now begun, the helmitol being reduced to 10 grains, three times a day, but discontinued at the end of another week. A cure resulted at the end of four weeks.

Case III.—M. A.; aged, 28 years; gave a history of three attacks of gonorrhea, the last of six months’ duration, which had failed to yield to the former treatment. There was a slight gleety discharge, and the patient complained of considerable irritation in passing his urine. The urine was turbid and strongly alkaline. Helmitol was prescribed in doses of 10 grains, four times daily, and within the next three days the urine began to clear up, and at the end of a week contained only some shreds, while the irritation on micturition had completely ceased. The drug was now discontinued and local treatment resorted to, under which he made a complete recovery.

Case IV.—C. L.; 50 years old; complained of frequent and painful urination, which she ascribed to catching cold. She was of a rheumatic type and a hearty and indiscriminate eater. The genital organs appeared normal. The urine contained an abundance of mucus and some pus. She was advised to lie down as much as possible, drink plenty of water, and remain on a milk diet for a week, while helmitol was administered in 10 grain doses, three times daily. At the end of a week she reported feeling much improved, and the urine was found perfectly clear. The drug was continued in ten grain doses for another week, and the patient admonished to pay more attention to her diet.

244 West 122d street.
THE REPORT OF A CASE OF POLYMAZIA.

By JAMES M. CRAIGHILL, M.D., of Baltimore.

The patient in this instance was a colored woman, who came into my hospital ward on the 2d of March, 1903; age, forty-five; married; was suffering with a specific ulcer on the tonsil. She was of very low mental calibre, and when I questioned her as to the number of children she had she could not remember whether it was seven or eight. In the course of the usual physical examination I found under each arm a tumor about the size of a lemon and the tip surrounded by an areola, which felt like ordinary mammary gland tissue. During her nursing period she said they contained milk which exuded from them freely and at that time they would be three or four times the size they were when I saw her. There is no history of a similar condition in any of her family.

A case has been reported where the two extra breasts were as large as the normal ones and situated on the upper part of the abdomen. A supplemental nipple, a short distance from the normal ones, is a more frequent anomaly, several cases of this kind having been seen. In one family the condition was hereditary. There were originally in man five mammary glands, two at the center of the thorax, two in the axillary space and one about the umbilicus. Sanderson saw five nipples in these different situations in a man. Some writers think that the condition indicates a reversion to a lower type than man. This woman was, as I have said, of a very low type of the human species.

According to Gould and Pyle, polymazia is much more frequent than is generally supposed, seventy cases in females and twenty-two in males having been collected. The general site is the natural breast, then in the axillary spaces, and then in various parts of the body. They may be located in the vulva. A case is reported of a man with six nipples, three on each side, as in a bitch or sow. The unfortunate Anne Boleyn, wife of Henry VIII, had six toes and six fingers and an extra breast. We know that curious cases of lactation in old women occur, brought about by giving their breasts to children to sooth them. A case is reported of a grandmother of sixty-eight who nursed numerous grandchildren in succession. The condition is not altogether confined to the female sex. A noted case occurred in Baltimore, where a negro man had been wet-nurse to his mistress’ children, and the case was exhibited at the University of Maryland many years ago. Cases have also been reported of milk in the breasts of very young children.
BOOK REVIEWS.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene and other topics of interest to Students and Practitioners by leading members of the medical profession throughout the world. Edited by A. O. J. Kelly, A.M., M.D., Philadelphia, Pa., U. S. A. With the collaboration of William Osler, M.D., Baltimore; John H. Musser, M.D., Philadelphia; James Stewart, M.D., Montreal; John B. Murphy, M.D., Chicago; Thomas M. Rotch, M.D., Boston; John G. Clark, M. D., Philadelphia; J. W. Ballantyne, M.D., Edinburgh; James J. Walsh, M.D., New York; John Harold, M.D., London; Edmund Landolt, M.D., Paris; Richard Kretz, M.D., Vienna; with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic and Brussels. Octavo; 300 pages per volume. Cloth. $2.00 per volume; $8.00 per year. Half leather, $2.25 per volume; $9.00 per year.

Volume I, of the thirteenth series of this excellent work, is replete with articles of great practical worth. In such a wealth of good things it is hard to choose special features for mention; however, three papers especially commend themselves to the reader’s attention: “Aneurism of the Descending Thoracic Aorta,” by Dr. William Osler; “Primary Intestinal Tuberculosis,” by Dr. Frank Billings, of Chicago, and “Nauheim Methods in Chronic Heart Disease,” by Dr. Thomas E. Satterthwaite, of New York. “The Progress of Medicine During 1902,” by Drs. Watson and Cattell, is both instructive and interesting.

To all who wish a reference library, an encyclopedia, a practical postgraduate course in clinical work, and a book filled with all that is fascinating in medical reading, “International Clinics” is recommended.

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OBSTETRICS; one of the volumes in the Practical Medicine Series of Year Books, issued monthly by the Year Book Publishers, 40 Dearborn street, Chicago, under the editorial charge of Dr. Gustavus P. Head. Price, per volume, $1.25. Price of the series, $7.50.

This work, edited by Dr. Reuben Peterson, of the University of Michigan, is intended for the busy physician who has no time to consult more pretentious works on the subject. It is admirably suited for the purpose and presents the object matter in a clear and intelligent manner. The book is divided into four divisions: pregnancy, labor, the puerperium and obstetric surgery, each with the necessary subdivisions. Dr. Peterson has eliminated all unnecessary theory, with the result that every page is filled with practical hints. The Year Book Publishers are to be congratulated on getting out such a helpful series and one which appeals so strongly to the hard-worked medical man.
EDITORIAL.

MEDICAL SOCIETY OF NEW JERSEY.

The 137th annual meeting of the Medical Society of New Jersey will be held at the Coleman House, Asbury Park, June 23-25. Among the more important business will be the consideration of the proposed new Constitution and by-Laws, which were published in full in February Gaillard's. The program is long and interesting, and from the topics of the papers to be read, should prove highly profitable to those in attendance. A report of the meeting will be found in Gaillard's for July.

CONCERNING "SCHOOLS" OF MEDICINE.

"That there exists in the minds of very many persons in all communities a prejudice against, and an antipathy to, rational, scientific medicine cannot be denied, and yet many of these same persons would admit—do constantly admit—that humanity owes more to modern medicine than it does to any other department of human knowledge. Why is this so? We believe that it is largely because the majority of people still cherish that old delusion that all medicine is dogmatic and sectarian. That there are 'schools' and 'sects' among some of those who practice the healing art, is unfortunately true, and this fact makes it hard for the people to understand that all physicians do not belong to
or believe in some one of these ‘schools.’ Those who founded and who still profess to believe in the homeopathic delusion have done much to reinforce and to maintain this belief in schools of medicine. We hear on all sides, men talking learnedly of ‘homeopathy,’ ‘osteopathy,’ ‘hydropathy,’ ‘vitopathy,’ ‘allopathy.’ The first question asked concerning a physician is apt to be ‘what school does he belong to?’

“The misconception has become so firmly rooted that even some physicians who do not belong to any of the actual schools of medicine which do exist, will permit it to be said of them that they belong to the ‘regular school’ or even, though more rarely, to the ‘allopathic school,’ which does not exist. Imagine a sectarian engineer, astronomer, mathematician or electrician! Scientific medicine is none the less founded upon truth, none the less abhorrent of sects and schools, than are the other sciences, and yet while the absurdity of a sectarian astronomer, mathematician or engineer would be at once apparent, people do not see the absurdity of a sectarian practitioner of medicine. We even hear of homeopathic surgeons and homeopathic oculists; whether osteopathic oculists have yet come into being or not we do not know. Can anything be more absurd than the sectarian fitting of glasses or performing of surgical operations? It surely ought not to be impossible to make the individual of average intelligence understand that medical science, while not an exact science, is a true science, and that an established fact in medicine is a truth which has been demonstrated by scientific methods and that it belongs to no school or sect, but to the whole world. When the people thoroughly understand these things, ‘schools’ of medicine will cease to exist, and there are not wanting many signs that ‘schools’ are passing rapidly. We should be glad to see some broad, influential newspaper discuss this subject intelligently, for medical journal and medical society discussions do not reach the people.”

Dr. Burnside Foster never spoke more truly than when he wrote these words. The modern practitioners of medicine are physicians, not ‘pathists. Sectarianism is a relic of the dead past.

PROGRESS IN CHEMISTRY.

At the recent session of the Chemical Congress, Professor W. Markwald, of Berlin, showed the electro-chemical and physical section a smudge of dark powder on a piece of paper, which was the first time that any of those eminent scientists had seen the metal, Polonium, discovered by Professor and Madame Curie, of Paris. The latter doubted whether Polonium was a primary element or related to bismuth, but Professor
Markwald demonstrated that it was indeed a primary element. He exhibited a bit of the metal, weighing 15-100 of a grain, which was produced from two tons of uranium at a cost of $75. It is more thinly distributed in uranium than xenon, the most rarified gas, is in the atmosphere.

Professor Markwald gave a marvelous exhibition of the powers of his speck of Polonium. It intercepted a strong current of electricity passing through the air from the generator to the receiver, the air ceasing to be a conductor for the flashes. The room was then darkened and pieces of barium, platinum and zincblende, placed near the Polonium, glowed with a bright, greenish light. The assemblage of chemists were thrilled with astonishment. It appeared to be a miracle.

In the section of organic preparations, Professor Proskauer, of Berlin, read a paper on the sterilization of drinking water with ozone and on ozone waterworks, the German electricians having succeeded in cheaply producing a concentrated solution of ozone. The speaker, with Professors Chalmueller and Prall, of the Imperial Health Office, made exhaustive experiments with the solution in purifying water. The experiments included tests with water artificially impregnated with the deadliest disease germs, like typhus, cholera and dysentery. Such water was pumped through the so-called "ozonizing tower," and then rigidly analyzed. All the germs were found to be killed, whereas the ordinary method of sand filters left the germs living. Moreover, the water was greatly improved in quality through the increase of oxygen from the ozone.

Professor Proskauer said the ozonizing plant was cheaper than the sand filtering system, usually used in city water works, hence, the time had come for the general introduction of ozone plants. The town of Weisbaden, added the Professor, already has one of these plants which sterilizes 250 cubic meters of water hourly.
ABSTRACTS FROM THE BEST JOURNALS.

MEDICINE AND THERAPEUTICS.

The Climatic Aspect of the Nauheim Treatment of Diseases of the Heart.

The Nauheim treatment should be adapted to climatic conditions. The original procedures have not proved satisfactory in England which has led to certain modifications, reports Dr. Thorne in Lancet.

In the case of dilated irritable heart with vertigo, palpitation, dyspnea and cardiac pain, the bath should have a duration of three or four minutes and a temperature of 97° or 98°. It should contain four or five pounds of Brüttwich salt and five to six ounces of calcium chloride. The pulse is carefully noted before, during and after the bath. There is usually a diminution in frequency and increase in volume, and a lowering of tension. The patient goes to bed for an hour after the bath, and is not allowed to read, write or talk. A bath of similar strength, temperature and duration is given the following day. On the third day the Schott exercises are usually given instead of a bath, the patient resting for a minute or two between each exercise and lying down for half an hour after them.

The baths are given on two consecutive days, and the exercises on the third day, for the first week or fortnight, according to the severity of the case and the results produced on the heart's action. After the first week or fortnight, baths are given three days in succession, with an interval for exercises on the fourth day.

If the patient does not have a good reaction of the circulatory system, the strength of the baths is increased by one pound of sodium chloride and one ounce of calcium chloride every second bath up to the tenth or twelfth. To the tenth or twelfth bath is added half of one of Sandow's effervescent packets, at the same time reducing the sodium chloride by about two pounds and the calcium chloride by about two ounces. If this change, proves satisfactory the effervescence is increased to three-fourths of a packet at about the sixteenth bath, and a whole packet at the twentieth. The number of baths taken in a course varies from twenty-five to thirty, a greater number being likely to weaken the patient. At the end of the course the patient is having a bath containing from twelve to fourteen pounds of sodium chloride, from fourteen to sixteen ounces of calcium chloride, and a box full of Sandow's tablets. The time of the bath should be from three to four minutes to begin with, increased about one minute for each bath.

The exercises should be given by one who has had sufficient experience to note arterial tension and the character of the pulse. It is bad practice to give a bath and the exercises on the same day. The exercises are by no means as important as the baths, and unless an experienced operator can be obtained they should be omitted.

In general care of a case no definite rules can be laid down. The treatment must be adapted to the peculiarities of the individual case, but all business and social engagements should be given up and the entire regimen of the patient should be directed by the physician.

By this treatment an organically diseased heart cannot be converted into a sound organ but a dilated and enfeebled heart with flabby muscular walls and imperfect contracting powers can be cured by this method.

Notes on Some Recent Advances in Ocular Therapeutics.

Cecil E. Shaw says, in Medical Press, that in eye work adrenalin has two distinct uses; one is to Blanch the conjunctiva and so lessen bleeding in operations involving the cutting of that membrane, the other to reduce great conjunctival injection and so promote absorption into the eye. Acouin is a less well-known drug; its chief use in eye work is an addition to solutions for subconjunctival injections, of which it greatly lessens the pain. Protargol is less painful than the old solutions of silver, and not being precipitated by albumin it penetrates to all parts of the lacrymal sac. In troublesome cases of chronic conjunctivitis, however, the old nitrate of silver solution is, on the whole, more effective. Cuprol is well spoken of as a substitute for sulphate of copper, but the author has as yet had no personal experience with it. Euphthalmine is the most satisfactory mydriatic when we wish to dilate the pupil for ophthalmoscopic examination with the smallest possible disturbance of vision. The only disadvantage is its expense. Mydriasine has just been brought out by
ABSTRACTS.

Squire. The author has had a sample for three days only, and so cannot give an opinion on it, but says that certainly one drop of a one-per-cent. solution causes full mydriasis in thirty to forty-five minutes, and in a case of suspected iritis is acted excellently, showing an adhesion of the iris to the lens capsule. Aspirin seems to act very well in affections of the eye due to rheumatism. Jequeritol and Jequeritol serum are said to be of use in cases of granular conjunctivitis with pannus.

Excretion of Sodium in Renal Disease.

W. P. Herringham, in the Lancet, states that there is no connection between the toxicity of urine and uremia. The latter condition is not due to the retention of normal products, but to something abnormal. He has made a study of a considerable number of cases in reference to the potassium and sodium excretion in patients suffering from chronic renal disease. The greatest variation was in the excretion of sodium. In patients who died there was found a great, and in some cases a complete, retention of sodium. In every one of the fatal cases the sodium was nil or very small, and it was not so in five cases which did not end fatally. He has made twenty analyses in nine cases of diffuse or parenchymatous nephritis, and of these, two were fatal; both showed complete absence of sodium from the urine on one or more days.

Variations in Composition of Human Milk.

The average composition of human milk, as shown by 117 analyses, is: Fat, 2.91; sugar, 7.01; proteins, 1.34; ash, 0.13; total solids, 11.39; solids not fat, 8.48; say Drs. Sharpless and Townsend in the Boston Medical and Surgical Journal. There are wide variations from the average in milk from the same individual at different times. There are marked variations in the average composition of milk from different individuals. The average composition of human milk does not vary to any marked extent at different periods of lactation. During the first lactation the milk, on the average, is weaker in fat and proteins, but stronger in sugar than in subsequent lactations. These differences may or may not be due to age.

Physics and Therapeutic Value of Cathode and Ultraviolet Rays.

Roswell Park, in the Medical News, gives most exhaustive and philosophic discussion on the origin, nature and therapeutic value of cathode and ultraviolet rays. As to the therapeutic value he says that is as yet undetermined; it is yet too early to report cases. This much, however, has been determined with reference to the rays in question: 1. They afford methods of treatment for extremely new-growth of limited area and superficial character which, while not exactly certain, are extremely promising. 2. They not only cause no pain, but tend to relieve pain, both superficial and deep, in a most pleasing and satisfactory way. 3. They are adapted to cases which can hardly be submitted to any other method of treatment, and they afford more hope in delayed or inoperable cases than does any other method of treatment. 4. It will be found that the odor of putrefaction may be swallowed by their use and the putrefying process itself checked. 5. Burns and intense dermatitis, so frequently noted when the treatment first came into vogue, may now be almost certainly avoided. 6. More than this, they afford a supplementary method of treatment after operation, by which the benefits of the same may be enhanced and enlarged. 7. It is not necessary to intermit such work as the patient may be engaged in, in order to carry out the x-ray or phototherapeutic method of treatment.

Pilocarpine in Strychnine Poisoning.

Dr. J. D. Batson, in Philadelphia Medical Journal, writes of a two and a half year old boy who swallowed strychnine, the quantity being unknown. Medical assistance reached him one hour later. The effort to evacuate the strychnine before the physician arrived was unsuccessful. The child's stomach contained undigested food, hence the absorption of the strychnine was not rapid. Apomorphine was given hypodermically, which soon evacuated the stomach. Tannin was given to produce an insoluble tannate. Notwithstanding the administration of chloral hydrate the convulsions increased, became stronger and recurred each two minutes. The convulsions became clonic, and death was imminent. One-twenty-fourth of a grain of hydrochloride of pilocarpine was then given, which was followed by a lessening of the convulsions, and after a second injection they ceased entirely, the patient making an uneventful recovery.

Bacteriological Studies in Scarlatina.

The bacteria obtained from cultures from the skin, epidermal scales, and the surface of the tonsil in cases of scarla-
tina are the same as those found in the same locations in health, and not one of them is constantly present except the streptococcus in the throat, says Dr. G. H. Weaver, in American Medicine. Because the numerous cocci which grow in such cultures, and which appear in groups of two and four or bunches of the same under the microscope, it is impossible to identify them, except by a complete study in pure culture. Cultures made by inexperienced persons, or by those who do not appreciate the importance of avoiding the tongue, are especially apt to contain large diplococci or sarcine. The streptococcus is present upon the tonsil of scarlatinal patients in enormous numbers in almost all cases.

Tobacco Deafness.

According to Wyatt Wingrave, in Medical Press, cases of deafness due to tobacco-smoking may be classified into three groups: Mechanical, or pneumatic; irritative, or catarrhal; toxic, or nerve-deafness. In the group of nerve-deafness the author brings forth seventeen cases, and in regard to them he emphasizes the following points: They were all marked cases of nerve-deafness (unattributable to other causes) occurring in heavy smokers. The loss of low tones in 50 per cent. suggests an auditory equivalent for a recognized ocular lesion. There was definite scotoma in four cases and impaired sensation of vision in eight of them. The disease was symmetrical. Eighty per cent. showed marked improvement on abstinence from tobacco, and, with supplementary drug treatment, three were cured.

Experimental Study of Lithium.

Dr. C. A. Good contradicts many of the accepted notions as to the value of lithium in the treatment of gouty and rheumatic conditions, in the American Journal of Medical Sciences. The remedy was introduced by Garrod, who found that it was an excellent solvent for uric acid and urates, and who supposed that by giving the remedy the deposits in and around the joints would be dissolved and further deposits prevented. Ure found that a urinary calculus composed of alternate layers of uric acid and oxalate of lime, when placed in a solution of four grains of lithium carbonate and one ounce of water, and maintained at blood heat for five consecutive hours, lost five grains in weight. From this it was argued that it would be an easy matter to entirely remove them from the bladder by injections of lithium solutions. In practice this method was found inefficient, and extra care must be exercised; if sodium phosphate is present an insoluble lithium phosphate is formed.

As a result of the writer's experiments, he finds that lithium is excreted by the saliva and into the stomach and bowels, and by the urine. The greater amount is excreted by the kidneys, though more appears in the stomach and bowels when nausea, vomiting and diarrhea have been produced. It can usually be demonstrated in the secretions within ten minutes after a hypodermic injection, though its excretion proceeds slowly. Lithium salts possess no diuretic action that cannot be accounted for by their salt action. They render the urine alkaline and act like other alkalies. Dilute solutions of lithium salts do not dissolve uric acid or urates.

The Treatment of Empyema by Continuous Aspiration.

W. Van Hook gives the details of two cases in J. A. M. A. He advocates the plan of irrigation suggested by Perthes, which consists in making an adequate chest opening, resecting a rib if necessary, and then maintaining continuously a pressure less than that of the atmosphere in the pleural cavity, so that the lung may be made to approach more rapidly to the chest wall. A pump is used which is actuated by the running water of the h-drant. There must be constructed a proper cover for the wound; then there must be a continuously acting air pump to remove the air from the pleural cavity, and finally there must be a collecting vessel supplied with a manometer. The mode of construction of all these pieces of apparatus is detailed by the author and his directions must be consulted by those interested. The entire outfit can be provided at a cost of only a few dollars.

Van Hook quotes Perthes as saying that in all recent cases the lung becomes distended in a few days while the secretion diminished slowly and the healing of the space remaining after the removal of the drain occupied a considerable time. This is explained by the statement that a certain time is required for the death of the pneumococci and streptococci imbedded in the superficial layers of the pleura.

Treatment of Typhoid with Acetozone.

Frederick G. Harris says, in Therapeutic Gazette, that many patients were given acetozone, but with much irregularity on account of many contributory causes; dis-
like of the odor and taste of the solution; resistance of ignorant patients; lack of persistence on the part of overworked attendants, due to crowded wards caused by the epidemic. Those patients who are given the drug early, often and regularly show the best results of this treatment. What Virchow calls the "brutal force of figures," cannot but convince anyone that acetozone lowers the temperature, shortens the duration of the fever, and lessens its toxic symptoms more than our better known treatments. From the information gained in watching a series of one hundred and twenty-eight cases of typhoid fever, the author believes that when the cases can be seen during the first week of the illness, and given large amounts of acetozone solution regularly and often, assisted by a gentle laxative, the temperature will return to normal in from ten to twelve days.

Hypodermics of Atropine in Torticollis.

Dr. C. S. Potts, in University of Pennsylvania Medical Bulletin, reports that a man 30 years of age, a roofer by occupation, had had spasmodic torticollis for the past year. It had developed gradually, and was made worse by the use of other muscles. The spasms were clonic, the point of the chin being drawn to the left, and the head backward. He was first given 1-100 grain of hydrobromate of hyoscine together with bromides and the galvanic current, but with no improvement in the trouble. Then hypodermic injections of atropine were made into the sternomastoid muscles in the back of the neck, the dose being increased from 1-100 to 1-45 grain. At the end of three weeks there was a marked improvement, and he remained comparatively well for four months. There was then some return of the trouble, after which the treatment was again given, with the effect of further improvement so that he could return to work.

SURGERY.

Primary Tuberculosis of the Breast.

W. S. Schley reports one case in Annals of Surgery, and gives an elaborate review of the literature of the subject. His patient was a woman of thirty-two years. Family history was negative and she had nursed five children without any mammary trouble. Eight weeks before admission to hospital pain was felt in the right breast, followed three weeks later by a small lump in the upper and outer quadrant. Two weeks before admission it began to grow rapidly and became very painful. Chest examination was negative. The lump was not tender, skin was not adherent. The breast was amputated and the axilla cleared out. The breast was filled with a sort mass, from which radiated connective tissue strands. The growth closely resembled a scirrhous carcinoma. Under the microscope a moderate amount of adenomatous tissue was visible. There was also abundant infiltration of the connective tissue with small round cells, and in places distinct tubercles with giant cells and central necrosis. The whole of the tumor was diffusely infiltrated with these evidences of tuberculosis, but there were no large cheesy masses and no other evidences of tuberculosis than those given above. The tubercle bacilli were demonstrated in stained sections of the tumor. The axillary lymph nodes were perfectly normal. Two weeks after the operation the patient was given an injection of seven milligrams of tuberculin, but showed no reaction. As a control to this test, three other known cases of surgical tuberculosis were given each six milligrams from the same dilution and gave typical reaction.

A Case of Arterial Occlusion and Gangrene.

A. Dunlop had a patient, a retired army officer, of fifty-three years, who had suffered for some time with pains in the foot suggestive of gout, and at other times presenting the local syncopal and asphyxial conditions seen in Raynaud's disease. In course of time evidences of gangrene appeared in two of the toes, together with occasionally symptoms suggestive of septic poisoning. The affected parts were removed with temporary benefit. Finally a good share of the foot became gangrenous, and was removed by section through the fourth metatarsal bone and disarticulation of the fifth at the tarsal end. Some months later obstruction appeared in the right femoral vein. There was pain in the groin, the stump of the foot became swollen and purple, and there were paroxysms of severe pain in it. The whole leg was edematous and the protruding bone in the stump became inflamed and bare. A fortnight later a similar attack took place on the left side, and it was over a month before both legs had recovered, and even then there were frequent pain and great tenderness in the stump of the right foot. In spite of the fact that the condition of the arteries could not be positively learned, and though perhaps the possibility of slow-
forming thrombus in atheromatous or sclerosed vessels could not be wholly excluded, the author was inclined to regard the case as one of Friedlander's arteritis obliterans.—Lancet.

The Electrothermic Angiotribe in Varicocle.

Dr. O. Horwitz reports the use of the instrument in Phila. Medical Journal. In the treatment of varicocle there are two methods—the subcutaneous and the open operation. The introduction of aseptic surgery has led to the almost universal adoption of the latter. A means by which the veins can be destroyed without the application of a ligature is desirable. The electrothermic angiotribe devised by Downes is a safe method of dealing with enlarged veins. By it infection is prevented and there is no possibility of the formation of thrombus. Downes' instrument offers the following advantages over the simple angiotribe suggested by Freeman: A more scientific, less crude and less dangerous method than that depending on violent traumatism in order to produce hemostasis is substituted; there is less danger of secondary hemorrhage and from thrombus; the operation is not followed by pain; the instrument is not conducive to the production of orchitis, a condition attending operations in the vicinity of the commonly attending operations in the vicinity of the cord.

Primary Sarcoma of the Appendix.

A case of this nature is reported by P. Peterson, in Practitioner, his patient being a man of thirty-nine years with the usual history of pains in the right iliac fossa coming on at intervals, but causing no vomiting. The patient was seen in a severe attack of pain with slight fever and a mass distinctly appreciated in the fossa by palpation. A few days later acute symptoms had subsided, the abdomen was opened and the appendix exposed. It was found much thickened, firm to the touch, and bound down by adhesions posteriorly, while the omentum was coherent to its apex. The appendix was also somewhat thickened for a radius of about one-quarter of an inch round the attachment of the appendix. The adhesions were separated, and the appendix, together with the thickened part of the appendix, was removed. The opening was then closed. The patient never rallied from the operation, and died a few hours later.

Careful post-mortem examination failed to show any trace of tumor formation elsewhere, and the part of the appendix that remained appeared healthy. The appendix on removal was bent almost to a right angle and measured 16.5 cm., along the larger curvature, and 10 cm. in circumference at the thickest part. On microscopical examination the increase in bulk was found to be due to a round-celled sarcoma infiltrating all the coats with the exception of the peritoneal. The mucous membrane had almost entirely disappeared in parts, over the bases of the glands remaining. The neoplasm had evidently commenced toward the apical part of the appendix and extended along the walls toward the cecum; the small part of the latter that was involved showing very little infiltration.

Idiopathic Dilation of the Esophagus.

R. Sievers reports the case of a man who had a peculiar difficulty in swallowing, dating back to earliest childhood. The food would evidently accumulate in the esophagus, causing an oppressively painful sensation in the chest. This could only be relieved by pressing the food into the stomach, to accomplish which extraordinary efforts were necessary. Various methods of examination showed that the dilation was situated at the lower end of the esophagus, and had a capacity of 1 liter (2 pints). It was not a diverticulum, but was a spindle-formed enlargement. The sac had no digestive powers. The stomach was normal. There was no indication of tumor or aneurism causing the obstruction. Spasm of the cardia was excluded by the non-intermittent character of the condition, and the total absence of any evidences of nervous disorder to account for the spasm. The only possible explanation seems to be that of congenital malformation.—Zeitschrift Klin. Med.

Acquired Diaphragmatic Hernia.

F. Lucksch reports a case of acquired diaphragmatic hernia in a 75-year-old woman, who for some time had suffered from an umbilical hernia. The latter became incarcerated and was relieved by operation. Several days later the patient died suddenly. Autopsy showed the presence of a hernia in the right half of the diaphragm. The latter had bulged upward and formed a sac about twice the size of a fist. It was lined with peritoneum and contained the ascending colon. Lucksch considers this a rare condition and one that occurs in very old people. The author recognizes two varieties of diaphragmatic hernia. In one there is a congenital defect of the muscle layer of the diaphragm, and in the other the struc-
ture of the diaphragm is not injured, the hernia being caused by intra-abdominal pressure.

**Exploratory Puncture in the Diagnosis of Abdominal Hydatid Cysts.**

R. Torres, in La Semana Médica, considers puncture of abdominal hydatid cysts dangerous for two reasons, namely, that infection may occur, and symptoms of intoxication may arise. The author states that the hydatid fluid is completely aseptic, but that it is extremely sensitive to infection; hence, despite the most careful sepsis and antisepsis, infection is prone to occur in puncture of the cyst. He quotes the statement of Posadas, that in the large number of cysts treated by him, those only which had been previously punctured contained a turbid fluid, while the fluid of the non-punctured was perfectly limpid. Torres holds, further, that the special danger of hydatid cysts does not depend upon the micro-organisms within the fluid, but rather upon the toxicity of the fluid itself; Morusson and Schlagdenhoffer having demonstrated that at certain periods of the cyst's evolution ptoamines are developed that give rise to toxic symptoms in the event of a leakage of the fluid into the peritoneal cavity. The author believes that a single drop of the fluid reaching the peritoneum is sufficient to give rise to such toxic symptoms; and such an accident he thinks practically inevitable in the withdrawal of the syringe after puncture of a cyst; having demonstrated through puncture of a bladder distended with water, that some portion of its contents invariably escapes as the syringe is withdrawn. A case in which a well-nigh fatal peritonitis developed immediately after exploratory puncture, is cited; and this unfortunate result, together with the findings of the clinicians quoted, has made the author feel that exploratory puncture should be proscribed, and that a laparotomy is to be preferred as affording a safer means of diagnosis and an opportunity for immediate radical treatment, should this be found necessary.

**Cancer of the Lips.**

In a large experience Sir Thornley Stoker has not found evidence to show that epitheloma of the lips is due to an inherited disposition, but he states positively that the use of the pipe is the exciting cause of lip cancer in almost every case. Irritation by faulty teeth is a factor to be considered but it is doubtful if syphilis is of importance. In over 350 cases only 3 were feminine and they were assiduous smokers. In the diagnosis of cancer of the lip only two conditions can be confounded with it—sarcoma and a syphilitic sore. Surgical treatment is much the same as during the past few decades. One great lesson has been learned, the propriety of the disuse of caustics and pastes of all kinds. Early operation is simple and successful and rarely followed by recurrence. If accompanying disease of the jaw and its soft coverings be extensive operation is best left undone. Lymphatic involvement alone should not prevent operation. As to the method of operating, Stoker strongly advises that all intricate cuttings and elaborate movement of flaps should as far as possible be avoided and the operation, however extensive, made as simple as may be. The more elaborately cosmetic the operation the more likelihood there is of recurrence.—Practitioner.

**A Case of Painless Amputation of the Leg After the Intraneural Injection of Cocaine.**

John H. Gibbon, M.D., in Philadelphia Medical Journal, says he is an enthusiastic believer in this method of local anesthesia, in properly selected cases, but is not an extremist in his advocacy of its use. If the technics of infiltration, as described by Matas, is carefully carried out failures should be few. At the present time, local anesthesia, of the kind referred to in this paper, should be limited to those cases in which a general anesthetic is contraindicated. The method is specially adapted to emergency hernia operations. The work of Crile in this field has been of great importance. A warning is needed for those unfamiliar with the method. Before trying the method in the more extensive operations one must have learnt to use the method successfully in the smaller ones. The solutions of cocaine employed must be freshly prepared and sterile, and the technics must be perfect. The case the author reports follows: A man, aged 50 years, with extensive tuberculous disease of the ankle joint and bones of the tarsus, presented himself for treatment. His general condition made amputation desirable, but contraindicated the use of a general anesthetic. Fifteen minutes before operation he received one-quarter of a grain of morphine and a one hundred and fiftieth of a grain of atropine hypodermically. The sciatic and anterior crural nerves were then exposed by infiltration anesthesia (Schleich's fluid), and injected with a 1-per-cent. solution of cocaine. Anesthesia
was complete in about eight minutes. Amputation was performed at the middle third of the leg and absolutely no pain was experienced by the patient. He did not even know that amputation had been performed. Examination of the patient, about one year after operation, failed to reveal any secondary nerve changes in the injected nerves.

**Operative Treatment of Chronic Facial Palsy of Peripheral Origin.**

C. A. Ballance, H. A. Ballance and P. Stewart, in *British Medical Journal*, report a series of cases of chronic facial paralysis of peripheral origin, in which an anastomosis was performed between another healthy nerve and the distal segment of the paralyzed facial. Their conclusions are as follows: 1. Peripheral facial palsy is remediable by facial-accessory anastomosis, but the extent of recovery appears to be limited to associated movements in conjunction with the shoulder. In most cases the previous deformity disappears from the face if at rest. 2. For certain reasons the authors recommend facial-hypoglossal anastomosis rather than facial-accessory. 3. The cases suitable for operation are those in which the paralysis has lasted so long that no recovery is to be expected, say, facial palsy lasting six months without any sign of recovery. The sooner the operation is done after this date the better. 4. Suppurative casual condition producing an infective neuritis renders the prognosis after operative treatment less favorable than in cases due to trauma.

**The Cure of Anal Fissure Without Operation.**

S. Lewis describes his treatment in *Medical News*, as consisting in the application to the fissure and surrounding area of a saturated solution of potassium permanganate and the use of a suppository containing sulphhydrolate of bismuth. Technique is important. The patient is placed in a semiprone position on the table, supporting her own right buttock. On separating the folds at the mucocutaneous junction, as a rule, the outer extremity of the fissure or painful ulcer, or at least a red streak indicating its location, can be seen. It may be hidden behind a pile and may be multiple. Cocainization is often required before satisfactory examination can be made, and may have to be repeated on reaching the fissure. In case of spasm, rarely a large flexible bougie may be passed and left in situ five minutes. The fissure is exposed, gently cleansed with warm water, and permanganate applied on a tiny swab. This should extend over the whole surrounding area. Smarting lasts from two to ten minutes. The writer employs a suppository, sold under the name of anusol. In most cases it can be inserted by the patient. It should be applied night and morning. The usual dietetic and medicinal treatment of constipation is prescribed, and the patient told to report in two days. The worst cases are confined to bed. At the second treatment the operation is repeated, only the cocaine is omitted. At the third, suppositories may be reduced to one daily, at bedtime. If this treatment fail to give immediate relief, there are probably other fissured areas present. These should be found and treated.

**OBSTETRICS AND GYNECOLOGY.**

**Necessity of Manual Examination.**

Semmelink, in *Centralbl. f. Gynäk.*, shows how easily a grave complication may be overlooked in pregnancy should the patient decline examination. He was consulted by a woman, aged 42, in the seventh month, who desired him to attend her in confinement. As she had borne twelve children already, and all her labors had been spontaneous except one, she declined examination as unnecessary. This decision was reconsidered meanwhile by Semmelink, as the patient's legs were edematous, and had been so before the pregnancy. He was furnished with a sample of the urine, and found it free from albumen. His advice to the patient to place herself under her family doctor for the edema was not followed. At term labor pains set in, and as they grew weak Semmelink delivered the child with forceps. It was a healthy male, over eleven pounds in weight, and was reared. The placenta followed about half an hour later. Four days after the confinement the patient was put in the hands of De Mouchy. In a few days the patient complained for the first time of pain during defecation, bloody stools were passed. Then the rectum was explored, and malignant disease detected high up the bowel. There was stricture, and an accumulation of feces above it; it is significant that this complication had neither caused inconvenience nor interfered with the labor. The cancer was quite inoperable and the patient refused to have colotomy performed. She died within six months.

**Eclampsia.**

E. A. Ayers, in *N. Y. Med. Journal*, says that the great majority of cases of
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eclampsia can be prevented. The bowels must be kept properly emptied. This not only sustainsthe eliminative function, but permits the uterus gradually to occupy abdominal space with less interference to the daily work of the kidneys, uterus and heart. Cascara, either alone as the fluid extract, or in tablet with aloin and podophyllin, is very satisfactory; and this should be varied with the use of calomel once a week, more surely to keep the liver in proper condition. The rule for every pregnant woman should be, to be regular in meal hours, moderate in the use of meats, exclusion of the more indigestible vegetables and of all wines, and avoidance of excessive quantity at any time. Whenever the amount of urine secreted or excreted, or of urea excreted, falls below normal, or albumin or casts are present, the patient should be treated by diet, laxative and diuretic, to restore to normal the urinary function. In the treatment of cases of eclampsia each case must be a law unto itself. Whenever feasible, Ayers aims to secure such degree of elimination of toxins promptly as will put a temporary check upon the convulsions, and then to test whether he can remove the evidence of insufficient elimination by usual methods, and so, if successful, permit the pregnancy to go to term. If the effect which the convulsions have had is not marked, the mind being clear, the pulse under 100, and the convulsions not occurring oftener than every hour or two, he favors giving a saline cathartic by the mouth and a high saline solution in the bowel. Hot packs, water bags, wet blankets and sheets must be used with reserve. If the case presents the highly nervous type, restlessness, tossing and mental activity, he favors the administration of 20 to 30 grains of chloral per rectum, seeking not narcosis, but removal of nerve tension; nitro-glycerin, 1-50 of a grain, should be given at the start, and repeated as needed. Oxygen and injection of saline infusion into the subcutaneous tissue are indicated. It is, useless to try to select a particular anticonvulsive and use it, for there is no disease that calls more for special selection than eclampsia. If labor is going to continue whether we check the convulsions or not it is best to hasten delivery.

Uterine Fibroma near the Menopause.

George E. Shoemaker says that among the medical heresies which are fast fading away is the idea, once popular, that fibromata of the uterus are likely either to diminish in size or to cease to be and to grow about the time of the menopause. This idea appears to have had its origin in the inability of surgeons safely to remove such tumors, and in their effort to give to the patient the only hope in their power. An experience of many years in gynecological dispensaries, and of eleven years as gynecologist for city hospitals, has failed to bring to the notice of the writer a single case which has had such a termination. He has, however, operated upon many who have been deluded with this hope up to the age of fifty to fifty-five years, finally coming to operation on account of the severe and increasing hemorrhage, growth of tumor, recurrent attacks of peritonitis or salpingitis, while by the degeneration of heart or kidneys and other indirect consequences of anemia, the patient’s vitality has been forever impaired. The writer quotes three such cases. The danger from operation in cases of this class while greater than in the simpler forms of abdominal sections, is not very great, and the mortality should not exceed 6 per cent., which is largely made up by complications, such as pyosalpinx, recurrent peritonitis, or the effects of hemorrhage, all due to delay.

Preliminary Report of an Operation for Abdominal Pregnancy of Twenty-one Months’ Luration.

Charles P. Noble presents this report: The patient was a nullipara of thirty years. The illness in question dated from early March, 1901, when she missed a period. Two weeks later she was taken with a sudden pain at one in the morning. The pain was sharp, severe and lancinating, and located in the right iliac quadrant. For six months her condition was that of a normal pregnancy. The last of August she had an attack of dull, dragging pain in the lower part of the abdomen, vomiting, chills and fever. At the end of four weeks the patient improved, the breasts and abdomen became smaller, and the uterine bleeding took on more the character of menstruation. The abdominal mass persisted and a diagnosis of fibroid was made. Vaginal examination discovered a hard mass having the characteristics of a fetal head. The uterus was pushed to the right. On November 26 the abdomen was freely opened and the fetus extracted. The writer believes that the ruptured tubal pregnancy occupied the space between the left broad ligament, and that this space was roofed in by adhesions between the upper border of the broad ligament, the sigmoid and omentum. The fetus was in an excellent state of preservation.—Phila. Med. Journal.
Dr. R. P. Francis, of Montclair, entertained the Orange Mountain Medical Society at its May meeting. Dr. A. J. McCosh, son of the former president of Princeton University, read a paper on "Indications for Surgical Interference in Lesions of the Stomach." Dr. T. W. Harvey and Dr. Winthrop D. Mitchell opened the discussion.

Members of the Carpenters' Union of the Oranges have made arrangements to set apart the sum of $200 from their funds each year for endowing a bed in the Orange Memorial Hospital for the use of carpenters injured by accident or suffering with illness.

Dr. Harry Chandler, of South Orange, has been appointed house physician of the Orange Memorial Hospital to succeed Dr. Ransome.

Dr. Chandler secured the position by obtaining the highest average at the competitive examinations held at that institution Saturday. He is but 24 years old and a son of Dr. William J. Chandler, of South Orange, who is a member of the visiting staff of the hospital. The new appointee is a graduate of the South Orange High School, and after spending two years at Princeton graduated from the Albany Medical College in May.

Dr. F. D. Gray, of Jersey City, who went abroad to inspect European hospitals, says that few of the hospitals in Europe are in any way equal to those to be found here, with two notable exceptions—the new general hospital in London and the hospital in Hamburg.

The death of Dr. Thomas George Morton, which took place in Cape May on May 20, after a short illness, deprives the profession of one of its most brilliant and original surgeons. He was born in Philadelphia in 1833, and graduated in medicine at the University of Pennsylvania, in 1856. He served with distinction as a medical officer in the Federal army during the civil war. He was a frequent contributor to the periodical literature of medicine, and he was among the earliest to practice the radical operation for disease of the vermiform appendix.

Two men died of glanders in Newark in May.

Miss Minnie Norris and Dr. Louis Estler, of Arlington, were married June 8 at the new home recently purchased by the bridegroom at Chestnut street and Midland avenue, Arlington.

Dr. Henry Spence, of Jersey City, has removed from Jersey avenue to Bergen avenue, on the Heights.

There are a number of vacancies in the navy for assistant surgeons, which ought to be filled by young New Jersey physicians. All regular graduates under 30 are eligible.

John B. Burdett, M.D., died in May at his home, 545 Summit avenue, Jersey City, of a complication of diseases. His sickness began with grip at the time of the Christmas holidays. Pneumonia and Bright's disease followed. Dr. Burdett was born at Ridgefield, Bergen County, Sept. 21, 1833. He was graduated at the New York College of Physicians and Surgeons in 1856, and served for two years on the staff of the Kings County Hospital at Flatbush. He began practice in Hudson City, now a part of Jersey City, near the Five Corners, in 1858. He was for many years one of the staff of Christ Hospital, Jersey City, and served as president of the Hudson County Medical Society.
and the Hudson County Pathological Society. He was a Sublime Degree Master Mason of Bergen Lodge, No. 47, and one of the organizers of the Highland Lodge. He was once an expert rifle shot and was president of the Jersey City Heights Gun Club. He leaves a wife and two daughters.

The twenty-ninth annual report of St. Francis Hospital, Jersey City, has just been issued. It shows that during the past year 3,439 cases were treated and that of that number 2,191 were surgical. The general death rate was 6.7 per cent.

Five hundred and fifty operations were performed and the death rate in such cases was 4.7 per cent.

The building contains 250 beds for the treatment of free patients. During the past year a department of microscopy and bacteriology has been instituted. Attached to the hospital is a resident house physician and a house surgeon. Dr. John D. McGill continues to be medical director. Dr. Nathan Bozeman is consulting surgeon, and Dr. J. Leonard Cornoing consulting physician.

The surgeons are: John D. McGill, M.D.; Mortimer Lampson, M.D.; Thomas J. McLaughlin, M.D.; Christopher D. Hill, M.D.

Dr. Oliver R. Blanchard and Dr. W. M. Faison have charge of the gynecological department, and the assistant surgeons are: Charles K. Law, M.D., William L. Hetherington, M.D., Immanuel Pyle, M.D.; John J. Mooney, M.D., Edward P. Hart, M.D., Frank W. Mallalieu, M.D.

The staff of physicians consists of William J. Parker, M.D., William S. Boyd, M.D., Arthur D. DeLong, M.D., John C. Parsons, M.D., Edward Mulvaney, M.D., Samuel H. Culver, M.D.

Dr. George J. Hornung, surgeon dentist, and Dr. Edward Mulvaney, electrotherapist.

The house physicians are Dr. Oscar J. Russi and Dr. Thomas Vincent Lottus.

Dr. Charles H. Althans, head of the chemical laboratories of Reed & Carnrick, of Jersey City, sailed June 6 on the Atlantic Transport line steamship Minneapolis of the International Mercantile Marine Company, for Europe. He will spend three months in German laboratories.

The fifteenth annual announcement of the Training School for Nurses at the City Hospital, Newark, took place June 3. It was the largest class of nurses that has been graduated from the Training School since it was opened in 1888. Dr. H. C. H. Herold, president of the Board of Health, presented the diplomas, after an address to the graduates by Rev. Dr. Daniel H. Martin. Those receiving diplomas were:

Anna Mae Regan, Oswego, N. Y.; Stata Helen Bell, Syracuse, N. Y.; Elizabeth Balzhiser, Cincinnati, O.; Beulah Araesta Stauffer, Littitz, Pa.; Irma Fischer, New York; Ruth Louise Livingston, Orange; Jane Mitchell Jackson, Canada; Mable Pauline Colley, Morristown; Ellen Margaret Nicol, Canada; Florence Iola Stauffer, Littitz, Pa.; Ida Florence Austin, Orange; Anna Warrington Christian, Philadelphia; Mrs. Elizabeth Anderson Duncan, Newark; Katherine Irene Herron, Bordentown; Cornie Day Aller, Morristown; Sophie Fredericka E. Schmidt, Newark.

Dr. N. H. Adsit, of Succasunna, in the ruins of his fine new barn, destroyed by fire, found a peculiar piece of glass from the west window in the loft. The fragment was more than ordinarily thick, being a blemish in the pane. He examined it and was surprised to find it formed a magnifying glass. Dr. Adsit put the matter to a test and found that the sun's rays focused at about two feet from the glass ignited paper or dry grass in ten seconds. The fire started when the sun was in the western sky, and the doctor believes the glass caused the fire.

At a recent meeting of the Newark, N. J., Board of Health, which controls the
City Hospital, the resignation of Dr. Baker, its superintendent, was asked for. Later a clerk handed the committee Dr. Baker's letter of resignation. It is said to have made some caustic comments concerning the management of the hospital.

Dr. Allen H. Oliver, now connected with the Presbyterian Hospital of New York, was selected to succeed Dr. Baker, but declined to accept the place.

Dr. and Mrs. Leslie D. Ward, Mr. and Mrs. Herbert Ward and Leslie Ward, Jr., of Newark, will leave early in July for an extended tour on the continent.

It is reported that the number of smallpox patients in Phillipsburg, N. J., has increased, so that the health authorities have decided to build a pest house.

At the annual meeting of the South Orange Village Board of Health Dr. Meford Runyon was elected president; Allerton D. Hitch, secretary, and Dr. W. W. Heberton, health inspector.

The North Hudson County Medical Society held its annual dinner Tuesday evening, May 26. The event was preceded by a theater party, the members and their wives having engaged a section of seats at the Victoria Theater, New York, where David Warfield in "The Auctioneer" was witnessed. On the dinner committee were Dr. Bell of Hoboken, chairman; Dr. A. O. Weigand and Dr. A. Oestermann, both of the Hudson City section.

At the last meeting of the State Board of Registration and Examination in Dentistry in New Jersey, Dr. J. Allen Osmun, who is about to take up his residence in California, formally tendered his resignation to the board, and it was accepted. Dr. Charles S. Stockton has been appointed by Governor Murphy to fill the vacancy.

Dr. W. E. Truex, of Freehold, was elected president of the board to succeed Dr. Meeker, who resigned to become secretary and treasurer.

The semi-annual examination under the supervision of the board will be held in July, and a number of applications have already been filed.

Dr. J. M. W. Kitchen and family, of Prospect street, East Orange, are at Gilmanston, N. H.

At the annual meeting of the Camden County Medical Society, held May 12, the following officers were elected for the ensuing years: President, Dr. John W. Marcy; vice-president, Dr. Joseph H. Witts; secretary, Dr. Paul Meecray; and treasurer, Dr. John W. Fithian.

At the last regular meeting of the Brooklyn Gynecological Society, Dr. Edward J. Il, of Newark, N. J., was the guest of the evening, reading a paper on the treatment of retro- and lateral deviations of the uterus. His somewhat unusual and radical method of treatment evoked a spirited discussion.

Atlantic City will be the meeting place of the New Jersey Homeopathic Society next year. Dr. J. R. Fleming, of Asbury Park, was elected president of the society; Dr. Bernard Clausen, Hoboken; Dr. E. S. Sheldon, Collingswood, and Dr. Mary G. Cummins, Paterson, vice-presidents, and Dr. Wallace McGeorge, Camden, corresponding secretary.

The thirty-seventh annual report of the Hospital of St. Barnabas, Newark, gives some interesting facts and figures for those interested in the work of this institution. They report generally improved conditions, with 863 patients in the wards, 808 of which have been admitted since the last report was issued. The whole number of out patients treated was 3,675, 2,227 old cases and 1,448 new ones.

Dr. G. F. Lightfoot has been appointed health officer of Kearny to succeed Dr. M. W. Clouse, resigned.
Dr. Sarah E. Bissell of New York, who was born in Newark 70 years ago, has been taken to a State institution, suffering from nervous breakdown. She was for 35 years one of the best known women physicians in New York.

At the last meeting of the Montclair Board of Health a vote of thanks was extended to Dr. R. P. Francis for valuable services during the eight years he was secretary and treasurer.

The wedding is announced of Dr. Siefried Husserl, of Newark, and Miss Clara Gotthelf, of Memphis, Tenn.

Dr. Archibald Taylor of New York, died in Somerville May 12. He had been there for a year in quest of health.

Dr. F. W. Lockwood, of 237 Prospect street, East Orange, entertained the Practitioners' Society of the Oranges in the rooms of the William Pierson Medical Library Association May 16. Dr. Ralph H. Hunt, of East Orange, read a paper.

The Orange Memorial Hospital is in serious financial straits and the finance committee of the Board of Governors has been compelled to issue an urgent public appeal for funds. Out of the past fifteen months the monthly bills have been paid but seven months, and the management is now over $3,000 in debt.

Dr. J. L. Gardner, of Elliot place, Orange, a prominent physician of that place, was fined $20 and costs for violation of the State game laws, May 28.

Game Warden Dean caused Dr. Gardner to be summoned before the Recorder because he claimed to have found in the physician's possession a number of trout which were one-fourth of an inch less than six inches, the length required by law. Dr. Gardner caught the trout in Pike County, Pennsylvania, and set up a defense that the fish had shrunk en route. He brought experts before the court to prove his contention.

The Recorder, however, declined to pass on the question of shrinkage, and said he would impose the fine, inasmuch as the trout in Dr. Gardner's possession were under the required length.

During the taking of testimony Dr. Gardner's reputation as a true sportsman was proven. He will appeal the case.

A number of doctors from Gloucester, Cumberland and Salem Counties met in Paul's Hotel, at Woodbury, May 27, and organized under the name of the Tri-County Medical Society of South Jersey. The following officers were elected: Dr. H. A. Stout, Wenonah, president; Dr. B. A. Maddington, Salem, first vice-president; Dr. N. W. Elmer, Bridgeton, second vice-president; Dr. George Evans Reading, Woodbury, secretary and treasurer; Dr. L. M. Halsey, Williamstown; Dr. E. E. De Groff, Woodstown; Dr. D. Oliver, Bridgeton, executive committee.

Dr. E. R. Laine and Dr. D. W. Gardner have been elected to prominent offices in a new lodge of United Woodmen, recently started in Caldwell.

For the first time in two years and two months the Newark Isolation Hospital is closed and locked. The health authorities believe the epidemic of smallpox which has existed in that time has been stamped out.

During the epidemic there were 1,313 smallpox cases in that city. In 1901 there were 387; in 1902, 901, and in 1903, 25. The total number of deaths was 261, a death rate of a fraction less than 20 per cent. This is lower than during the same period from smallpox in New York and other large cities. The average cost per patient here, for maintenance only, was $36.67, and for maintenance, including building and equipment, $65.57.

The total amount of money received from all sources was $35,012.46. This sum includes a balance on hand, May 1, 1902, in all the accounts, of $1,094.54, $1,500 upon
a mortgage and reinvested and $7,000 in legacies. Disbursements amounted to $33,114.74, and there is no deficiency in current expenses.

At the meeting of the Newark Board of Health, June 3, a report was read upon the progress being made with antitoxin to check tuberculosis, and a recommendation was made that a special appropriation of $2,000 be asked of the Common Council in order to further prosecute the work. It was stated by the president, Dr. H. C. H. Herold, who made the report, that the most encouraging results had been obtained, and that there was every reason to believe that antitoxin, as prepared by the special committee, was a great boon to tuberculosis sufferers.

Dr. Herold said that since the experiments had begun forty-three physicians in the city had taken up the use of the serum and that upward of 150 patients had been treated. In all instances, he added, there were indications that the injections had the effect of combating the tubercular germs. It was also stated in the report that in one case there had been a positive cure of consumption by the use of the antitoxin, and that in a number of others there had been partial cures or a notable destruction of the bacilli in the sputum and the healing up of spots in the vitals that were affected by the disease.

In one other case a patient who had not been entirely cured was so much benefited that he was able to pursue his daily vocation.

The use of antitoxin for other diseases, diphtheritic and otherwise, was touched upon, and it was stated that equal success had been met with in such cases.

In procuring the antitoxin Dr. Herold said that three horses had been in use, and that these were still ready for service and fit to be operated upon whenever it was desired to get new supplies.

As the head of the committee in charge of the antitoxin work, of which Dr. R. N. Connolly and Dr. Werner Runge are the other members, Dr. Herold said that the plant should now be formally turned over to the Board with the laboratory and the equipment, and his recommendation that $2,000 be requested to run it was referred to the finance committee.

Governor Murphy has announced the appointment of James G. Morgan of Weehawken as a member of the Board of Managers of the State Hospital for the Insane at Morris Plains, to succeed Dr. Romeo F. Chabert of Hoboken, resigned. Mr. Morgan is appointed for five years.

Miss Alta Sands Tolley, of Glen Ridge, and Dr. William H. H. Bull, of Park place, Bloomfield, were married in Glen Ridge. Dr. and Mrs. Bull will reside in Bloomfield, where the doctor is a well known and highly successful practitioner.

Dr. Simon Baruch, visiting physician to the Hood-Wright Hospital and consulting physician to the Montefiore Hospital for Chronic Invalids in New York City, has removed to the Anchorage, Seventh and Atlantic avenues, Long Branch, where he expects to reside during the entire year. Dr. Baruch has been a summer practitioner at West End and Elberon for twelve years, but now limits himself to office and consultation practice. He visits his city office at the Hotel Majestic, three times a week, and lectures at the N. Y. Post Graduate Medical School and Hospital every Saturday afternoon.

The physicians in Bayonne, N. J., who have organized a baseball team are arranging to play a game with a team composed of members of the clergy. The proceeds of the contest to be donated to the Bayonne Hospital.

Among those who play on the doctors' team are: Drs. Corwin, Sexsmith, Davey, Connolly, Woodruff and Axford. The latter is captain. The physicians will shortly play a game with a team of Bayonne lawyers, captained by Congressman Allan Benny. The Congressman pitches for his team.
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NEWS AND NOTES.

The American Urological Association meets the first Wednesday of each month, except July, August and September. The annual meeting this year will be held in New Orleans, May 8 and 9.

Much interest is being manifested in the approaching meeting of the American Medical Association by local physicians in New Orleans. It is stated in the local papers that some $12,000 will be expended in entertainment on this occasion, half of this sum having already been secured by subscriptions among the physicians of the city. The Tulane Theater has been engaged for three night sessions of the whole association, and the second floor of the Washington Artillery Hall has been reserved for the section of general medicine. The first floor has been reserved for physiology and pathology. The other exhibits will be as follows: Ophthalmology, in the College of Pharmacy; laryngology and otology, College of Pharmacy; surgery and anatomy, Young Men's Christian Association Auditorium; diseases of children, Young Men's Christian Association; dermatology, Young Men's Christian Association; obstetrics and gynecology, Tuoro Synagogue; nervous and mental diseases, Tuoro Synagogue; stomatology, Carondelet Street Methodist Church; hygiene and sanitary science. Carondelet Street Methodist Church; materia medica, pharmacy and therapeutics. Carondelet Street Methodist Episcopal Church; house of delegates, City Council Chamber.

In the “Reference Book of Practical Therapeutics,” compiled by our old friend, Frank P. Foster, A.M., M.D., editor of The New York Medical Journal, we note the

(Continued on page 17.)

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THE PRESENT STATUS OF THE THERAPEUTIC USES OF THE X-RAYS. By J. Edward Stubbert, Ph.D., M.D., of New York. The writer, who has had an excellent experience in the use of the X-rays, in the treatment of various diseases, tells of the beneficial results obtained and lauds the new form of treatment. He especially mentions the immediate cessation of pain after the application ................................................................. 163

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cases of diarrhoea, dysentery, typhoid fever,
intestinal tuberculosis, etc.

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NEWS AND NOTES.

Registration for Trained Nurses.—Governor Odell, of New York, has signed the bill providing for the registry of trained nurses by the New York State University. Only those who are so registered may hereafter legally sign “R.N.” after their names, or wear these initials upon their uniforms. The purpose of this law is to enable employers to know the qualifications of persons whom they hire to do nursing. It does not attempt to dictate who shall be employed as a nurse, or who shall undertake to do a nurse’s work. It simply provides that persons of insufficient training shall not be permitted to palm themselves off as being qualified equally with those who have spent years in patient study.

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An interesting feature of the meeting of the association held in New Orleans, La., May 4, was the report submitted by the special committee appointed at last year’s convention in Saratoga upon requirements for admission to the freshman year of a medical college. The majority report holds that students applying for admission to colleges of the association shall have pursued a four years’ course of instruction in a high or normal school, or present a certificate of admission to the freshman class of a State university. The minority report requires a four years’ high or normal school course preceded by not less than a six years’ course in primary and intermediate schools. The amended report, which was finally adopted, requires four full years of work in a high school or its equivalent for eligibility to admission in a medical college.

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Dr. G. Werner.

Falkenberg, Alsace, Germany, April 20, 1902.

It is stated that the Brooklyn Board of Health is to begin its annual onslaught upon the mosquito. The comparatively cold weather has, it is said, prevented the board from beginning the work sooner. The plan is to petrolize all ponds and pools where mosquitoes are likely to congregate and breed. In addition to the light fuel oil heretofore used the heavier crude oil, which evaporates less quickly, is also to be used. The lessened number of malarial cases in Brooklyn, is evidence that the work of last year has borne fruit.

Surgeon General P. M. Rixey, U. S. N., desires us to call the attention of the younger readers of Gaillard’s to the desirability of a billet in the navy. There are at present many vacancies, and hereafter there will be opportunities for thirty-five new surgeons yearly. “In these days of sharp and unremitting competition among medical men, both the army and navy as careers for young medical men are full of promise. Indeed, it would be no exaggeration to say that upon the whole a young man would do better to enter the army or navy medical service than to become a civil practitioner. The prizes, from a pecuniary standpoint, are not so great, but the position is assured, the life is varied and full of interest, and the opportunities for practice, and especially for scientific research, are assuredly more open to the army or navy medical officer than to the rank and file of the medical profession.” The annual sea pay of assistant surgeons in the navy is $1,050, which amount is raised according to length of service. The maximum is $5,500.

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The pictures of fat, healthy looking children who have been brought up on Melin's Food attest the value of that excellent food. The business of the house is growing rapidly, its export department alone being one of the most important in the company.

It is reported that Dr. J. Playfair McMurrich, professor of anatomy at the University of Michigan, has accepted a commission from the Royal Academy of Prussia and the Government of Holland to examine and identify certain species of animal life.

Dr. Eugene Hodenpyl has been elected president and Dr. Simon Flexner vice-president of the American Association of Pathologists and Bacteriologists.

Dr. J. Rollin Slonaker, associate in neurology, University of Chicago, has accepted the position of assistant professor of physiology in Leland Stanford, Jr., University.

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The American Protologic Society has chosen these officers: President, William M. Beach, of Pittsburg; vice-president, Leon Straus, of St. Louis; secretary-treasurer, A. Bennett Cooke, of Nashville; executive council, Samuel T. Earle, of Baltimore (retiring president), chairman; George B. Evans, of Dayton, O., and John L. Jelks, of Memphis, Tenn. The society will meet in Atlantic City, N. J., in June, 1904, on the first and second days of the meeting of the American Medical Association.

The increasing use of boracic acid is due in no small sense to the excellence of Listerine. Boric acid is held in perfect solution by this favorite antiseptic, which neutralizes the products of putrefaction completely. Lambert's Lithiated Hydrangea is a remedy of acknowledged value in all diseases of the urinary system.

Dr. James R. McLane has resigned as dean of the College of Physicians and Surgeons, the Medical Department of Columbia University, in this city. Dr. McLane was actively connected with the college as Professor of Materia Medica and Therapeutics. Professor of Obstetrics, and Dean, for more than thirty-five years.

Dr. Norman M. Harris, associate professor of bacteriology at the Johns Hopkins Medical School, has accepted a call to the University of Chicago.

"The Survival of the Fittest" very aptly expresses Fellows' Syrup of Hypophosphites. Mr. Fellows, in his long experience, has seen various makers of hypophosphites come and go, but seemingly he is going on forever. It is hard to "down the real thing."

Dr. William W. Verner, of Allegheny, Pa.; Dr. Otto Kohlhase, of Webster, S. D.; Dr. Percival S. Rossiter, of Baltimore, Md.; Dr. Wesley Rennie, of Chester, Pa.; Dr. Walter S. Hoen, of Richmond, Va.; Dr. Wallace B. Smith, of Huntsville, Ala., and Dr. C. C. Grieve, of Ionia, Mich., have been appointed assistant surgeons in the navy.

Dr. Edwin B. Cragin has been appointed consulting obstetrician to the New York Infant Asylum, in the place of the late Dr. T. Gaillard Thomas.

Physicians who desire a vade mecum are requested to ask the Antikaminia Company, of St. Louis, to send them one of Hill's Charts. Dr. Hill has taken most of the ailments the flesh is heir to and put them in a convenient manner in his chart, so that he who runs or rides may read and profit thereby. A postal card is all that is necessary.

(Continued on page 17.)
Gaillard's Medical Journal.

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SOME OF GAILLARD'S CONTRIBUTORS

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Instructor of Diseases of Eye and Ear, Medical College of Virginia.

A. C. BARDES, M.D., of New York,
Instructor in Diseases of Nose and Throat, New York Polyclinic Medical School.

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A PAMPHLET ENTITLED:
"Summer Complaints of Infants and Children,"
MAILED UPON REQUEST.

LAMBERT PHARMACAL CO., Saint Louis, U. S. A.
ACUTE INFLAMMATION OF THE ACCESSORY SINUSES OF THE NOSE.*

NORTON L WILSON, M.D., of Elizabeth, N. J.,
Ophthalmologist, Rhinologist and Laryngologist to Elizabeth General Hospital,
etc., etc., etc.

Acute sinusesitis has become so frequent of late years, and is so often followed by a chronic condition which necessitates an operation, that I have thought it might be interesting and possibly of some value to present to this society a brief paper upon the subject. A correct idea of the topographical anatomy of the sinuses can only be obtained by the study of both dry and wet sections. The most of the plates in our text-books representing these sections are a very poor representation of them as they really exist. The subject in my opinion is one of great importance to the general practitioner. To him the patient first applies for help. Indeed, most of the cases which come to me for treatment are of the subacute or chronic variety.

If the acute cases had been properly treated from the first there would have been a few cases only of chronic character for treatment.

The cure of disease is of invaluable benefit to mankind, but its effective prevention is of far greater importance. We should therefore seek to obtain a better understanding of those causes which produce the disease under consideration, if we would the more successfully prevent its occurrence.

It is within the knowledge of all who have observed the cause of acute sinus inflammation that severe symptoms may in many cases be successfully met and a speedy cure effected if there be a prompt recognition of the trouble, a treatment which will be immediately effective.

In order to prevent the resultant troubles, we should know the various causes to which they owe their origin. These may be either predisposing or exciting. Dr. D. Bryson Delevan, in his paper, read last year at Saratoga, pointed out certain existing causes, which directly predispose to the disease under consideration.

"It may not be," he said, "so generally understood that in many instances certain causes exist which directly predispose to sinus disease; causes in the presence of which exciting influences of comparatively little importance in a normal nose may assume dangerous proportions and become the occasion of serious results.

*Read at the 137th Annual Meeting of the Medical Society of New Jersey, held at Asbury Park, June 23, 24 and 25, 1903.
PREDISPOSING CAUSES.

"Anything which seriously hinders free drainage from the upper half of the nasal cavity may act as a predisposing cause," such as deflection of the septum, catarrhal thickening of the tissues of the upper and middle part of the septum, hypertrophic conditions of the turbinates and especially the middle turbinate, polypi, congestive conditions of the soft parts, and by that term I mean an engorged and swollen condition of the mucous membrane, which is not an hypertrophy. The formation of masses of granulation or even the presence of inspisated mucus, any one of these may be a contributing factor in the cause predisposing to the disease. Malformations of the region of the nose are by no means invariably associated with disease of the accessory sinuses.

They do, however, predispose to congestive troubles in general, and those in turn render the sinuses more liable to disease. Cases of acute sinus disease without any apparent malformations have, however, come under my observation.

EXCITING CAUSES.

Inflammation and suppuration in the accessory sinuses may arise in the course of certain affections, such as influenza, pneumonia, scarlet fever, measles, typhoid fever, diphtheria, small pox, cerebro spinal meningitis and erysipelas.

In regard to the last named disease the above named author makes this pertinent remark: "It is questionable whether erysipelas may not in many cases be due to pre-existing sinus disease, numerous instances of recurrent facial erysipelas have been observed in which the erysipelatous attacks have been done away with by the treatment and cure of necrosing ethmoiditis and similar diseased conditions of the accessory sinuses."

This was the condition that existed in a case coming under my observation. The patient had had several attacks of facial erysipelas and a final cure was effected by curetting his anterior ethmoidal cells.

The inflammation may reach the sinuses by direct extension from the nose, fauces and naso-pharynx, or the cavities may become involved through the blood stream in the course of a general systemic infection. This latter mode of infection I believe to be much less frequent than by extension from the nasal cavities.

Among the most frequent exciting causes are influenza and croupous pneumonia. On the occasion of a recent visit to the Massachusetts Eye and Ear Infirmary in Boston there came under my observation several cases of acute inflammation of the frontal sinuses, which accompanied or followed La Grippe, and I have found cases resulting from such causes in my own private practice.

I believe that to this form of epidemic influenza may be attributed the increase in the number of cases of late years.

Weichelbaum, during the epidemic of 1890, found suppuration present in a large number of post-mortem examinations upon influenza patients.

Sinus inflammation may result from acute coryza without influenza infection. Suppuration of the sinuses has been ascribed to the presence
of polypi, but I am inclined to think that in most instances the polypi are due to suppurring sinuses, that is to say, the mucous membrane becomes irritated from the constant flow of pus over its surface and a polypus springs therefrom. Grünwold and others have said that sinusites is probably the cause of ozena or atrophic rhinitis. This theory I cannot accept, for the reason just stated, namely, the presence of pus causes an hypertrophy rather than an atrophy. I am rather inclined to believe the sinus disease is secondary to the atrophic rhinitis. We are all familiar with catarrhal and suppurative processes in the middle ear, as secondary to atrophic rhinitis, and I fail to recall a single case where the atrophic rhinitis was due to a suppurring ear. Certain it is that in all the acute infections of the sinuses we have an inflammatory condition in the nasal mucous membrane, which, if properly treated, gives prompt relief to the existing sinus disease. Dental cases or operations upon the nasal cavities or the use of instruments not properly aseptic or the plugging of the nasal cavities for epistaxis have caused disease of the antrum. Another prolific cause is to be found in the irritation from dust, laden with bacteria; this is no doubt the reason for so many automobilists having diseases of the frontal and ethmoidal cells.

**Bacteriology.**

To E. Frankel and Weichelbaum we are mainly indebted for the bacteriology of the accessory sinuses. They have found the diplococcus pneumonia, the bacterium coli and a number of pyogenic organisms. The influenza bacillus has been demonstrated by Lindenthal, Howard, Ingalls and Morizkowskie.

True diphtheritic membrane has been found in the antrum by Weichelbaum, Frankel, Pearce and others.

**Pathology.**

In acute inflammations the mucosa becomes congested, infiltrated with round cells and swollen, while a serous exudation is poured out constituting an acute catarrh of the membrane, the exudation may become sero purulent or purulent, and if mixed with a quantity of mucus it presents a muco purulent character. If the ostium of the sinus becomes blocked by the swollen mucous membrane, the exudation is retained under pressure and the clinical symptoms and signs become aggravated.

**Diagnosis.**

We will be able to diagnose the disease by observing the following manifestations:

In every case of acute coryza or influenza or the exanthemata we should keep in mind the possibilities of infection of the accessory sinuses; we should remember that the antrum of Highmore, the frontal sinuses and the anterior ethmoidal cells communicate with the nasal chamber through the middle meatus under the middle turbinate bone, while the posterior ethmoidal cells and the sphenoid sinus open into the superior meatus that is above the middle turbinate and under the superior turbinate. Inflammation of the sinuses is usually ushered in with the general malaise attributed to La Grippe, the severe bone ache.
being generally well marked. In fact I have seen the diagnosis of La Grippe made when it should have been acute inflammation of the accessory sinuses.

Pain is a prominent symptom. It may be in the brow and eyes with photophobia, or there may be tenderness over the antrum. The muscles of the head and neck may be stiff and not infrequently there is a tendency to mental depression.

The symptoms are modified according as the osteum remains open or becomes closed. In the former condition secretions drain away more freely and a spontaneous cure frequently results, while in the latter there is retention and an aggravation of symptoms.

Pain is not always a reliable indication as to which sinus is involved, but clearly indicates that some one sinus is involved.

Tenderness over cheek or forehead may be elicited upon slight pressure. The discharge varies in character. It is sometimes a straw-colored fluid, or blood-stained, muco or muco purulent.

A free flow of the secretions is followed by cessation of symptoms. A stoppage of discharge increases the symptoms. The alternation in character of symptoms is very suggestive of sinusites.

The mucous membrane is red and swollen and the turbinates turgescent. If the middle turbinate is contracted, with adrenalin, there will probably be found some discharge flowing from the middle meatus, which may be increased by inclining the head forward. The pulse is not much quickened and the temperature is raised but little.

**TRANSILLUMINATION.**

Transillumination is not infallible, although it is of value in many cases. It may be interesting to know that this method of diagnosis was first demonstrated in 1885 by Dr. Hewson, of Philadelphia, and was not first given to us by the medical profession of Europe. For this statement I have the authority of Dr. B. A. Randall. The clouding in transillumination is not due to the presence of pus, but to the thickened mucosa or the serum-filled tissues. If best results are to be obtained by this method, it should be used in a dark room with the electric light up to its full candle power. In cases of acute coryza, with severe frontal pain, we may expect to find frontal sinus or anterior ethmoidal inflammation.

If the pain is in the cheek, there is a probability of antral disease, or if it be of a boring character, deeper in the head, there is an indication of posterior ethmoidal or sphenoidal inflammation.

I have never seen a case of acute sinus inflammation without pain, but I have seen severe chronic cases with no pain.

**TREATMENT.**

As to the method of treatment, let me observe, that it is the first duty of the conscientious physician to prevent disease. In these very cases where serious consequences may be avoided if the physician will recognize the importance of a severe coryza and treat it both internally and locally and not allow the much despised "cold in the head" to go untreated and get well as best it may. Here he may find the opportunity to discharge that duty.
INFLAMMATION OF THE NOSE—WILSON.

There is no doubt that from a lack of effort to prevent disease is due a larger number of the chronic cases of sinus disease. The principles of treatment applied in these cases are based upon the ordinary rules of caring for a cold in the head.

The first and in my opinion one of the most important steps in the treatment of these acute inflammations is to order the patient to bed and the enjoining of absolute quiet. This should be followed by securing thorough relaxation and diaphoresis by means of a hot bath, the frequent drinking of water or hot lemonade containing acetate or citrate of potash. The application of hot cloths to the head and the administration of calomel in $\frac{1}{4}$ gr. doses every hour until a full grain is given has been taken. This to be followed by a saline cathartic. After the bowels and skin are active, the ice bag to the head may replace the hot cloths and the administration of atropin should be instituted.

The rhinitis tablet, which contains camphor, atropin and quinine, acts very well. It should be given until the mucous membrane of the nose and mouth become somewhat dry or the face is flushed or the pupils dilated. Belladonna seems to have a selective action upon the mucous membrane lining the nose and sinuses. By its use we certainly are often enabled to abort a coryza or a sinusites.

Locally, free drainage and thorough cleansing of the parts can be effected by a warm spray of Dobell's or Silus' solution, and the application of adrenalin solution (3 iss to oz.) either in pledgets of cotton or by gently spraying into the nostril, followed by a light spray of menthol, camphor and liquid vaseline, if the latter does not produce sneezing.

The use of cocaine in the acute cases is objectionable because of its toxic effect and because of the secondary swelling of the turbinates which follows after the effect of the cocaine disappears.

If the case goes on to suppuration and is not relieved by the above treatment, it may be necessary to wash out the sinuses with a warm saline or boric acid solution or a solution of creolin.

Where suppuration is present cocaine and adrenalin should be used to facilitate the introduction of the catheter. If it be impossible to wash out the antrum after removal of the anterior portion of the middle turbinate, a trocar should be plunged into the antrum through the nasal wall, under the inferior turbinate. The bone is here thin and may be easily punctured. The cleansing fluid should be forced in until it escapes from beneath the middle turbinate. It will be found that a few washings usually suffice, unless thickening with granulations has already taken place. The bleeding which occurs from a turbination is of decided value in lessening the congestion of the parts. While I have never seen death occur as the result of an acute inflammation, I have seen it occur as a result of the chronic inflammation. In conclusion permit me to say that not a few of this class of cases will recover without treatment, but that does not excuse us for not recognizing the condition and satisfying ourselves that the patient is put in the best possible position for recovery.

410 Westminster ave.
MOUTH BREATHING.

By CLIFTON M. MILLER, M.D., Richmond, Va.
Demonstrator of Anatomy and Instructor in Diseases of Eye and Ear, Medical College of Virginia; Attending Surgeon Eye, Ear and Throat Department, City Dispensary, etc.

The physiologic function of the nose other than that connected with the sense of smell has been, until recent years, so much neglected that a writer on physiology, whose work was published in 1882, mentions no other, and in speaking upon the organs of respiration he says they are the larynx, trachea, bronchi and their terminals. In the same work we find stated that the moisture found in the expired air has been derived from the pulmonary mucous membrane. More recent observations list the physiological functions of the nose in the order of importance, as (1) Respiratory, (2) Olfactory, (3) Phonatory, (4) Auditory.

The inspired current of air enters through the anterior nares, where it encounters the vibrissae which mechanically free it from the coarser particles. From the general structure and outline of the nose, it would be inferred that the in-going air current would pass to the upper portion of the nose and thence back to the pharynx by way of the middle and superior meatuses and that this is the case has been abundantly proven by experimentation. It is in the passage along this channel that the air is saturated with moisture by evaporation from the turbinates and at the same time brought to the body temperature. This channel for the passage of the air traverses the area where the largest capillaries of the body are located, and those, too, whose caliber is most delicately controlled by the vaso-motor nervous system. So finely adjusted is this nervous mechanism that the variation in the amount of watery vapor in the inspired air is recognized and the amount of serum poured out from the capillaries immediately controlled. Whether or not this secretion has a bactericidal effect has not been finally proven, but there is no doubt of the fact that pathogenic bacteria are mechanically entangled on the moist mucous membrane and are conducted toward the nasopharynx by the action of the ciliated cells and then expectorated. Since the completion of this paper, the following has come to my notice: "The nasal mucus is a bactericide for staphylococcus and pneumococcus, but not for bacteria coli communis and Eberth's bacillus."

Pneumococci, staphylococci, streptococci and numerous other pathogenic bacteria have been demonstrated in the nasal chambers, while the air that has reached the pharynx is practically germ free. At the same time that the air is mixed with moisture and mechanically freed from its deleterious constituents, it is brought to about the body temperature so that it enters the remainder of the air tract without producing any irritative effect. As a preliminary to the inrush of the inspired air-current, there is a rarefaction of the air column from the trachea upward, which rarefaction aspirates the air from the accessory sinuses, all of which empty into the infundibulum or upper meatus, and it is conceivable that this air, which has rested for an appreciable length
of time in these cavities, contributes decidedly to the warming and moistening of the remaining air which takes only a fraction of a second to traverse the somewhat tortuous path to the pharynx. The olfactory nerve terminals being distributed only over the surface of the superior and middle turbinates and the upper portion of the nasal septum, the direction of the inspired air-current is just such as to carry odoriferous particles to the point where they can be appreciated.

The nose with its accessory cavities is the sounding board of the voice, giving to it timbre and resonance. The entrance of the eustachian tube into the naso-pharynx serves the purpose of ventilation of the middle ear and equalizing the air pressure upon the inner and outer sides of the delicate membrana tympani. By no means last in point of importance, is the influence exerted upon the circulation at the base of the skull by nasal respiration, every inspiration emptying the ethmoid veins and through them the longitudinal sinus and cavernous plexus. From the foregoing review of the physiologic functions of the nose, it will be readily seen how important to the physical welfare is nasal respiration and how far-reaching will be any interference with the normal conduct of it.

In consideration of the many causes which give rise to the condition of mouth breathing, first and most important will be naso-pharyngeal adenoids or hypertrophy of the pharyngeal tonsil; and with that pathological state and its baneful results, will I deal more particularly in this paper.

The naso-pharynx in children is not only actually, but also relatively smaller than in adults, and at birth can scarcely be termed a cavity at all, and does not reach the adult proportionate size until about the sixth year. While adenoids are not confined to infancy or childhood, it is in these periods of life that they are most frequent and at the same time their evil effect is most felt, for during this time the organism is less resistant to pernicious influences and anything that interferes with the physiological function of an organ or part will retard its growth and development and, in obedience to the well known law of correlation of development, distant parts may be interfered with to a lesser though appreciable degree.

A recent investigator, in a series of experiments upon guinea pigs, confined them to an atmosphere laden with a mixture of starch powder and nitrate of silver. A histological examination of the lung of the animals which had been breathing this atmosphere, showed that the epithelial lining of the lung was two, seven or sometimes twelve layers in thickness in contrast to the normal one layer. This fact led him to formulate an hypothesis that there was in mouth breathing a thickening or swelling of the air vesicles, which would give rise to an interference with the interchange of gases in the lungs and thus the blood is under-oxygenated and surcharged with deleterious waste products which should be eliminated by its passage through the lungs. This hypothesis, while it has not been proven by histological examination of the human lung, seems to me to be a most reasonable one, for nature's tendency to protect any part from irritation or injury is too well known to need any emphasizing, and that air, entering the lungs insufficiently
filtered and moistened, is an irritant to the delicate lining cannot be denied.

The picture of the habitual mouth-breather is an unmistakable one with mouth open, face lacking in expression, flat chest or chicken breast and deficient respiratory movements, a lack of mental alertness and interest in their surroundings. Aproslexia or lack of concentration and attention is a term that has been much used in describing these children, but it has also been much abused, the apparent lack of attention being often due to deficient hearing. The speech is thick, defined as talking through the nose though this is just what it is not, for the flat and colorless speech is due to the non-participation of the nose in phonation.

Air, when breathed through the mouth, is using a channel which is not physiologically formed to prepare it for its reception in the lungs. Almost sufficient warmth is furnished and this air reaches the pharynx but one-half to one degree lower in temperature than would have been the case had it passed through its normal channel, the nose, but here its preparation ceases and it passes unmoistened and unfiltered into the upper respiratory tract. This gives rise to a state of chronic inflammation of the mucous membrane of the mouth and pharynx, which makes them less resistant to bacterial invasion and to this very thing they are subjected with every breath taken. Osler says: "A special predisposing factor in the lymphatic tuberculosis is catarrhal inflammation of the mucous membranes, which in itself excites slight adenitis in the neighboring glands," and Wright says: "We must assume at present that the tubercle bacillus passes into the lymphatics through the mucous membranes of the naso- or oro-pharynx in a very large proportion of cases of pulmonary infection." The system already lowered by the improper oxygenation of the blood is subjected to the greater strain of air infected from bacteria being brought to a non-resistant barrier, the mucous membrane of the mouth and pharynx in a state of chronic catarrhal inflammation. Anemia is caused by deficient oxygenation of the blood and the retention of waste products in its current. These same causes give rise to mental hebetude and deficiency so that the mouth-breather not only looks stupid from the facies which it imports, but is mentally less alert than he otherwise would be as a result of the interference with the purification of the blood in the lungs. The more or less constant swallowing of the muco-purulent secretion from the chronic catarrh of the naso-pharynx, nearly always present in these cases, gives rise to gastro-intestinal irritation with all of its attendant evils. Stunted growth may, and frequently does result from the foregoing conditions alone or in conjunction.

As a result of the non-performance of its physiological function, the nose does not properly develop and the bones of the face also are undeveloped. We find also chronic inflammation of the nasal mucous membrane due to the stasis of the blood which is not freed of its serum by atmospheric contact and we soon see a pathological secretion more or less profuse constantly poured out. The hard palate instead of being a gentle curve assumes a high arched shape and this gives rise to a deflection of the nasal septum, and the secondary teeth when erupted
are irregular in their location and relative positions. The ear assumes a condition of retracted drum and lowered hearing on account of the absorption of the air contained in the middle ear and the impossibility of its renewal so long as the naso-pharynx is not utilized as a passage-way for the inspired air, or else we see a state of chronic catarrhal or purulent inflammation of the middle ear and consequent impairment of hearing.

So great is the menace to the functional activity of the ears of all nasal conditions particularly those that lead to stenosis, that it has been well said by a prominent otologist that if the rhinologist of this generation does his full duty the otologist of the next will find but little to do. Interference with nasal breathing is apt to give rise to hyperemia of the meninges with headache, night terrors, enuresis, or even epilepsy as a result.

I do not claim to have set forth anything new or original in this consideration of the evils attendant upon mouth-breathing, but it cannot be too forcibly impressed upon us that we have not done our full duty to those patients who come to us for the treatment of any condition that may result from the improper performance of the nasal function, until we have put the nose in a condition as nearly approaching the normal as possible, with the in-going air current fairly equally distributed between the two sides of the nose, for a deviated septum or any condition giving rise to stenosis of one side of the nose will cause many of the symptoms of mouth breathing, there being not sufficient warmth or moisture supplied by one side of the nose for a volume of air which nature has intended should be conducted over mucous membrane of twice as much area.

In summing up I would say:
1. The nose is the guard at the gateway of respiration.
2. Any condition, such as adenoids, deflected septum or hypertrophy, that leads to a nasal stenosis and consequent mouth-breathing is a menace to general health.
3. The nose can no longer be considered as merely two "blow holes" for the entrance of air and appreciation of odors but has a most important physiological function to serve.

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THE VALUE OF NASAL RESPIRATION.

By A. C. BARDES, M.D., of New York,
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Probably the most important function of the nose is the preparation of the air for its entrance into the lungs. Ordinarily a person breathes eighteen times a minute. With each breath twenty cubic inches of air are taken into the lungs, so that in one hour nearly 100 gallons are consumed. Air is usually colder than the interior of the body and is full of impurities. That the air from the frozen north and the tropical desert can be tempered and brought to the heat of the body in the short space of time required for its passage from the nose to the lungs is wonderful to contemplate. To effect this, the interior of the nose is provided with an extensive surface that is constantly bathed in a warm fluid. This warm mucus, of which one pint is secreted in twenty-four hours, performs a threefold service: It imparts heat to the incoming air, moistens it, and catches the dust and other impurities that may enter. This preparation of the air is absolutely necessary to render it bland and unirritating and to permit it to pass over the sensitive surfaces of the throat and lungs without any ill effects.

If for any reason the orderly working of the nose is interfered with, the mouth becomes the breathing aperture. Although the mouth can assume the function of the nose to a certain extent, it cannot do so adequately. Nature assigns to each organ its own duties, and whenever one organ assumes the office of another a two-fold injury occurs: First, an injury to the organ which is called upon to do double duty, and second to the organ whose functions are assumed, because inactivity of a part leads to its functional decay.

The trouble that most commonly disorders the nose is some obstruction of the nostrils. This trouble may be temporary or permanent, and the inflammation that it induces may extend to the ears, throat, or lungs, thereby impairing the activities of these parts. The fact that the nose is engaged in one of the most necessary processes of life—that of breathing—makes it imperative that the nasal passages should be unobstructed. Mouth breathing should never be allowed
when nasal breathing is possible. Many infectious diseases enter the body through the mouth, consequently when the nose is obstructed, the economy has lost the protection which nature has provided against the admission of impure and germ-laden air into the system.

When the mouth is used for breathing the raw air chills the throat and inflames the delicate air passages, setting up an irritation that lasts until the accumulated phlegm and the impurities of the air are expelled by coughing. Clear nasal passages, besides having a healthful influence upon the air, afford ventilation to the middle ear and the connecting chambers of the nose. Besides these functions, the nose plays an important part in the production of the voice. It is the natural sounding board and resonance chamber of the vocal organs, and as such gives to it pleasing quality. It is well known how flat and toneless the voice sounds when the nose is stopped up by a cold. Its beauty and force are degraded into a series of unpleasant sounds. Inability to use the nose for breathing causes it to become further diseased, and the mouth, through assuming this function, becomes enlarged and misshapen. A confirmed mouth-breather never has a clear voice; the vocal powers are restricted and the voice becomes fatigued and hoarse after slight exertion. Quite frequently asthma can be traced to mouth-breathing. In such cases relief can be obtained only by the restoration of nasal breathing.

Inasmuch as a common cold is the beginning of most nasal disorders, as well as of most diseases that afflict the human family, it may be well to know how it is contracted, and this knowledge will suggest the means for preventing it. The immediate effect of a cold is to chill a certain part of the body and, by obstructing the circulation, to drive the blood to another part. Assume that a person is heated and perspiring and that the blood is flowing evenly and freely to every part of the system. All at once it is subjected to a sudden change and becomes chilled. As it is a principle that heat causes expansion and cold contraction, the natural result of the chilling is a contraction of the vessels of the skin. This throws the circulation out of equilibrium, and the blood is forced to a weaker part of the body, usually the nose, which becomes distended and inflamed. As the result of the engorgement of the vascular turbinated bodies of the nose, their nervous tone becomes relaxed and they pour out a great quantity of serum.

Colds usually settle in the head in preference to any other parts because, among civilized peoples, the nose is rarely in a healthy state. It is directly exposed to the dangers of cold and impure air and to atmospheric changes. Again the breathing organs are probably the most highly organized and naturally the most sensitive parts of the body, and as a chain will break at its weakest link, the extreme delicacy of the nose makes it the first to suffer.

Too many people regard a cold as a trivial complaint and do not give it the attention it deserves. For this reason we often uncured colds constituting the basis of most chronic diseases. The course of an uncured cold may be so silent and insidious as not to be suspected until it has developed into a full-fledged and intractable disease. The distress that accompanies a bad cold is known to every one, but the real danger lies in its after effects.
Catarrhal troubles of the nose are doubtless the most common, as well as the most annoying, ailments from which we suffer. Apart from the inconvenience that the obstructed nostrils entail, a catarrhal trouble, by impairing the circulation of the head, diminishes the activity of the brain and clouds the mental faculties. Many sufferers complain of debility and want of accustomed energy, and their depressed spirits often lead them to fancy the existence of some dreaded malady, such as cancer or tuberculosis.

Catarrh of the nose is at first nothing more than an inflammation which narrows the nasal passages and still further obstructs them with unhealthy mucus. The inflammation gradually but persistently creeps down into the throat or extends to the ears. With every cold in the head the trouble grows worse, and the sufferer is carried further below the standard of health.

Catarrhal troubles in children should be attended to as soon as they are recognized. The removal of adenoids and of abnormal tonsils in early childhood will prevent the many complaints which, in after years, these growths occasion. Quite often a person with a catarrhal ailment is sent in quest of a more healthful climate, when the fault lies in the nose rather than in the atmosphere. Persons of sedentary habits, who spend most of their time indoors and take but little exercise, are particularly subject to catarrhal colds. As a rule they keep their rooms too warm and they wear an excess of clothing—measures which enfeeble the constitution and undermine the health.

Usually the less clothing we are accustomed to wear the less susceptible are we to colds. This is the basis of the Kneipp cure, simply a return to natural and primitive conditions, when men were scantily attired and disease was almost unknown. Our early ancestors, like the present-day savages, wore little or no clothing; but as they became civilized they also became vain and, more for ornament than for protection, they gradually increased the amount of clothing. It is a mistaken impression that the breathing organs ought to be well shielded from the cold. The neck and chest are better protected by a cold sponge bath and by porous underwear than by chest pads and mufflers.

For the maintenance of good health one must live in an atmosphere that is constantly changing. The poorly ventilated and overheated apartment of the rich and the crowded and ill-ventilated rooms of the poor are responsible for most of the debilitating throat and lung complaints in our large cities, and the key-note of their prevention and cure is more out-door living and more perfect ventilation. The constant fear of draughts leads many to exclude from their rooms the wholesome fresh air that is so essential to health; naturally the supply of fresh air is soon exhausted and they are compelled to breathe over and over again air which has already been deprived of oxygen, and which is contaminated with the poisons of their breath. Apartments to be healthful should be moderately heated, well ventilated and dry.

317 East Thirteenth Street.
EDITORIAL.

RADIIUM RAYS IN CANCER.

Medical circles in Vienna are greatly interested in a report communicated to the Viennese Society of Physicians, and read at a recent meeting of the Imperial Academy of Science, to the effect that a long standing case of cancer was cured by radium rays at the clinic of the late Professor Gussenbauer.

The patient, who was sixty-one years of age, had long suffered from cancer of the palate and lip, and had repeatedly been operated upon fruitlessly until the autumn of 1902, when the physicians of the Viennese Hospital declared it was absolutely useless to operate again.
One physician determined as a last resort to try radium rays, and treated the afflicted parts by exposing them to the light of radium bromide, the strongest radium preparation in existence. He was rewarded by a gradual and complete disappearance of the tumors.

Physicians at the same meeting reported that radium rays had cured a case of melanosarcoma and several cases of red mole.

MEDICAL JOURNAL CONSOLIDATION.

The Philadelphia Medical Journal, which was founded a few years ago by Dr. George M. Gould, has given up the ghost. Its assets have been taken over by the New York Medical Journal, but a Philadelphia office will be maintained, for the time being at least.

The demise of the Journal is ascribed to various causes. The president of the publishing company gives a death certificate, "too much ethics," while the editor-in-chief contradicts this and signs another certificate of "too much commercialism." It is evidently a case for the coroner, owing to the conflicting statements of the physicians who were present when the patient expired.

To those who are conversant with the facts, it looks as if the editors declined to follow the policy laid down by the publishers, and as the latter owned the journal and believed they had the right to conduct their own business as they saw fit, sold out when they found a customer.

The weekly field is still well covered, and the New York Medical Journal will, no doubt, shine more effulgently than ever with the added strength given it by its Philadelphia contemporary.

THE DEATH OF DR. LOVE.

The sudden taking away of Dr. Isaac Newton Love, editor of the Medical Mirror, came as a great shock to his thousands of medical friends. Cheerful, urbane and courteous, he stood out as one of the marked men of the profession. His friends were legion, and it was given to few physicians to possess the varied characterists which composed Love's make-up. Although a resident of New York but a few years, he had obtained a large clientele and was rapidly forging his way to the front.

The world is better because Isaac Newton Love lived, and mankind is poorer because of his untimely taking away.
ANNUAL MEETING OF MEDICAL SOCIETY OF NEW JERSEY.

New Jersey's State Medical Society, the oldest organization of physicians in the United States, met June 23 in its 137th annual session in the Coleman House, Asbury Park. Despite the inclement weather, the attendance was unusually large.

At the initial meeting the delegates were tendered the freedom of the city by the Common Council.

The report of the committee on the revision of the constitution and by-laws was presented by Chairman Philip Marvel, of Atlantic City. It suggested that the constitution and by-laws of the society be amended so as to conform to that of the American Medical College. Consideration of the report was deferred until the afternoon session, when it was adopted.

At the afternoon session the annual reports of the corresponding secretary, recording secretary and treasurer were submitted, as was also the report of the committee of legislative action on bovine tuberculosis.

Dr. R. C. Newton, of Montclair, reported for the special committee on milk as a food and a means of contagion. Dr. Joseph Tomlinson, of Bridgeton, chairman of the committee on the present methods of education from the standpoint of the physician, read his report, in which he urged that a practicing physician be appointed by the governor as a member of the State board of education, a complete compulsory medical inspection in the public schools and the introduction in the public schools of a department of physical education.

In the evening President E. L. B. Godfrey gave the annual address on "The Educational Standards of the Medical Profession of New Jersey, Past and Present." This program followed:

"Progress in State Medicine and Hygiene." J. L. Leal, Paterson.


"Progress in Surgery." Charles Young, Newark.

"Progress in Ophthalmology." Talbot R. Chambers, Jersey City.

"Progress in Medicine and Therapeutics." W. H. Ireland, Camden.

"Serum Therapy in the Treatment of Tetanus." B. C. Pennington, Atlantic City.

Discussion opened by H. C. H. Herald, Newark; David St. John, Hackensack.


Discussion opened by O. R. Blanchard, Jersey City; W. F. Faison, Jersey City.

"Osteopathy" (The term a misnomer. What the system really is. Origin and extent of the practice. Legal standing in this State). Daniel Strock, Camden.

The most important report submitted was that of the committee on legislation. Chairman L. M. Halsey, of Williamstown, told how the undertakers, osteopaths and opticians attempted to secure official recognition from the recent New Jersey Legislature, and how their efforts were checked by the State Medical Society, who managed to defeat or hang up in committee the bills licensing these individuals. Dr. Halsey predicted that the opticians and osteopaths would make similar attempts next year, and urged that the committee on legislation be enlarged so as to include a representative from each county medical society. This committee should then organize at once and prepare to oppose vicious legislation and procure proper laws to safeguard the public. The suggestion was agreed to.

Dr. John Foreman, of Freehold, was cleared of the charge of violating the medical code of ethics preferred by Dr. John Taylor, of Newark.

Dr. Foreman consulted with Dr. J. F. Ackerman, of New York, who practiced both allopathy and homœopathy. Dr. Taylor's charges made a sensation when preferred.

The petition that the society support the
Atlantic County Medical Society in its fight to have the charter of Dr. H. Walter, of Atlantic City, revoked, because he grants diplomas, was discussed and finally referred to the judicial committee. It was said Dr. Walter represents himself to be a graduate of the University of Pennsylvania Medical School, and that he is a graduate only of the veterinary department. It was also said that Dr. Walter grants diplomas in violation of a State law.

This program was carried out Wednesday morning:

Essay by the Third Vice-President, W. B. Johnson, Paterson. "The organization and operation of Hospitals and other Charitable Institutions in the State of New Jersey."


Discussion opened by T. H. McKenzie and Alexander Armstrong, of Trenton.


Discussion opened by Edwin Field, Red Bank; Philip Marvel, Atlantic City.

"Infantile Colic." Alexander McAlister, Camden.

Discussion opened by Dr. W. E. Darnall, Atlantic City; R. Marshall, Tuckahoe.


Discussion opened by J. C. McCoy, Paterson; Mortimer Lampson, Jersey City.


Discussion opened by Emery Marvel, Atlantic City; Philander A. Harris, Paterson.

"Some Practical Methods of Hydro-Theraphy for General Practice." Elliot Gorton, Fair Oaks, Summit.

Discussion opened by A. H. Small, Riverside.

In the afternoon these subjects were discussed:

"Some Diseases of the Eye Due to Nasal Infection." S. Zeigler, Philadelphia.

Discussion opened by E. F. Hart, Jersey City; W. P. Eagleton, Newark.

"Two Cases of Transient Complete Blindness of Both Eyes." C. J. Kipp, Newark. (1st Case—Amaurosis from auto-infection, 36 hours' duration, recovery. 2d Case—Idiopathic optic neuritis, 3 weeks' duration, recovery.)


"Acute Inflammation of the Accessory Sinuses of the Nose." (Frequency, importance to the general practitioner. How to study the sinuses. Etiology, pathology, anatomical relations. Diagnosis and treatment.) N. L. Wilson, Elizabeth.

Discussion opened by T. R. Chambers, Jersey City; J. F. Chattin, Trenton; W. P. Eagleton, Newark.


Discussion opened by George H. Balleray, Paterson; Emil A. Guenther, Newark; H. G. Norton, Trenton.

"Pneumonia Simulating Appendicitis." (Details of eight cases in children, in which symptoms of appendicitis were substituted for those of pneumonia; so completely in some cases that operation was considered. Similar cases in medical literature.) Dr. J. P. Crozier Griffith, Philadelphia, Pa.

Discussion opened by D. C. English, New Brunswick; E. W. Hedges, Plainfield.

Discussion opened by G. E. McLoughlin, Jersey City; J. J. Bauman, Jersey City.

"Unusual Malformation in the Female Generative Organs." Emery Marvel, Atlantic City.

Discussion opened by Paul M. Mccray, Camden.


Discussion opened by F. C. Ard, Plainfield; W. B. Johnson, Paterson.

"Court Testimony of Medical Experts in Mental Diseases." B. D. Evans, Morris Plains.

Discussion opened by J. W. Ward, Trenton; J. D. McGill, Jersey City.

The annual banquet was served in the evening at the Coleman House. The list of toasts follows:

“Our Society,” Dr. D. M. Skinner, of Jersey City; “Our Fellows,” Dr. David C. English, of New Brunswick; “Our Vice-Presidents,” Dr. Walter B. Johnson, of Paterson; “Our Specialties,” Dr. Talbot R. Chambers, of Jersey City; “Our Honorary Members,” Professor Cyrus F. Brackett, of Princeton University, and “The Physician as a Citizen,” by former Secretary of State George Wurts, of Paterson.

The spacious dining room was crowded, and the toasts were of the highest order. Later, the physicians enjoyed a hop given in their honor by the proprietor of the hotel.

The meeting came to a close Thursday morning, when this program was followed:

Presentation of pathological specimens, new instruments and apparatus, and reading of such papers as may be approved by the Business Committee.


Discussion of the question proposed by the Business Committee: “Vaccination. How long does it protect? How shall it be controlled? What are its sanitary and commercial aspects?”

Discussion opened by G. E. Reading, Woodbury; J. W. Fithian, Camden.

“A Case of Amoeba-Coli-Dysentery.” Philip Marvel, Atlantic City.

“Report of a Case of Cesarian Section for Pelvic Deformity,” also “The Relation of Medical Education to Preventive Medicine.” George H. Balleray, Paterson.

The discussion on vaccination was the most interesting subject at the closing session. Dr. G. E. Reading, of Woodbury, claimed that the existence of smallpox was a disgrace to civilization, and should be stamped out, as it readily could be but for the prejudices of legislatures which seemingly could not be controlled. It was further urged that every child should be vaccinated in infancy and that the operation should be repeated in adolescence whenever there was danger of contagion. So-called dangers from vaccination were pronounced purely imaginary.

The officers elected for the coming year are:

President, Henry Mitchell, of Asbury Park; first vice-president, A. W. Taylor, Beverly; second vice-president, Walter B. Johnson, Paterson; third vice-president, Henry W. Elmer, Bridgeton; corresponding secretary, E. W. Hedges, Plainfield; recording secretary, William J. Chandler, South Orange; treasurer, Archibald Mercer, Newark.

The standing committees were continued with a few slight alterations. Charles A. Kinns and E. J. Marsh were appointed delegates to the American Medical Society. William F. Faison, of Jersey City, is alternate.

The society, by vote, decided to hold the next annual convention at Atlantic City.
CLINICAL NOTES.

IMPAIRED DIGESTION OF INFANTS—PARTICULARLY BOTTLE-FED BABIES.

By F. H. MUNROE, M.D., Newark, N. J.

The first few months of the baby's existence are fraught with much anxiety to both mother and physician.

The stomach, just beginning the functions for which it was created, is somewhat loath to accept the changed conditions; it frequently rebels at having to perform the act of digestion as it should, and rejects the food committed to its care.

Sometimes the cause of this rejection may be over-feeding, but much more frequently it is due to hyperacidity caused by fermentative changes in the food itself.

Particularly is this true of bottle-fed babies, and in the trials of food necessary to discover the one that best agrees with the baby, much time is lost and much worry is caused.

The very nature of artificially prepared foods predisposes to their rapid fermentation, and the progress of digestion is begun before the food leaves the laboratory.

Added to this condition is that of slight uncleanness, which frequently exists in spite of the persistent use of boiling water in the bottle, tube and nipple. Even a strong solution of borax or bi-carbonate of soda is not sufficient to thoroughly remove the particles of food and prevent the excessive fermentation and its sequelae, namely, colic, vomiting and diarrhea.

The only rational method of treating this dreaded condition is to assist nature in her efforts to establish a normal process of digestion, and overcome the too active fermentation taking place in the stomach and intestines. Investigation has shown that these abnormal conditions may be readily overcome and normal conditions restored by the internal administration of Glyco-Thymoline in small doses, and its further use in cleansing the tube, bottle and nipple.

Ten drops of Glyco-Thymoline added to each two ounces of feeding will usually be sufficient to correct hyperacidity and prevent diarrhea, but larger dosage are necessary in cases where diarrhea has already set in.

I submit two cases of fermentative indigestion.

Case I.—An infant, fourteen months old; fed on a modified cow's milk, suffered from vomiting after feeding, eructations of gas and colic, which persisted until relieved by the passing of wind; vomited matter very sour-smelling. The diarrhea movements were attended by pain and contained mucus of a greenish color—all the symptoms pointed toward an intestinal fermentative indigestion.

I used several remedies in this case, with indifferent results. Finally I prescribed Glyco-Thymoline, ordering ten drops to be put into each two ounces of food, the bottle and nipple to be washed with a twenty-five per cent. solution, and the nipples, when not in use, to be kept soaked in it.

The effect was immediate. Within twelve hours there was a decided improvement, and within twenty-four hours all the serious symptoms had entirely disappeared and a normal condition was restored.

Case II.—Child, almost two years old. Fed on milk, cereals and carefully selected diet.

The symptoms much the same as in the above described case, but the diarrhea was more severe and tenesmus and pain more marked, with bloody stools, apparently a severe dysentery.

Microscopical examination of the stools showed the presence of a fungus of the yeast plant variety.

The colon was flushed twice daily with Glyco-Thymoline solution, two tablespoonfuls to a pint of water, by high rectal tube, and a teaspoonful of Glyco-Thymoline by mouth every four to six hours. This was followed by marked improvement in every way.

I have given this remedy internally and by rectum in other cases, and it has become one of my "sheet anchors" in the treatment of intestinal disorders, both in babies and older people.
PRACTICAL EXPERIMENTS IN THE TREATMENT OF ANEMIC CONDITIONS.

By FRITZ EULER ROLLE, M.D., of Vienna.

Translated from Wiener klinische Rundschau (Vienna, Austria), March 29, 1903.

In the following I desire to describe in some detail the action of an iron preparation which, owing to its great advantages, deserves a permanent place in our materia medica. The preparation referred to is Pepto-Mangan (Gude), which unites in a fortunate manner those qualities which we have a right to demand of a ferruginous remedy. In the first place it contains besides iron a second constituent of importance in the formation of blood, namely, manganese; and, secondly, both of these are present in a neutral solution, which is the more to be valued since because of this fact it disturbs neither the gastric nor the intestinal functions. For this reason we are enabled to submit every case of chlorosis at once to ferruginous treatment, irrespective of the condition of the gastro-intestinal tract.

In my own experiments with pepto-mangan I have exceeded the limits of its indications hitherto maintained, inasmuch as I became convinced that this preparation should not be confined especially to cases of chlorosis and anemia, but would effect improvement in other diseases attended with weakness and exhaustion, or at least maintain the nutrition of the patient, since the peptone which it contains acts as a nutrient and deserves consideration. On this point of view I based the first series of experiments, consisting of 11 cases, in which the general result was very satisfactory. These comprise 1 case of tabes with gastric crises, 1 case of obstinate vomiting in pregnancy, 1 case of esophageal cancer with severe stenosis, 4 cases of diabetes mellitus of slight degree, 3 cases of the uric acid diathesis with arthritis, and, finally, 1 case of leukemia. The second series of observations related especially to cases of chlorosis and secondarily anemia, the latter comprising 14 cases, so that altogether 25 experiments were made.

In the following I have made a selection from this number, and almost every case illustrates the remarkable value of the preparation.

J. P., aged 33 years, consulted me June 2, complaining of constant vomiting and very violent colicky pains which occurred soon after taking food of any kind. The vomited matter contained almost always the entire food ingested, and on one occasion a moderate quality of black coagulated blood. Pressure upon the stomach was quite painful. The diagnosis of ulcer of the stomach, to which the symptoms pointed, was discarded after a more thorough examination revealed symptoms characteristic of a tabes dorsalis. The patient within a short time had become markedly emaciated, having lost eight kilos in weight. He had acquired syphilis 12 years previously during his military service. The attacks affecting the stomach therefore proved to be gastric crises. After they had diminished in frequency and intensity under the use of hot poultices and strict diet, pepto-mangan was prescribed at the beginning of July. At first three tablespoonfuls were given daily, added to milk, and later, when it was found that the preparation was well tolerated, it was increased to six tablespoonfuls. After the sensitiveness of the stomach had gradually subsided the patient could be discharged from treatment in the middle of August, having regained his weight with the exception of a trifle, while the crises had completely ceased.

In a case of uncontrollable vomiting in an anemic woman, 24 years old, during her first pregnancy, pepto-mangan was administered in the quantity of three tablespoonfuls daily, to which were added small amounts of cold milk. Hot applications with the thermophor were also employed. After less than four weeks the patient was discharged from treatment improved, without any loss of weight.

I am able also to report two cases of dis-
eases of the metabolism, namely, one of diabetes mellitus of moderate degree, and one of the uric acid diathesis. The subject of the former was a man 40 years old, who since two and one-half years had constantly excreted a variable quantity of sugar in the urine. He stated that while the amount at first was only 0.7 per cent., it had increased and finally reached 3.21 per cent. After being placed on exclusive animal diet there was always a gradual subsidence of the glycosuria, the sugar disappearing completely from the urine after about 14 days. In the course of time, however, he acquired an unconquerable repugnance toward any form of animal food, and the supply of albumen could only be augmented by the addition of nutritive preparations to milk, of which he took about a quart daily. Peptomangan was administered regularly in quantities up to 6 tablespoonfuls daily, chiefly to relieve the marked anemia present, which it did excellently.

Another patient, 58 years old, who had suffered since four years with arthritis urica, had passed three months previously through an acute gouty attack, which yielded to iodide of potassium, the former attacks having been relieved by the salicylates. The diet, which had always been somewhat abundant, was thoroughly regulated, and for a long time the patient took meat only at his midday meals, with the proportionate addition of green vegetables and some fruit, while his breakfast consisted of coffee with milk or thin cocoa, with two tablespoonfuls of pepto-mangan, and a roll, and his supper of butter, eggs, etc., and two tablespoonfuls of pepto-mangan. No recurrence of the acute gouty attack has taken place after a lapse of five months, and subjectively also the patient feels well under this regimen.

Another observation relates to a peasant girl 24 years old, with leukemia. Besides the medicinal treatment with quinine and arsenic, pepto-mangan at first three tablespoonfuls, later six tablespoonfuls, was added to the milk. The patient also received a mixed diet. At the end of two months she had gained 2½ kilos in weight. I take the liberty of reporting a case relating to chlorosis characterized by severe symptoms, and illustrating very graphically the prompt action of this chalybeate.

The case was that of a girl, 18 years old, who presented a well-developed type of marked chlorosis. There was marked anemia of the general integument; the mucous membranes were very pale, and she suffered since the last fourteen days with persistent headache and buzzing in the head. This was accompanied by palpitation and a feeling of weakness, as well as pronounced edema of the lower extremities up to the middle of the leg. Her menstruation was very irregular and profuse. Examination of the blood showed a much reduced color index, 20 according to Fleischel's method. The number of red blood cells was reduced to 3,100,000, the white not being materially increased. Although the patient had taken the greatest variety of iron preparations, they were not well tolerated. I therefore decided to administer pepto-mangan (Gude), enjoining at the same time rest in bed, which seemed indicated, if for no other reason than that of the condition of the heart and the attacks of weakness. The patient received at first two tablespoonfuls, and after a few days three tablespoonfuls of the pepto-mangan, and this amount in the third week was increased to five tablespoonfuls daily. The effect was truly surprising; without the least disturbance of the gastro-intestinal tract, considerable improvement of her entire condition had occurred at the end of four weeks, so that she was able to be up and about. She had a good appetite and menstruation was regular for the first time in months, while the cardiac palpitation, headache and buzzing in the head, as well as the edema, had vanished. Examination of the blood showed 3,980,000 red blood corpuscles and a hemoglobin percentage of 50 (Fleischl). After another four weeks the patient was completely restored to health, with a hemoglobin percentage of 70 and an increase in the number of red blood cells to 4,200,000.
ABSTRACTS FROM THE BEST JOURNALS.

MEDICINE AND THERAPEUTICS.

Nervous Complications of Influenza.

M. J. Hallé, in Press médicale, reviews the changes in the nervous system which can follow an attack of grippe. Meningitis, either spinal or cerebral, may appear, and be of the congestive, serous or suppurative variety. Cerebrospinal meningitis may be evoked by the bacillus of influenza and may, in its course, be subjected to secondary infection. Hemorrhage and cerebral softening may appear as a sequel to the disease, and symptomatic epilepsy has been observed. Grippal myelitis is not rare and the transverse dorsolumbar type is the most common. The spasmodic form of grippal myelitis is marked by pain in the extremities, exaggerated reflexes and epileptoid tremors, but sensation and the sphincters are usually intact. Ascending myelitis has been noted. Syncope, accompanied by Cheyne-Stokes' breathing and usually fatal, is not rare. One case of bulbar paralysis with nuclear ophthalmoplegia has also been recorded. Among the neuroses, coma, asthema, hysteria—the last very commonly—epilepsy in predisposed subjects, and tetany, have been reported as sequels to influenza. Among the psychoses, melancholia, mania and the renewal of former mental disturbances, have been noted. Peripheral neuritis and peripheral paralysis and neuralgia have also been commonly seen.

Pemphigus Chronicus.

Frick reports in J. A. M. A. a case of pemphigus chronicus, which occurred in a married woman, 53 years of age. The disease had existed for more than two years when the patient came under observation. The mucous surfaces of the labia majora were first involved. In June, 1892, the eruption appeared on different parts of the body in the following order: inside the thighs, on the legs, arms, breasts, abdomen, neck, outside the thighs, back of hands, feet, face, scalp, mucous membrane of mouth and soles of feet. The palms of the hands were not involved. Erythematous patches were observed for a part of the time, but these seemed to have no influence on the bullous eruption. The patient's general condition was fairly good, except that rigors and heat flashes were frequent. The temperature ranged from 100° to 100 2-5° for a period of about 2 months. The urine contained a slight amount of albumin and a few coarse granular casts. A bacteriological examination of the fluid from the blebs gave the following results: The staphylococcus pyogenes albus was isolated and also a bacillus which resembled in its morphology the bacillus typhosus and grew readily on agar-agar, gelatine, potato and bouillon. The organism was motile and was colored by Gram's method. The period of profuse eruption was from June until late in August, and about September first the bullae diminished rapidly and disappeared in all parts of the body except on the mucous surfaces of the labia. The patient also gained strength and appeared to be in normal health. The treatment consisted in giving the patient a nutritious diet, rest in bed, and the administration of tonics, especially arsenic. Antiseptic baths gave the patient much comfort; these consisted of bichloride and boracic acid, the former being used in 1:5000 solution. Weaker solutions were also employed.

The Kidneys in Scarlet Fever and Diphtheria.

O. Heubner, in Munch. med. Woch., says he has examined the kidneys in two cases of pure scarlet fever, in which death was the result of cardiac weakness and uremia, and two cases of diphtheria, not complicated with either bronchial or pulmonary disease. Small pieces of kidney were hardened for one day in 10-per cent. formalin, cut with a freezing microtome, overstained with hematoxylin, differentiated with hydrochloric acid, and counterstained with eosin; other pieces were placed in 1-per cent. solution of hydrochloric acid and formalin, and kept in an oven for months for the purpose of dissolving out the connective tissue and leaving the uninfirmer tubes intact. In the scarlet fever cases he found exquisite hemorrhagic disease with especial involvement of the glomeruli, and secondary disease of the renal epithelium. The epithelium of the canals nearest the glomeruli had degenerated and become mixed with coagulated blood; the straight tubules contained hyaline casts and epithelial detritus. In the diphtheria cases there were few hemorrhages, and they were found in the straight tubules. The primary disturbance here was the degeneration of the epithelium of Henle's loop, its ascending limb, and the convoluted tubules.
Aural Vertigo.

H. Jackson, in Polyclinic, reports that it is not always possible to distinguish epileptic and aural vertigo. After attacks of unconsciousness cease to recur and vertigo alone persists, the condition may be recognized as one of aural vertigo. This has three distinct symptom groups, viz.: (1) auditory, such as deafness, tinnitus, etc.; (2) locomotor, in the form of reeling, etc., associated with abnormal ocular movements which lead to erroneous visual judgment; (3) vital—disturbances of the great centers which regulate digestion, circulation and respiration; such symptoms as nausea, vomiting and prostration result. The mechanisms which correspond with the first and second are as follows: The auditory commenced at the cochlea, continue through this portion of the auditory nerve to the muscular region in the medulla, and are completed by the supranuclear connection, ending in the auditory center in the cerebral cortex; the motor evidences originate in semicircular canals, through the vestibular nerves to the nuclear region in the medulla, and continue upward to end in the cerebellum. The third symptom group has not been physiologically demonstrated.

Neurasthenia in Childhood.

Dr. Luigi Capelletti, in Riformi medica, in an instructive article brings out the fact that neurasthenia is not, as commonly believed, the sole heritage of the adult, but, on the contrary, is quite often found in childhood before the period of puberty. The ordinary belief that in youth there is nothing to cloud the mind and that the nervous system is not exhausted as it is in adults, has had its reflection on the view taken by most physicians who deny the existence of neurasthenia in children. In 1889, Boeadiff showed the characters that neurasthenia may assume in childhood, and a number of authors before him have treated of this disease in the early years of life—the so-called Beard's disease in children. The present author reports two cases of marked neurasthenia in children which he cites as examples. In children neurasthenia is somewhat masked, and, therefore, is not generally recognized. According to Boeadiff, all the signs of neurasthenia may occur in children. The following symptoms should be especially looked for: (1) Loss of attention, so that the child does not progress well in study at school. (2) Taciturnity and melancholy moods, irritability, restlessness. (3) Exaggerated or deficient memory. (4) Loss of will power. (5) Unreasonable fear of school. There are besides, the following physical symptoms: Headache, feeling of "chilling" perspiration, slight vertigo, insomnia, muscular debility, loss of appetite, sense of fullness in the epigastrium, occasionally vomiting, constipation, rarely diarrhea, in some cases dilatation of the stomach, emaciation, a yellow color of the face and a coated tongue. Frequently there are also sexual excitability, sometimes emissions, an irritable heart, a variety of vasomotor phenomena, such as blushing, sense of cold and heat, etc.

The symptoms cited here have been observed by the present author, but there is one psychic symptom which he has noticed particularly, and which he regards as characteristic of neurasthenia in children and different from a great tendency to constant doubt in the mental operations of these children. Doubt permeates all their thoughts and actions, just as it does in the case of adult neurasthenics. This symptom is so constant and so marked in neurasthenic children, that its discovery is very significant in the diagnosis of a case. The element of doubt in the psychic state of a child is more noticeable in children than in adults, as a child naturally tends to be impulsive, and does not indulge in self-analysis at each step as does the neurasthenic adult. The author thinks that attention to this symptom and to the other signs mentioned, will render cases of neurasthenia in children recognizable at an early stage, and that proper physical and psychological treatment, increasing the will power and strengthening the exhausted nervous system, would prevent the deplorable consequences of neurasthenia in adult life.

Colon Infection Stimulating Typhoid Fever.

Joseph Evans and Joseph Sailer report a case in U. of P. Med. Bul. which, though incompletely studied, still indicates that it is not impossible that some obscure cases of continued fever in which the blood does not react either to the typhoid or para-colon bacilli, may be actually due to general colon infection. The numerous tests that were made in this case tend to prove that although typhoid sera will sometimes agglutinate the bacillus coli communis, yet not in as high dilutions as the "bacillus typhosus"; also, that this case was not one of simple continuous fever, but was really a colon infection; again, that it was not a case of typhoid infection with delayed Widal reaction. The case appears to be one of pure colon infection with the colon bacillus similar to that used in making the
tests—the bacillus that was isolated at the Pasteur Institute in Paris. Unfortunately a blood culture could not be made, and it cannot be known positively whether a similar micro-organism was present in the blood of the patient or not. Certain sources of error must therefore be considered theoretically possible. The present culture, however, was recognized as colon at the Pasteur Institute. It ferments all sugars; it gives a strong indol reaction, and therefore is identical with the colon bacillus according to all the usual differential tests. It is, however, actively motile. The blood of the patient did not give any reaction with proved cultures of the typhoid bacillus, nor with four varieties of the paracolon bacillus. Hence, the infection was presumably not typical of any of these forms. The most reasonable hypothesis with regard to this case is that it was one of infection with the colon bacillus, and resembled in its clinical course an infection with the typhoid bacillus. Examination of the literature has not so far discovered another case of this nature.

Poisoning by Corrosives.

Eli H. Long says, in Medical News, that by corrosive action is meant that immediate disorganization or coagulation of tissue that occurs upon contact with poison. Nearly all corrosives are strong chemicals. The fact and the nature of their destructive action depend upon their chemical affinities. The severity of action depends upon concentration rather than upon quantity. Leaving out the halogens and arsenic, the following groups of corrosives may be considered: Mineral acids, caustic alkalies, coagulants. The mineral acids all coagulate albumin in addition to their affinity for bases. The caustic alkalies, by reason of their common affinities for water and acids, act similarly. They do not coagulate albumin. The coagulant corrosives act differently according to the affinities presented by each. Carbolic acid possesses the simple affinity for albumin, while the metallic compounds, when decomposed, have also the action of the liberated acid in addition to the coagulant action. The employment of a chemical antidote is most important, but even more important it is to dilute the poison largely by a copious draft of water without reference to the character of the poison. Corresponding closely to the three groups of poisons under consideration, the chief antidotes of practical value are: Dilute alkalies, dilute acids, albuminous substances. After administering the chemical antidotes, emesis should be favored, unless already excessive, by copious drafts of warm water. When the poison has been removed, demulcents should be employed to soothe the corroded tissues, and they should be left in the stomach to prevent further damage to its walls by friction.

Empyemata in Children.

P. S. Blaker, in British Medical Journal, writes an article based upon a personal experience of eighty-one cases of empyema in children. He divides the cases into two main groups: “acute,” or “primary”; and “late,” or “secondary,” the latter comprising about 80 per cent. of all cases. Nearly all cases of empyema in children are associated with pneumonia, either lobar or lobular. An empyema due to initial disease of the pleura alone must be a very rare affection. An empyema almost always begins as such, and very seldom as a simple effusion. In the acute cases, the signs of fluid in the chest develop simultaneously with those of pneumonia, and the patient is very ill from the start. There is vomiting, marked dyspnea, cyanosis and high temperature. Signs of fluid are heard over the chest, and puncture with a needle brings away a thin purulent fluid. In such cases death practically always occurs when the patients are under two years old, from extensive consolidation of the lungs, meningitis, pericarditis, or peritonitis. As a rule, the fluid withdrawn from the chest is teeming with pneumococci. In the secondary cases, the prognosis of which is much better, there is no lung consolidation, and the patient has an empyema pure and simple. Pneumococci were found in 65 out of 69 cases. Tubercle is a very rare cause of empyema in children; it was found in 3 out of 23 autopsies. As stated, before, the younger the patient the less the chances of recovery. A mixed infection, due to pneumococci and streptococci, is of bad omen.

All the cases were treated by opening the pleural cavity and draining it. Rib resection was done in 52 cases, and simple incision in 26. Of these latter 12 patients recovered and 14 died.

The after treatment is most important; the tube should be removed as soon as possible. After the second day it should be taken out daily, cleaned, boiled, shortened and reinserted. When the discharge becomes thin and watery, the tube should be taken out altogether, being replaced by a thin gauze drain for a day or two. Aseptic dressings are preferable to antiseptic ones.
SURGERY.

Surgical Treatment of Medical Nephritis.

Dr. Dario Maragliano, in Gazzetta degli ospedali e delle cliniche, criticizes the work of the different investigators who have been engaged in the study of the possibilities of surgical treatment in Bright's disease. His article contains a sketchy review of the work done since the time of Harrison, of London (1866), in the field of surgery for nephritis, but the portions which refer to the work of Pousson (Bordeaux), and of Edebohls (New York), are of special interest. As regards Edebohls he says that this author, in a letter to the editor of the Medical Record, Vol. 40, No. 25), presented the results obtained in eighteen cases of chronic nephritis by surgical intervention. Edebohls started from a principle entirely different from that of the other observers in this field, and held that instead of nephropexy, nephropexy with renal denudation was the desirable procedure in the treatment of chronic nephritis. Edebohls had observed that nephritis was cured by nephropexy, and this accidental result he applied in eighteen cases. Of these cases, eight were worthy of consideration, as in the remaining ten the time that had elapsed after the operation was not sufficient to base any conclusions on them. The eight patients whose histories are analyzed by Edebohls were, according to this writer, completely and permanently cured of their nephritis by nephropexy in virtue of rich adhesions which formed between the denuded parenchyma of the kidney and the lumbar wall. This, according to the author, so improved the nutrition of the kidneys that their tissues became regenerated and healthy. The operation performed by Edebohls was virtually the nephrolysis suggested by Rowling (in 1902). Even without nephropexy, which is entirely unnecessary if the kidney is in place, the present author thinks, some new vessels would form after the denudation of the kidney, and these would probably be of more value than the diminution in renal tension. The latter would, at all events, be only temporary, for the sclerotic process which goes on after denudation would form a new capsule which would compress the kidney as much as the old capsule did. It is doubtful whether the cases cited by Pousson and Edebohls were in reality cases of Bright's disease, for chronic nephritis does not necessarily mean Bright's disease. For example, Israel says that nephrotomy may be of benefit in some instances of chronic nephritis, but not in Bright's disease. The fact that Edebohls and Pousson speak of unilateral nephritis makes this doubt stronger for Bright's disease is the result of changes in the entire organism—a systematic disease. The denudation of the kidney may, however, be of benefit in chronic nephritis in which the parenchyma of the kidney is alone the seat of pathological changes. It is possible that this operation may decrease the excess in renal tension and evoke the formation of new vessels which promote the nutrition of the organ.

Blastomyasis of Skin from Accidental Inoculation.

The patient of Newton Evans was a physician aged twenty-eight years, who inoculated himself on the finger at an autopsy made on a patient dying from systemic blastomycotic infection. The general features of a pus finger soon appeared with ensuing involvement of the arm. Incision and curetting of the finger removed a fungous mass extending down to the tendons. The wound was packed and allowed to heal in the usual way. During healing there was a slight febrile reaction, and after a crust had formed over the incised surface it was noted that little pustules were forming around and beneath the edges of the crust. These were evacuated. The tenderness was not marked. There also formed on the back of the hand in the subcutaneous tissue, over the metacarpal bone of the index finger, a small nodule of the size of a split pea, at first hard and later softened. This was not painful. It remained for from six to eight weeks, gradually growing smaller and disappeared. Simultaneously with the appearance of this nodule, a somewhat similar nodule appeared on the palmar surface of the affected finger, about one-half an inch above the lesion. This lesion contained a very small pus cavity, just beneath the epidermis, which was evacuated a number of times and decreased in size, but was not entirely healed at the time the case was reported. The granulation tissue removed by the curetting showed very little remaining epithelium on the surface, a mass of necrotic tissue occupying its place. Beneath the epidermis the corium was filled with a dense cellular exudate, for the most part consisting of polymuclear leucocytes. Scattered about in this tissue were found numbers of the typical, doubly-contoured, budding organisms, exactly identical in appearance to the organisms found in immense numbers in the case on which an autopsy was performed and from which the disease
presumably was contracted. The paper, in *J. A. M. A.*, closes with general considerations on blastomycotic infection.

**Otorrhagia in Hemophilia.**

Tomka Somer has related the history of a child two and a half years of age, restless, with a temperature of 39.2° C. (102.5° F.), suffering from acute otitis media. Paracentesis was performed. The pain and fever disappeared at the end of five days. Politzer. There was a very slight discharge. Two days later there was hemorrhage from the ear without apparent cause. The part was tamponed with sterilized gauze saturated with a solution of alum. Cold and hot injections into the ear were without results. Ergotin internally had no effect.

At one day of patient's illness and abundant hemorrhages which threatened the patient's life, they ceased suddenly and, four days subsequently, the opening of the drum-head was closed. There had been no flow of blood through the Eustachian tube.

Rohner, Haug and Ziem alone have described similar cases among bleeders. We should distinguish between hemorrhages produced in the course of intratympanic operations and those due to traumatism of the artery or jugular vein. Those from the vein may be arrested by the tampon. In a similar case, where paracentesis had been done by the thermocautery, the patient succumbed to pyemic thrombophlebitis.

Traumatisms of the carotid are only possible when there is congenital malformation of the anterior wall of the tympanum. Malformations of the posterior wall, which explain the presence of the jugular in the cavity of the middle ear, are either congenital or pathological (senile atrophy, rachitis and caries).—*Revue Hebdomadaire de Laryngologie, etc.*

**The Mortality in Appendicitis.**

A. J. Ochsner, in *Medical News*, finds that: (1) the treatment suggested, while it cannot supplant operative intervention in acute appendicitis, is capable of reducing the mortality by changing the class of cases in which the mortality is greatest after operation, into another class in which the mortality is very small. (2) All cases of acute appendicitis, whatever the final proposed treatment is to be, should be treated as follows: (a) Absolutely nothing must be given by the mouth. The necessary food and water must be given by enema. Absolutely no cathartics must be given. (b) In cases in which there is nausea or vomiting or food and mucus in the stomach, gastric lavage must be employed so as to put a stop to the peristalsis. (3) In case no operation is performed, the patient must be kept on the foregoing treatment until he has been free from pain and otherwise normal for at least four days. (4) The indication for operation in appendicitis are. (a) Patients suffering from chronic recurrent appendicitis should be operated on during the interval. (b) Patients suffering from acute appendicitis should be operated on as soon as the diagnosis is made, provided the infection has not spread beyond the appendix. (c) Patients suffering from an appendicitis in which the infection has spread beyond the appendix and has not become localized, must be put on the same treatment as the non-operative cases until their condition will warrant surgical intervention.

**Unilateral Disease of the Kidney Simulating Stone.**

J. Ransohoff reports a case of atypical chronic inflammation simulating stone, in *J. A. M. A.* Detection by sounding is altogether fortuitous. Aside from positive presentment by radiography the signs most relied on are pain, paroxysmal or continuous and certain changes in the urine. The pain may be simulated by tuberculosis, tumor, hydronephrosis, or by microscopic changes affecting either the secreting, circulatory, or supporting framework. Every one associates hematuria with stone, but in 20 of the author's cases it has been marked by sparseness. That in certain cases of chronic nephritis albumin and casts are often absent for months, and both pain and hematuria present, and that it often manifests itself as a unilateral disease, makes it evident that differential diagnosis may be insurmountably difficult. Capsule splitting and section of the kidney will doubtless relieve many cases which simulate stone and which because of the impossibility of making a positive diagnosis are not now subjected to exploratory incision.

**Functional Hemiplegia Dating from Childhood**

At a meeting of the Medical Society of the Hospitals, M. Bernard, of Val-de-Grace, presented a young soldier, who was afflicted with left-sided hemiplegia and contracture, which had begun in early childhood when he commenced to "walk." At times the contracture ceases or considerably diminishes. It is much more marked in winter than in summer. In walking the left leg drags unmistakably, as
in organic hemiplegia. The face, however, was completely spared, but there was contraction of the visual field, hemianesthesia, and the patient stated that he had formerly had somnambulism. The latter manifestations seemed to point to hysteria, although the origin in early childhood renders that diagnosis questionable. The difficulty may be due to a slight infantile hemiplegia.

A Supposed Sarcoma of the Kidney Cured by the X-ray Treatment.

The patient of C. H. Richmond was a woman of forty years who suffered from a tumor of the right side, which, from its exact location and rapid growth, was regarded as a sarcoma of the kidney. At the time the X-ray treatment was begun the patient's pulse was ranging from 108 to 120, the evening temperature from 101° F. to 102° F.; she had night sweats, had ceased to menstruate, had lost about twenty pounds in weight, was not able to dress herself without help, and measured two inches and a half, or three inches more than normal in circumference just below the ensiform cartilage, with the tumor extending downward as far as the crest of the ilium. Daily treatments were given for fifteen minutes each for a period of nineteen days. At the end of this time the temperature was nearly normal—on some days entirely normal—might sweats had lessened, the tumor had apparently ceased to grow and seemed softer, her appetite was good, she slept well, the pulse had somewhat improved, and she was buoyant in spirits. She was then removed to a hospital, the ray treatment being there continued. Nine weeks later the growth had entirely disappeared, so far as could be determined by bimanual palpation.—N. Y. Med. Journal.

The Drainage of the Knee-joint in Acute Suppurative Arthritis.

Acute pyogenic infection of the knee joint is one of the most dangerous of suppurative diseases. One great reason is the difficulty of obtaining satisfactory drainage. The author calls attention to the fact that there are two pouches in the knee-joint behind, which are not drained when the joint is opened by anterior or lateral incisions; posterior incisions must and should be made, for each pouch. All really acute cases of suppuration in the knee joint with a temperature of 103° F. should be treated by anterior and posterior incisions, especially if they arise from a punctured wound. If the infection arises from self-infection, and is subacute, with a temperature of 102° F. and under, lateral incisions on each side of the patella and irrigation will probably be sufficient. The joint must be treated as though it were an aseptic case, tor in self-infection there is usually but one organism present, and that a mild one. Should this partial drainage fail, then the posterior pouches must be opened and thoroughly drained.—H. L. Brainard, in Lancet.

The Surgical Treatment of Puerperal Pyemia.

That deadly form of puerperal infection which is propagated by the venous circulation is characterized by an acute course, and is usually terminated by septic embolism in the lungs of other internal organs, says Dr. E. Mickels in the Lancet. This form of puerperal infection is rare. Antistreptococcic serum and other treatment is of little value. In infection of the transverse sinus, ligature of the main venous trunks has been tried with success. It is a question how far this method of dealing with infection of the veins is applicable to the uterus. Unfortunately, the process is often complicated by infection of the lymphatics or other structures. In uncomplicated cases of puerperal pyemia it is necessary to deal with a large uterine plexus, the blood of which is collected by four deep-seated veins—the two internal iliac and the two ovarian veins—all of them difficult of access.

A case of operation for septic phlebitis is described. The patient was taken ill in the fifth month of pregnancy having a temperature, which was shortly afterward followed by an abortion. The placenta was removed and the patient was doing well, when on the second day the temperature began to rise, and on the fourth day there was a severe rigor. Antistreptococcic serum was given, but with no improvement. A curettement was performed, and from that time the chills increased in severity and the temperature rose to 106.4°. Subcutaneous saline injections were made, but with no effect. While the patient's general state deteriorated, the local conditions in the pelvis improved. There was no exudation or accumulation of pus. About two weeks after the beginning of the illness an indistinct fulness was noted in the left inguinal region. During the next few days there was a slight increase in the size of the swelling and tenderness. The condition of the patient becoming desperate, an incision was made from the tip of the eleventh left rib to the anterior iliac spine, and thence forward and down-
ABSTRACTS.

ward parallel to Poupard's ligament. The muscles and transverse ascia were divided, and the peritoneum was stripped from the underlying structures. The appendages were quite healthy; the swelling was found to be due to a thickened and dilated ovarian vein. By gentle manipulation the vein was separated from the ureter and traced upward to its entrance into the renal vein. A ligature was then thrown about the vein where it leaves the broad ligament, and another where it empties into the renal vein. It was then opened and a fetid mass removed. There were no further chills, the temperature only reaching 101°, and on the following day was normal.

The circumstances in this case were favorable for operation from the fact that only one of the veins was involved. There is little difficulty in reaching the ovarian veins with a free abdominal incision. All manipulations should be gentle lest thrombi be detached and carried into the general circulation. The ligature is central and should be done first. When practicable the vein should be removed, but where adhesions have formed the vein may be simply opened and disinfected. If the vein can be removed drainage is not necessary.

Appendicitis and Parturition.

Eccles, in the Lancet, draws attention to the association of appendicitis with pregnancy and parturition as being of the gravest import and by no means uncommon. That a woman who has suffered from an attack of appendicitis and has not had the organ excised runs an enormous risk if she becomes pregnant, is now coming to be a well-recognized fact. He states that it is difficult to judge whether the occurrence of the pregnancy is a factor in the lighting up of the inflammation in the appendix, but it is equally certain that such an inflammatory condition commencing during pregnancy or after parturition has up to the present time been attended with often fatal results. This termination, the author believes, in many cases is due to a want of early recognition of the lesion and of its prompt surgical treatment.

Fearful Results from Caustic Paste.

A new plastic operation is reported by N. Senn, in N. Y. Med. Journal. The case is that of a man of 31, who for several months felt a hard nodule in the upper lip. He was treated by a "cancer doctor" who applied caustic paste which caused intense pain and extensive sloughing. This treatment was continued for 10 weeks, at the end of which time the nose, the whole upper lip, both cheeks, and both lower eyelids had sloughed away. The scalp was the only source of tissue supply with which to cover the skeleton face. Thirteen operations were necessary. A large flap from ear to ear and wide enough to cover the whole defect was detached in different stages and gradually lowered into position. To guard against subsequent undue contraction the under surface of the central two-thirds of the flap was lined with Thiersch's skin-grafts before it was mobilized from its bed. The upper maxillae were vivified by dissecting off the scar tissue. The flat united throughout with the exception of a limited space below the nares, which was closed later after the nasal cavity had been opened by a transverse incision through the flap. The hair of the flap was destroyed by the use of the Röntgen ray. The eyelids were made by making flaps from the corresponding temporal regions. The last operation of any consequence was the rhinoplasty by König's method.

Traumatism as Factor in Etiology of Tuberculosis.

J. Weir, in British Medical Journal, reports the case of a man who had been struck over the base of the right lung a month previously with a pair of heavy tongs. He complained of general weakness and there was an area of consolidation at the right base in the axillary line. Cough did not appear for several months, when tubercle bacilli were also found. The case illustrates the close relation that sometimes exists between traumatism of the chest and pulmonary tuberculosis. The injury bruises the chest muscles and hinders respiration; the morbid process spreads inward, causes pleurisy, which in time affects the adjacent lung tissue, rendering it more susceptible to the invasion of tubercule bacilli. As regard the connection between pleurisy and phthisis, the author holds that the theory that the pleurisy really precedes and causes the tuberculous infection, is quite as tenable as the generally accepted view that the pleurisy is always due to an underlying latent tuberculosis of the lung tissue. The pleuritic thickening and adhesions, according to him, interfere with lung expansion and predispose to tuberculous invasion. The range of chest expansion in cases of pulmonary phthisis practically never approaches the normal or average of the healthy chest.
Treatment of Cranial Depression in the Newborn.

Cranial depression in the new-born is usually the result of some abnormal difficulty in labor or delivery. P. Baum, in Zeitt. fur Gym., reports 4 cases, in all of which this condition was the result of difficult labor, because of narrow pelves, the pressure of the promontorium in 3 cases producing deep impressions in the skull bone, and in the fourth case causing fracture of the frontal bone. In the first case, troubled how to restore life, he thought of a corkscrew, and after sterilizing the instrument, inserted it into the skull, gave a pull, and suddenly the skull was broken out and the child's breathing and heart action improved for a time, but it soon died. The subsequent section showed no injury to the brain but an internal cranial hemorrhage which, however, seemed to have no connection with the operation. The second case was but a repetition of the first; in the third, however, the child lived and became healthy and strong. In the fourth case, as the skull was fractured, the corkscrew was more easily inserted, the skull was more readily restored to its normal shape with a complete recovery of the infant. In these cases it may be objected that the child would have lived without the operation, but it is probable that there would have been permanent deformity with defective brain action. Hence Baum feels justified in recommending the use of the simple procedure mentioned in cases not too difficult and always to strive for the removal of any skull depression.

Abdominal Hysterectomy for Myoma.

W. G. Spencer, in La Sem. Med., gives a description of a series of eight cases of uterine myoma successfully removed by Doyen's method of hysterectomy. None of the women could possibly have had a viable child and the occurrence of pregnancy would have rendered their condition much more dangerous still. Vaginal and partial abdominal operations were out of the question and the Doyen procedure seemed especially suited to these cases for the following reasons: (1) the certainty of the procedure in spite of inflammatory complications or the main tumor obscuring details; (2) the certainty of securing the main artery at a good distance from its origin; (3) and the ease with which the bladder and ureters are pushed out of the way of the field of operation. Recovery was satisfactory in all the eight cases.

Conservative Non-operative Treatment of Women's Diseases.

A. Pincus gives an illustrated description in Berliner Klin. Woch. of an apparatus which he employs in the conservative treatment of the female genital organs. He recommends the hot vaginal douche and its modifications in all cases in which the promotion of the elimination favors the absorption of inflammatory masses. The method must not be used without precautions, but the physician must determine the indications for beginning the treatment by the control of the pulse and temperature, and the sensitiveness of the pelvic organs through bimanual examination. So long as there is the least rise in temperature present, or there is excessive sensibility of uterus or appendages, he advises to wait before treatment; as he believes that in the acute or subacute stages of such diseases there should be complete rest in order to obtain the best results, even to the omission of any examination. Even vaginal examinations, introduction of tampons, or irritation, in an acute stage of the disease are to be avoided and cold applications should be used, such as an ice-bag on the abdomen, or in case of necessity opium suppositories. In suitable cases he uses tampons and massage in connection with other treatment. But massage is often used most illogically and should never be employed for hysterical women. In such cases the hot water is the rational remedy. He has used what he calls the resorption cure successfully for the hematocoele of extrauterine pregnancy, in many cases of primetritis, oophoritis and salpingitis and especially in long-standing pyosalpinx. Great care must be exercised that no exacerbation of tissues arises from the hot douches; constant watch must be kept over pulse and temperature. Pincus repeats in conclusion that he is not an absolute opponent of operative treatment; but it should be resorted to only after other methods in all suitable cases have been tried and have failed.

Rupture of the Uterus During Labor.

J. B. De Lee states that in the treatment of complete ruptures there are six methods to choose from, viz.: 1. Delivery of the child from below, and expectancy, icebag on the abdomen, ergot, opium, i. e., symptomatic treatment. 2. Delivery of the child from below, tamponade of the rent and the uterus; then same as No. 1. 3.
Delivery of the child from below, sewing up of the rent as far as possible, and tamponade of the remainder. 4. Vaginal delivery, followed by extirpation of the uterus from below. 5. Laparotomy, removal of the child and placenta, and suture of the uterus. 6. Laparotomy; removal of the child, etc.; partial or complete extirpation of the uterus. The first four methods presuppose the possibility of delivery of the child from below. This is not always possible, or it may be inadvisable because of the possibility of the danger of enlarging the uterine lacerations. In hemorrhage that cannot be controlled from below and in contracted pelves the laparotomy may become a necessity. If there be any question of sepsis the whole uterus should be removed, the peritoneum closed, and the subperitoneal space drained from below. It is a question if the peritoneal cavity should be drained. Of the four methods of treatment, in which the child is delivered from below, that offer in the best results, is the partial drain and suturing of the peritoneal cavity at the site of the rupture. Even in the septic cases simple drainage offers much hope, but here the vaginal extirpation is coming into vogue, and when the hemorrhage is slight the latter operation may be practiced.

American Journal of Obstetrics.

Age Limit in Uterine Carcinoma.

Although the maximum incidence for the occurrence of carcinoma of the uterus is between the fortieth and fiftieth years, yet the possibility of its development earlier should not be overlooked, and probably should be more frequently emphasized, says American Medicine. This fact has been strongly brought to our notice recently by the observation within three months of three patients suffering from well advanced cervical cancer before thirty years of age. In two of them the disease was so extensive as to contraindicate surgical interference. As we have repeatedly said, eternal vigilance is required for the early diagnosis of this insidious disease; and these cases in point indicate the necessity for careful examination and early operation in bad lacerations of the cervix; for it is extremely rare for a nulliparous woman to suffer from cervical cancer unless she has been subjected to some operation or instrumental treatment. When the disease occurs early during the period of sexual activity, its extension is very rapid and recurrence almost inevitable, so that we are confronted by the melancholy truism that we know little about, and can do little for, well defined cases of uterine carcinoma. The chief prophylactic measure is the repair of lacerations of the cervix which are extensive enough to produce an eversion of the cervical mucous membrane, whether they are symptom producing or not.

Postpuerperal Sepsis.

J. B. Deaver reports in N. Y. Medical Journal that the greatest cause of septic states of the puerperium is the introduction of pathogenic micro-organisms into the vagina by the examining finger of the attending physician, or by the giving of an antepartum douche. In those cases seen early with all the evidences of local infection and the presence of tenderness of the culdesac, as elicited by vaginal touch, it is best to open the culdesac freely by an incision through the posterior vaginal vault, packing the culdesac with iodoform gauze. The most common type is a simple septum from the absorption of the toxins produced by the putrefaction of shreds of decidua, blood cloth, etc. Early recognition will confine the operative treatment to the vagina and uterus and simply necessitate thorough cleansing of both cavities and the establishment of drainage with iodoform gauze. The best possible curet is the finger, but the use of the dull curet is warrantable. If treatment is delayed and general sepsis develops, the treatment that promises most is supportive. In septic metritis, which always means involvement of the adnexa and probably of the peritoneum, total hysterectomy should be performed. The author believes this operation should be performed by the vaginal route.

Treatment of Uterine Pityriomyxomas.

F. W. N. Haulbain reported nine years ago in Edinburgh Medical Journal 20 cases treated by electricity. He has traced the subsequent history of 15. Of these 9 were cured, in 2 hemorrhages recurred, in 2 the tumor continued to grow, and in 2 others underwent active degenerative changes. In soft, edematous fibroids, removal of the appendages is valueless. Vaginal myomectomy may be performed for stalked growths or submucous polypi, especially when the cervix has already been dilated by the downward growth of the tumor or thinned by pressure. It is a debatable question how far conservative surgery warrants us in proceeding in the removal of sessils, subserous and interstitial tumors by the abdominal route, as the risk of lengthened manipulation are great and the organs doubtfully servicable. When symptoms call
for hysterectomy. Haulbain prefers the supravaginal abdominal method as the quickest. He believes that electrical treatment is desired because it has been used in unsuitable cases, as submucous tumors, in which it tends to aggravate hemorrhage by stimulating uterine contractions. In interstitial tumors of medium size it seldom fails, and if it does, no harm is done. Diagnosis of the variet}y of tumor is important in all cases, and can be achieved only by dilation of the cervix and digital examination of the uterine cavity.

So-called Fever of Pregnancy.

In the text-book of John Burns, 1889, appeared a description of a so-called "fever of pregnancy." Recently Tarnier and Budin have dignified this supposed specific affection in the medical text-book, and it has been given a name, but it has had no other recognition. Pinard, in Ann. de Gyn. et d'Obst., now denounces such an expression as not only useless but dangerous, serving only to cover an absence of diagnosis. He states that there is no more an essential fever of pregnancy than a spontaneous peritonitis. Those who heed this warning are much more likely than others to discover in time that the fever of unknown origin is due to such causes as appendicitis, torsion of the pedicle of a hematosalpinx, hydrosalphinx, or ovarian cyst, or cholecystitis.

Hysterectomy for Puerperal Infection.

The discussion of the indications for hysterectomy in puerperal infections, by H. Duvet, in Jour. des Sci. Méd. de Lille, led him to the following conclusions: He divides them into (1) septicemias with evident local lesions in or around the uterus or appendages, which are often amenable to uterine disinfection, curettage, incisions, removal of appendages or hysterectomy; (2) septicemias without apparent local lesions. These are acute or chronic. Among the acute are some caused by placental infection which cannot be relieved by the curette and in which abdominal or vaginal hysterectomy gives good results. In others extreme virulence of the microbial agent is the characteristic and grave feature. In these it is doubtful whether removal of the uterus will be efficacious, if lavage of the blood by injections of normal saline solution does not cause some improvement. The chronic septicemias are the result of phlebitis or uterine or periuterine lymphangitis or of unknown foci which may often be at a distance from the genitals. Under these circumstances there are often multiple foci in the uterine parenchyma and different and efferent vessels. The writer terms these cases puerperal uterine pyemias. The septicemic symptoms usually begin in labor and last several weeks. Abdominal or vaginal hysterectomy may be useful, especially if performed early. In all cases of puerperal septicemia the best remedy, with uterine disinfection as an adjuvant or curative measure, is large subcutaneous or intravenous injections of normal saline solution. If the system has been sustained in this way against microbe intoxication one may then feel more inclined to radical treatment such as hysterectomy.

Cog (Gaz. de Gyn., April 1, April 15) believes that hysterectomy is indicated in acute puerperal infection when the following conditions coexist: existing or probably approaching severe toxemia, the uterus being the principal septic focus and constant pus discharge, failure of other treatment, and ability of the patient to withstand the shock of operation. These conditions are found chiefly in cases of decomposition of retained placenta not removable by curettage, supplicative gangrenous metritis, or large tumors which, having been long compressed during labor, may slough, interfere with the lochial discharge, or aid absorption of septic products by their great vascularity. More doubtful indications are acute general streptococcus infections, in which hysterectomy has been known to act favorably by removing many bacteria, though showing no microscopic lesions; pyemia, puerperal metritis, in which extirpation of the ovarian and hypogastric veins containing a septic thrombus has been successful; septic general peritonitis, which requires the icecap, morphine and surgical treatment, especially if abscesses form—opening and drainage of purulent foci. In the last, hysterectomy removes an important factor in sepsis and facilitates drainage. In cases with extension of the inflammation to the parametrium, appendages or pelvic peritoneum with severe local symptoms but good general condition and slow course of the disease it is well to employ ice and opium and to open and drain supplicative foci, but to reserve removal of the appendages or uterus until later if it is found necessary.

Pinard (Ann. de Gyn. et d'Obst., April) summarizes his views upon this subject most tersely. He states that, leaving out of consideration the rare and the well-determined conditions—placental retention, putrefaction of a uterine fibroid, rupture and inversion of the uterus—which may require hysterectomy, neither symptomatology, bacteriology nor pathology can at present furnish an indication for that operation in acute puerperal infection.
MEDICAL HAPPENINGS IN NEW JERSEY.

Dr. Frederick E. Lambert, of Jersey City, has succeeded to Dr. John J. Bumann as a trustee of the City Hospital.

Dr. and Mrs. W. Moore Gould and family, of Newark, are at their summer home in Mountain avenue, Caldwell.

Mrs. Augusta Clawson, wife of Dr. Frank T. Clawson, died at her home in Plainfield. She was a daughter of the late Capt. Holmes and was prominent socially. She was a member of the Daughters of the American Revolution and the Monday Afternoon Club. She leaves a young son and girl twins.

At the June meeting of the Orange Mountain Medical Society the guests present were Drs. T. Y. Sutphen, L. S. Hinckley and J. A. Stites. In the absence of the president, Dr. H. P. Gerbert, Dr. W. B. Graves, of East Orange, presided. A paper was read by Dr. J. M. Mayhee.

The marriage is announced in Hackettstown of Dr. Ross Hall Skillem and Miss Eliza M. Porter.

Dr. Edward P. Luce, of Bayonne, died June 12, aged 75. He was graduated from the Cincinnati College of Medicine and Surgery in 1862, and afterward served as surgeon in the United States army during the Civil War.

Dr. W. H. McKenzie, of Newark, has been elected president of the new Union Club, and Dr. S. Harbourne Baldwin is one of the governors.

Dr. E. H. Martin, of Montclair, is passing several weeks in Saratoga.

As a result of a fight in the courts the Hackensack Hospital will lose $80,000, which was bequeathed to the institution by the late Jacob G. Berdan, of Bergen County. Chancellor Magie, as ordinary of the prerogative court, has filed his decision setting aside the will on the ground that it was improperly drawn. Mr. Berdan left practically all his estate to the hospital, but as soon as the contents of the will were known his widow and children filed caveat.

Dr. and Mrs. James M. Ludlow, of East Orange, have gone abroad for several weeks.

Dr. John T. Connelly, of 2786 Avenue C, has been appointed to the Bayonne Hospital staff of physicians.

According to a daily newspaper, germs that will cause lockjaw when in contact with a wound were discovered in blank cartridges placed on sale in Newark before July 4. A report to that effect was made at a special meeting of the Board of Health of that city by Dr. Richard N. Connolly, the department bacteriologist. Use of the cartridges, it was declared, was likely to cause an outbreak of lockjaw.

The main structure of the group of buildings erected at Heywood and Mosswood avenues, Orange, N. J., at the time of the small-pox outbreak two years ago, and used as an isolation hospital, was totally destroyed July 3 by fire, entailing a loss of $2,000. Health Inspector William Schluer and Fire Chief Hodgkins both think the building was set on fire.

The Bayonne physicians recently defeated the clergymen of that city in a ball game for the benefit of Bayonne hospital, on July 4. The physicians defeated the Bayonne clergymen, 22 to 17.

It is stated that all children hereafter entering the public schools in Camden will be required to undergo a physical examination; at least a recommendation to this effect has been made to the Board of Education by the instructor in physical training in that city. Those found unfit to enter school will be recommended for treatment.

The Burlington County Medical Society met at Moorestown, June 18, and papers were read by Drs. Alexander
Marcey, Jr., De Forest Willard, Charles P. Noble, William E. Parke, E. L. Duer, L. Brinkeman.

The marriage of Miss Jennie Warren Prentiss and Dr. William Rankin Ward, of Newark, was solemnized in the Euclid Avenue Congregational Church, Cleveland, O. The best man was Dr. Stuart M. Campbell, of Chicago. Dr. and Mrs. Ward sailed for Europe later. After October 1 they will reside in Newark.

Dr. Caroline H. Marsh, of Livingston avenue, New Brunswick, has brought suit in the Supreme Court against Mrs. Minnie Oakley, of Highland Park, for $5,000 damages for slander. The suit grows out of the alleged circulation of stories reflecting upon Dr. Marsh, both professionally and personally.

Mayor Mark M. Fagan, of Jersey City, has appointed Dr. George W. Shera and Henry C. Vogel as trustees of the City Hospital, to succeed Dr. G. K. Dickinson and Albert G. Weissenborn, resigned.

The members of the Practitioners’ Society, of Orange, were entertained June 17 last by Dr. George D. Whiteside, at his home, 227 Main street, E. Orange. The paper of the evening was read by Dr. G. C. Becket.

The new home for the nurses of Cooper Hospital, Camden, erected by the board of trustees from endowment funds at a cost of $30,000, has been formally opened.

Dr. James T. Hanan, of Brooklyn, has taken up his residence in Montclair, in Claremont avenue.

Dr. Martin, Director of Public Health, of Philadelphia, with his able staff of advisers, has discussed with Mayor Weaver the all important subject of milk supply in the city of Philadelphia, together with the best means of alleviating the suffering of the city’s poor children in the slum districts during the summer months. The proposition to establish summer tents in Fairmount Park for the care of suffering children was abandoned in favor of the plan to establish tent hospitals at Red Bank, N. J., five miles below Philadelphia. Here a number of tents will be erected and 25 nurses employed during the summer months to care for the children. In this work the health authorities are working in conjunction with the Red Bank Sanitarium Association, whose boats run hourly to and from Philadelphia, carrying the children to the ample playgrounds, shaded lawns and bathing places at Red Bank. The Red Bank Sanitarium Association has heretofore accomplished great work in thus caring for the poor children of the city during the summer months. In some instances as many as 5,000 children have been conveyed from the city to the association grounds at Red Bank and returned in a single day. The co-operation during the present summer with the city authorities will doubtless vastly increase the good work accomplished in this particular line.

Dr. A. F. Voorhies died June 26 at his home in Baskinridge. He was one of the oldest physicians in New Jersey, having been in active practice for more than a half century. A widow, four daughters and a son survive him.

Trenton has begun a crusade against the mosquito along lines laid down by Professor Smith, State Entomologist, who made an inspection of the city at the request of the Board of Health. Professor Smith said he had no doubt that the malaria prevalent in Trenton could be traced to the mosquitoes that breed in the swamps around the Florence Mission.

Small-pox has been epidemic at Bordentown, five miles from Trenton, N. J. Twenty-two persons have been down with the disease, and the principal hotel in the town, the public schools, the churches and the telephone exchange have been closed. The death rate was, on July 6, 25 per cent., but Dr. Leedom, the health inspector, thinks he has the disease under control.
The use of cervical incisions is by no means a new obstetric procedure; for a century or more, cutting operations upon unyieldingervices have been fully recognized. Coutouly (1808) recommended the operation; Morgagni advised it; Simpson (1847) practiced incisions in carcinoma cervicis; Bedford (1843-1847) reported two cases of cicatrical closure of the os externum in which he cut the bulging cervix transversely, and then bisected the posterior lip in each instance. The women recovered without untoward symptoms. Bedford called his operation vaginal Cesarean section or hysterotomy; the advisability of calling such an operation by the former name was questioned by Baudeloque years before. Carl Braun, perhaps, was the first to outline indications for cervical incisions, and to designate the anatomic conditions which rendered the operation permissible—he demanded that there be at least effacement of the supra-vaginal portion of the cervix; the danger of tearing beyond the incisions was pointed out by him if the effacement was not complete. Skutsch (1887) definitely outlined the use of incisions, and practiced them when necessary. He recommended six (6) incisions, the advisability of which Dührssen questioned for he claimed two or three were sufficient, but in one instance he was forced to make seven. As each incision was made, the vagina being opened by specula, a long silk suture was inserted so as to coaptate the cervico-vaginal mucous membranes, the ends were left long. These sutures arrested hemorrhage, and then post partum aided the insertion of permanent sutures. When the repair was completed the silk was removed. Dührssen (1890) perfected the technique and widened very much the indications. Perhaps in certain directions the scope of the operation as laid down by him is too broad, but it furnishes a guide for those who recognize the value of the so-called Dührssen Incisions.

Anatomic Considerations.—To clearly understand when it is permissible to make the cervical incisions certain physiologic-anatomic data relating to dilatation of the os must be reviewed. It must be clearly recognized that there are marked characteristic differences between the

*Read before the Chicago Gynecological Society.*
dilatation of primiparous and multiparous os externa. In first labors the characteristic dilatation progresses from above downward, i.e., the internal os first begins to open; gradually the area about the internal os forms a continuous surface with the uterine wall above; in succession each succeeding horizontal plane of the cervix is unfolded until finally the external os is reached. Then, only, does the material dilatation of the external os begin. When this stage of labor is reached we say the cervix is effaced. Any moment thereafter the incisions may be undertaken—the later the cutting is delayed, the more certain we may be that we may secure a maximum opening without an extension of the cuts by tearing. Effacement frequently occurs partially in the days following "lightening," and generally is well developed in the early part of labor. In multipara during the last days of pregnancy there may be some material dilatation of the external os, while the internal os is completely closed. As labor advances dilatation of the entire cervical canal occurs, i.e., it occurs pari passu with effacement. In fact not infrequently full dilatation may occur with slight effacement, especially where the head fails to enter the brim. It should always be borne in mind that the period when cervical incisions may be safely done in primipara is clearly defined in nearly all instances; in multipara, on the other hand, this time is uncertain, and in fact, it may be almost stated dogmatically that the incisions are only indicated in multipara where the indication for them lies in rigidity, etc., of the external os.

Indications.—However perfectly the condition of the cervix warranting incisions may be fulfilled, however skillful the obstetrician may be, there are always inherent dangers in making use of this Dührssen operation, so it never should be lightly undertaken. While many of the indications to be given for the incisions apply with equal force to manual dilatation and hystereurysis, and the new Bossi method, I would express my opinion that in many of the indications the three methods do not come into direct concurrence with one another, but that they are complemental to each other. For instance, the time element. If haste be not essential the slow dilatation by the rubber bags should be elected; the hystereurynter prepares the cervix for delivery, softens it, and if rigidity be not too marked, secures dilatation. Per contra, a woman who is in danger of dissolution, threatened with rupture of the uterus, etc., should not be subjected to bag therapy, but should have incisions made. Manual dilatation, broadly stated, has a field midway between hystereurysis on the one hand and cervical incisions on the other, as regards rapidity of delivery and danger to the maternal organism. I would make an arbitrary classification of essential and contributory indications. While this division is subject to criticism I feel it will prove satisfactory. Under the former heading I would place all those inherent conditions of the cervix which prevent proper dilatation; under the latter those complications of labor which render it expedient to perform the operation in the course of forced deliveries.

A. ESSENTIAL INDICATIONS. VARIOUS FORMS OF CERVICAL RIGIDITY.

i. Conglutinatio Orifici Externi. This condition is especially apt to occur in primiparæ of advanced years; the true cause is still a mat-
CERVICAL INCISIONS—HOLMES.

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ter of some speculation, but generally may be held to be a continuation of the "pin-hole os" of the nonpregnant with a catarrh which renders the immediate circumference of the os unnaturally tense.

2. Atresia of Pregnancy. In close relation to the former, but of far greater import; there may be an actual growth or adhesion of the cervical lips to one another after impregnation has occurred. Rigidity of the cervix is an almost constant concomitant; as it occurs most frequently in multiparae, labor should be allowed to progress until cervical effacement is well developed before incisions are practiced.

3. Rigidity without Closure of Os. The factors which produce this class are many; in certain cases there is a simple structural change consequent to a chronic inflammation—a connective tissue hyperplasia, if you please; this appears perhaps more frequently in elderly primiparae. Again, as a result of too active treatment of the cervix with irritating drugs, escharotics, etc., the cervix becomes indurated. Chronic ulceration of the cervical lips may produce it. The deep lacerations of former labors, with their train of inflammatory processes, may give a strong demand for incisions. If such deep lacerations have been repaired by Emmet's operation the necessary sacrifice of tissue may give insufficient dilatation in the later labor. Such trachelorrhaphies often cause the worst forms of lacerations in subsequent labors; timely incisions may prevent them. The same may also be said of amputation of the cervix. Carcinoma of the cervix will be an indication for cervical incisions only when the disease is distinctly localized in the portio vaginalis; if the cancer has invaded the higher structures of the uterus Dührssen's vaginal Cesarean will come into consideration, or perhaps the abdominal operation may be elected. The timely use of hystereurysis, when possible, will be of great value in all these indications; especially is this preliminary treatment advisable in multiparae.

4. Vento-Fixation. If certain gynecologists will not admit the dangers of this operation in women who may become pregnant obstetricians will attest to the severe complications which may arise in labor from the adhesions of the uterus to the abdominal wall. The vicious relation of the uterine axis to the brim may seriously interfere with dilatation, and incisions may be added to consummate full dilatation; other operative procedures may come into consideration in individual cases.

B. CONTRIBUTORY INDICATIONS. COMPLICATIONS OF LABOR.

1. Premature Rupture of Membranes. Dührssen would cut the cervix when this occurs in order to gain space to introduce his hand in performing prophylactic version in flat pelves. Also in a case of prolapsed cord he would open up the os in order to turn. In elderly primiparae we may find an indication when the waters have prematurely drained away, and especially if there be anomalies of mechanism present.

2. Generally Contracted Pelves. Dührssen suggests performing his operation to overcome resistances of the soft parts; he claims the obstruction to the descent of the head does not lie entirely in the pelvic contraction, but that the undilated cervix plays an important part. By
removing the hindrance of the cervix forceps extraction may be more easily consummated.

3. Eclampsia. Of all the indications of the second class eclampsia undoubtedly offers the strongest argument for incisions. Convulsions occur more frequently in primipare; the eclampsia stimulates uterine action, the two produce more or less complete effacement; at an early moment cutting may be safely carried out. The hemorrhage which may follow is beneficial to the patient. The operation shortens the duration of the anesthesia, and the time necessary for delivery.

4. Heart Disease. If a woman with advanced heart lesions is so unfortunate as to advance to full term she should be delivered at an early moment before the over-burdened heart is too severely taxed—this is particularly true of mitral stenosis and aortic disease. On the supposition that these conditions produce their havoc at the termination of the second stage from over distention of the right heart Dührssen's incision, if bleeding results, will thereby improve the prognosis, and permit an early forceps delivery.

5. Articulo Mortis: Sudden death in Pregnancy or Labor. The law of Numa Pompilius (A. C. 600) which required physicians to remove the fetuses from the bodies of dead women is not sufficiently recognized; a timely post mortem operation occasionally will save the child. Whether a physician should remove the child from the woman in articulo mortis, or await her death is a matter of judicial as well as medical dispute—personally I would hold that in the interests of the child it should be removed before maternal death supervenes. In the latter instance, and in case of sudden death, if the head be deeply in the pelvis incisions and forceps are advisable. Above the brim version and incisions should not come into consideration with Cesarean section. The advantage of a vaginal operation in appropriate cases is manifest; a post-mortem Cesarean section demands consent of the family; the delay in arguing for it means the death of the child; if done there may be difficulty in freeing the engaged head. Delivering through the vagina no external marks of the operation are left, so the operation may be done with or without the consent of the family.

6. Other Pressing Indications. In this category come those indications which are so urgent that delivery must be completed at an early moment, threatened rupture, or actual rupture of the uterus, ablatio placentae, and the host of other complications which imperatively demand rapid delivery.

Contra-Indications. The chief prohibitory factor to Dührssen's incisions is an undilated internal os, or incomplete effacement of the cervix. Therefore, in multipara generally incisions are prohibited in the large proportion of instances coming under the second division of indications. Cervical rigidity about the external os in multipara secures a dilatation analogous to that in primipare; per contra, if the rigidity be due to stenosis of the internal os incisions are not permissible—vaginal Cesarean section would be elected. Manual dilatation is not a good precursor of incisions, for manual dilatation gives a dilatation with a minimum amount of effacement. Where effacement is more or less absent, the hydrostatic dilators should always be used when practicable.
In placenta previa I would hold a contra-indication, for the anatomic changes present in a frank case of previa induce a marked hypertrophy of the vessels of the lower uterine segment, the cervix is especially liable to tear, the incisions are apt to extend, and hemorrhage is often severe. If incisions, fortunately rarely coming into question, are indicated, they should be made on the side opposite to the implantation of the placenta.

Dangers.—The worst enemies to an operation or any procedure are those who maintain there are no evil consequences. Dührssen's incisions never can be made without an element of risk. Three factors may arise: (1) Infection; (2) Hemorrhage; (3) Extension of the incisions by tearing. (1) Infection need not be feared by one who has a clean technique. If the woman already shows signs of a beginning infection intra partum a clear cut cervical incision will be less dangerous than the ragged tear produced by a laceration in the course of a spontaneous or instrumental delivery. (2) Hemorrhage always will be an unknown quantity until the delivery is completed; generally, the bleeding following the cuts is of little moment. While it is true that normally there are no vessels of importance in the portio vaginalis, in the pathologic conditions which indicate incisions, there may be vessels which bleed freely, for the induration of the cervix prevents proper collapse of the vessels. (3) Extension of the incisions by tearing is always serious; the parametrium may be widely opened, and the uterine artery torn. The parametrium is specially subject to inflammation when opened in labor—chronic parametric inflammations may supervene. Tearing is dependent upon two factors: (a) the effacement of the cervix may have been incomplete at the time of operation; (b) the same etiologic factors which produced the cervical condition may concomitantly cause like infiltration of the vaginal vault.

Dührssen's cervical operation demands strict indications: it should be considered as a major obstetric operation and should only be performed when recourse to other procedures is ruled out; it should not be done by one who is not skilled in obstetric manipulations, nor by one who has not the armamentarium ready at hand to meet the complications which may arise from the use of incisions. Aside from the anesthetist there should be two assistants to aid in the post partum repair which may be indicated—without them the technique will be faulty.

The Operation.—The instruments required for the operation are: extra long and broad specula, 2-4 good volsella forceps, blunt pointed scissors bent at the knee, assorted cervix needles, needle holder, an aneurism needle may be required; artery forceps long and short (5-12 inches); dressing forceps (heavy), a slowly absorbable catgut—chronic or pyoktanin-formalin gut; appropriate gauze for utero-vaginal tamponade. In addition instruments for extraction should be prepared for use.

Technique.—The woman is anesthetized and placed on the table. The left hand is passed into the vagina (the thumb generally remaining outside). In making the lateral and anterior cuts the middle finger will usually be within the cervix and the index without—the two fingers thus will be able to fix the cervix and at the same time will serve as
guides as the scissors are passed home. When the posterior incision is made it may be more comfortable to have the index finger within the cervix and the middle posteriorly. With one or two cuts each incision is carried to the vaginal vault. If the cervical rim be yielding Dührssen and Zweifel recommend fixing the cervix with volsella at the site of each incision and cutting between them. The technique may sometimes be varied to advantage by widely opening the vagina with specula, catching the cervix with volsella as before described, and then under guidance of the eye and index finger the scissors are used in the four quadrants of the cervix.

In my paper on Ablatio Placentæ, presented to this society, I incidentally recommended making oblique incisions in the cervix instead of the usual ones in the four quadrants of the portio vaginalis for these reasons: the less likelihood of the possible resulting tear implicating the uterine artery; the tears which are other than lateral in the circumference of the cervix heal better from the fact that the rectum and bladder offer supports to the anterior and posterior lips of the cervix (Schauta). The number of incisions should vary with the degree of dilatation and the rigidity of the cervix, immediate extraction of the fetus follows the incision. The post partum management comprises a careful digital and ocular examination of the parturient canal; if there be no bleeding, if the incisions have not extended beyond the vaginal vault it is optional whether a repair be instituted or not. Dührssen is of the mind that the unsutured wounds heal as perfectly as the sutured; this opinion, expressed thirteen years ago, is perhaps in perfect consonance with the experience of most clinicians. If hemorrhage is present two courses are open to the operator, one to sew up the wounds, the other to tampon the utero-vaginal tract. The former usually should be elected when the upper angle may be included in the loop of the first suture of each wound; if this cannot be accomplished the tampon should be used. Douching should not be practiced with the idea of arresting hemorrhage; in fact the douche may aggravate the bleeding by dislodging clots already forming.

In closing, I must express my strong condemnation of the too common practice of using forceps through the partially dilated os; forcepts never were intended for dilators. If an instrumental delivery is indicated and full dilatation is not present some method of dilating the os must be used first. A great advance in the progress of general obstetric practice will be realized when the profession learns that a partially dilated os is a positive contra-indication to the use of forceps.

CONCLUSIONS.

1. The contributions of Dührssen to the subject of cervical incisions are not sufficiently original to warrant a proprietary right in the nomenclature; Coutouly, Baudelocque, Bedford, Braun, Skutsch did much to develop our knowledge of the subject.

2. Effacement of the cervix is an indispensable prerequisite to the use of incisions. For this reason incisions are especially applicable to primiparae, and often are contra-indicated in multiparae.

3. Incisions are indisputably of value, even necessary in essential
indicators. In contributory indications their use is a moot question; the judgment of the operator must decide in individual cases.


5. Incisions always are potentially dangerous; dangers comprise infection, hemorrhage and extensive lacerations beyond the vaginal vault.

6. Use of incisions demands an obstetric armamentarium, assistants, and a definite experience in obstetric procedures.

7. The details of the technique may be modified to suit the taste or the operator.

8. The minimum number of incisions to meet the exigencies of the case should be made.

9. Oblique incisions may be proven to be more advantageous as regards the after effects than the usual quadrant cuts.

10. In the absence of hemorrhage or accessory lacerations it is a moot question whether the incisions should be sewed up or not.

11. Immediate delivery should follow the incisions.

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THE MICROSCOPE IN PRACTICAL MEDICINE.*

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The field of usefulness of the microscope in the medical sciences is, of course, so wide that it would be impossible to attempt any full discussion of it in a paper of this kind. Being forced to make a selection among the multitudinous data available, it has seemed best to invite attention to the rôle of the microscope in diagnosis, in other words to a portion of the field of clinical microscopy. This limitation of the subject has the advantage of focussing attention on the side of microscopy that is of most immediate importance and interest to the busy practitioner, and is, besides, a field which need not be beyond his reach. In a little work recently published: "How to be a successful Physician," the author, a Connecticut physician, says that the well-equipped practitioner of the present day ought to be able "to prepare sputum and examine it for tubercle bacilli when with a centrifuge and microscope, it can be done in ten minutes. The blood can be obtained and the haemoglobin estimated in five minutes, and the volume of the corpuscles by the haematokrit in three minutes. Cover glasses may be spread with blood, fixed, stained, and examined in from ten to twenty minutes. The Widal serum reaction of typhoid fever need never take more than thirty minutes, and when pronounced not more than ten." I have quoted this passage to show that the processes in question are not pro-

* Read at the 1903 meeting of the North Carolina Medical Society.
hibitive either in point of complexity of technique, or in the amount of time required.

In the domain of clinical microscopy we are all fairly familiar with the procedures requisite in urinalysis, and I shall, therefore, devote the greater part of my time to the comparatively newer subjects of the blood, sputum, feces, etc.

**THE BLOOD.**

Here the microscope, and accessory apparatus, are used to determine quantitative and qualitative variations in the red and white cells; variations in the amount of haemoglobin; the presence or absence of parasitic organisms, notably the plasmodium malarize; and for purposes of serum diagnosis, as in the Widal test for typhoid fever.

The Blood Count.—The purpose of this is to determine the number of the red and the white cells. The method of procedure is as follows: Several hours after a meal the part selected is washed with soap and water, alcohol, and ether, with the least disturbance of the local circulation possible. A puncture is then made, and the exuding blood is sucked up into a Thoma-Zeiss tube. This apparatus consists of a capillary tube dilated in a part of its course into a bulb. After drawing the blood up to the point marked 1.0, the tube is drawn full of a 0.8 per cent. of salt solution deeply tinged with methylene blue, as far as the point 101. This effects a dilution of 1:100. The two fluids are mixed by gentle agitation and a drop is placed in the counting chamber. The latter is an excavation in a microscopic slide, the depth of the excavation being 0.1 mm. The bottom of the excavation is ruled into squares, the space over each square corresponding to 1.4000 of a cubic millimeter. After placing the drop in the chamber the cover slip is to be rapidly adjusted, and, if the preparation is successful, the cells will be approximately evenly distributed. After allowing several minutes for subsidence of the cells to take place the count is begun. Six or more of the large squares are to be counted, the cells lying on the bottom or right-hand lines being included. The average per small square multiplied by 4000 (because each small square represents 1.4000 cubic millimeter), and then by 100 (the ratio of dilution of the blood) will yield the number of red cells per cubic millimeter. In practice, however, the computation is simplified by multiplying the total number counted by 400,000 (4000x100) and dividing the product by the number of small squares counted.

The leucocytes are best counted in the same specimen and chamber with the red cells. A special chamber has been constructed for this purpose in which 9 square millimeters are outlined in large squares. According to the abundance of the leucocytes, 3, 6 or 9 square millimeters are to be counted. The average number per square millimeter is then multiplied by 10 (since, owing to the depth of the chamber being only 1.19 mm., the cubic contents per square millimeter is only 0.1 cubic millimeter), and by 100, the ratio of dilution of the blood. In practice the computation would be: Total number counted multiplied by 1000 and divided by the number of square millimeters counted.

The Differential Count.—The object here is to ascertain the rela-
tive proportions in which the principal forms of leucocytes occur. For this purpose the edge of a cover slip is drawn gently along across the exuding drop of blood, and is then applied to the surface of another cover slip and drawn gently over that, leaving upon the second slip a very thin film of blood which is dried in the air and then fixed by immersion in a mixture of equal parts of strong alcohol and ether for a half hour. The resulting preparation is then stained with Ehrlich’s tri-acid stain for 6 to 8 minutes, washed in water, dried, and mounted. To estimate the percentages of the different varieties, at least 500 leucocytes should be counted. The principal varieties of leucocytes are: (1) Lymphocytes, smaller than a red blood cell, with a large, deep stained nucleus and non-granular protoplasm; (2) Large mononuclear leucocytes, larger than a red cell, with non-granular protoplasm; (3) Polymorphonuclear neutrophiles, of the same size as the preceding, with a long, irregularly twisted nucleus, and protoplasm with fine neutrophile granules; (4) Transition forms between (2) and (3), with a single nucleus which in its constricted appearance indicates a beginning polymorphism, as a rule no granules but sometimes some of a neutrophile character; (5) Eosinophiles, of the size of (3) with large ovoid or roundish, highly refracting, fat-like granules which take only acid stains; (6) Mast cells (basophiles), mononuclear or polynuclear with large basophile granules; and (7) Myelocytes, large mononuclear leucocytes with neutrophile granules, never becoming amoeboid.

Estimation of Haemoglobin.—In \L on Fleisch’s haemometer blood is drawn into a capillary tube as for the blood count, and then discharged into distilled water in the estimating chamber, the proportions of the blood and water being determined by the graduations on the tube and on the estimating chamber. This proportion is such that with normal blood the resulting tint would read on the scale as 100. In the distilled water the haemoglobin goes into solution, and the mixed fluid thus becomes transparent. The scale consists of a similarly colored piece of glass, cut in the form of a wedge, which can be slid along until the tint exactly matches that of the solution when the percentage is read off on the scale. The absolute amount of haemoglobin can be determined, given that the normal amount is 1.4 g. per 100. The test must be made by artificial (monochromatic) light. A simpler test, and one sufficiently accurate for practical purposes, consists in placing a drop of blood on a piece of white filter paper, allowing it to dry, and then finding on Tallquist’s haemoglobin chart the shade of color which matches that of the stain.

So much for the methods of blood examination. What is the study of the blood capable of teaching us?

The meaning of Leucocytosis.—Apart from the normal increase in the leucocytes which occurs after a meal, and during pregnancy, a more or less temporary increase takes place in many diseases. In contra-distinction to the physiological form, this increase is termed pathological leucocytosis. The determination of its existence is often a matter of great moment. Thus in infectious diseases, leucocytosis usually indicates an exudative or a suppurative condition. It occurs, for instance in pneumonia, diphtheria, scarlatina, erysipelas and rheu-
matism. Pathological leucocytosis appears to be a protective reaction against bacterial invasion. Thus in pneumonia where leucocytosis does not take place, the progress is grave. In diagnosis the absence of leu-
cocytosis speaks against pneumonia, in which it is present, as against such diseases as typhoid fever and tuberculosis in which the condition is absent. The presence or absence of leucocytosis is often of great importance as an aid to the diagnosis between tuberculosis and suppura-
tive processes, tuberculosis and suppurrative meningitis, and typhoid fever.

Apart from the more or less temporary increase in the leucocytes which constitutes leucocytosis, the white cells are permanently in-
creased in several conditions. And in these it is by no means a matter of indifference which particular variety is increased, as an increase in one variety stamps the condition as one disease, while that of another marks the occurrence of quite another pathological process. Thus, in the lymphatic form of leukæmia, the increase occurs in the lymphocytes alone: and in chlorosis and pernicious anemia and some other diseases, this variety is relatively increased. In chronic malarial poisoning, the increase lies in the large mononuclears. Increase in the eosinophiles is observed in most cases of the lieno-myelogenous form of leukæmia, in bronchial asthma, in trichinosis, and some other diseases. Myelocytes are seen in the lieno-myelogenous form of leukæmia.

The Various Anaemias.—As regards the condition of the red cells, the blood examination may yield the following pictures: (1) Amount of haemoglobin much reduced, number of red cells little reduced, haemo-
globin value of each cell (the haemoglobin index, that is) consequently low—the picture of chlorosis. (2) The percentage of haemoglobin and of the red cells low (haemoglobin 15 per cent., red cells, 1,000,000), but the reduction approximately in the same proportion, that is, the haemoglobin index about normal, usually an accompanying moderate increase in the polymorphonuclear leucocytes—the condition obtaining in chlorotic anaemias secondary to wasting diseases. (3) Extreme reduc-
tion in haemoglobin and in the red cells, the former usually below 20 per cent., but the haemoglobin index generally above normal; the num-
ber of red cells always below 2,000,000, the cells presenting great vari-
tions in size (1 to 20 microns) and the shape, some being misshapen and distorted; absence of rouleaux—the picture of pernicious anaemia. (4) Diminution in the red cells with increase in size and in haemoglobin in-
dex (or, in acute cases, the red cells of normal size, or smaller, with a deficiency of haemoglobin), absence of megaloblasts, that is, nucleated red cells 10 to 20 microns in diameter; usually an accompanying polymorphonuclear leucocytosis—the type of pernicious anaemias sec-
ondary to malaria, syphilis, carcinoma or nephritis.

Examination for the Plasmodium Malariae.—A perfectly clean cover 
slip is touched to the tip of the drop of blood exuding from the 
pricked lobe of the ear, and laid gently on a slide, when, if the drop 
taken was not too large, the slip will adhere to the slide. Under an 
immersion lens the red cells are seen to contain small, colorless, highly 
refractive spheres which in their earlier stages exhibit slight but active 
changes in shape and position, and later (12 to 18 hours after the chill,
in the tertian form) active amoeboid movements. As the time goes on the organism shows black pigment granules, the remains of its meal of the haemoglobin of the red cell. In the tertian form at the end of 48 hours its life cycle is completed, it fills the swollen red cell, and divides into 15 or 20 spores which, by the rupture of the red cell, are discharged into the blood coincidently with the chill. Along with them numerous pigment granules are thrown into the circulation, and these are taken up by the leucocytes.

The presence of pigmented leucocytes thus becomes a factor in the diagnosis, and in severe acute cases after the administration of much quinine, in remittent fevers, and in chronic malarial fever and cachexia, the diagnosis often must rest on their presence. In the quartan form the early hyaline bodies are most refractive, their amoeboid motion is slower, the pigment is coarser, and only 6 to 12 spores are produced. The red cell is shrunken instead of swollen. The life cycle occupies 72 hours. The spores of the aestivo-autumnal form closely resemble those of the tertian, but in the plasma they move rapidly with a peculiar rolling and darting motion, and have three or four slightly projecting knobs. In the cell they are slightly refractive, spheroidal, with very active changes of form. After 12 to 18 hours the characteristic cignet-ring form has developed. After 24 hours this form tends to disappear from the circulation into the spleen, marrow, or other viscera. By the fifth to the seventh day the fully developed crescents appear in the blood. They measure 9 to 12 micromillimeters in length, a remnant of the red cell usually stretches across its concavity, and the center exhibits a ground of large, brownish, yellow pigment grains. Segmentation occurs apparently principally in the marrow and spleen from the younger spheroidal bodies which almost always produce 18 spores.

The most satisfactory method of study of the plasmodium is the staining of a film fixed by 30 minutes immersion in equal parts of alcohol and ether, with the Chenzinsky-Plehn stain (concentrated alcoholic solution of methylene blue 40, 0.5 per cent. solution of eosin in 70 per cent. of alcohol 20, and distilled water 40), for several hours. The films are then washed with water, dried between filter paper, and mounted in balsam. The red cells are light red, eosinophile granules deep red, leucocytes and parasites blue.

The Widal test for typhoid fever is made by adding to a 24 hours' broth culture of the bacillus typhosus, one tenth its volume of blood serum from the suspected case. Rapid cessation of motility and precipitation in clumps, indicates typhoid fever. Extremely probable with a 1:10 dilution, when a prompt reaction occurs with a 1:20 dilution, the diagnosis becomes almost certain. The absence of the reaction does not positively negative the diagnosis, as the New York Board of Health has found the reaction absent in 5 to 10 per cent. of the cases. It often happens that the test must be made with dried blood. In this case it is not so easy to determine accurately the dilution, but it is best to add distilled water approximately in equal volume to the clot, or if only a film be available the test must be made with a drop of water and the reaction be watched in the hanging drop. Retarded and
uncertain reactions, as where 30 minutes elapse before a decided response and some of the bacilli remain motile, are unreliable evidence of the existence of typhoid fever.

THE SPUTUM.

Apart from substances encountered in the sputa which are visible to the naked eye, such as elastic tissue, fibrinous casts, Curschmann's spirals, and rarer findings, we are concerned in our examination principally with the presence or absence of elastic fibers, but above all, with the demonstration of certain micro-organisms, especially the tubercle bacillus. In every sputum we find leucocytes and red blood cells, and it is only when the latter are in greatly increased number, and particularly when the blood is present in quantity visible to the naked eye, that their presence assumes grave significance. Little is to be learned from the various epithelial cells present, and the same may be said as to the crystals frequently observed. Elastic fibers appear in the sputa as threads of variable length, and a tendency to curl at the ends. Frequently they show an alveolar arrangement. Their diagnostic significance is great, as they indicate destruction of lung tissue, but the finding is only to be regarded as absolute and unequivocal where an alveolar arrangement is to be made out. If present in large number it suffices to examine the sputa spread out on the slide with the addition of potassium hydrate solution; otherwise it is preferable to boil the sputum with a 8-10 per cent. solution of potassium hydrate, pour the resulting liquid into a conical glass, and after 20 hours examine the precipitate. The sputum may exceptionally contain parasites of animal nature, especially where perforations from liver cavities have occurred. The principal parasites are echinococcus fragments, and the amoeba coli.

But parasites of vegetable nature are much more important, and of these the tubercle bacillus is facile princeps. If present in any number, the detection is comparatively easy. All that is necessary is to place any suspicious looking particle, especially small cheesy-looking particles often found at the bottom, on a cover slip and then laying another cover slip over it, draw the two horizontally apart, taking care to get a very thin film. The cover slip is then passed three times through the flame of a Bunsen burner, or of an alcohol lamp, to "fix" it, and the preparation is stained for two minutes in a solution of fuchsin 1, 5 per cent. of carbolic acid 100, and absolute alcohol 20, after which it is stained one minute in a solution of methylene blue 2, and a 25 per cent. solution of sulphuric acid 100 parts. It is then washed in water and mounted. The tubercle bacilli are stained red; everything else blue. It is where the bacilli are sparser that the difficulty comes in. Here reliance is to be placed upon a multiplication of examinations, and with different specimens of sputa, and upon the method of incubation of the sputa in the warm chamber for one or two days; also upon centrifugalizing the sputa. Only after repeated trials will the negative result carry conviction in a doubtful case, as the bacilli may be absent at one time and present at another. In the determination of the tubercle bacillus, only two possible sources of error are known; confusion with
THE MICROSCOPE—FEREBEE.

The bacillus of leprosy, which on account of its rarity in America may practically be neglected, and confusion with the smegma bacillus. In specimens from the genito-urinary tract, therefore, it is necessary to attempt a further decolorization for 12 hours in 97 per cent. alcohol, under which conditions the smegma bacillus becomes bleached.

The diplococcus pneumoniae may be stained in a cover slip preparation by immersion in 1 per cent. acetic acid, removal of the acid and drying in the air, staining some seconds in saturated anilin-watergentian-violet, and decolorizing by Gram's method as described hereafter. The diplococci are rod shaped and surrounded by a capsule. In influenza Pfeiffer's bacillus can be demonstrated by staining with a weak solution of carbol-fuchsin for five minutes. The bacilli form rods 1.5 by 0.3 microns, straight with rounded ends which often stain more deeply than the centers. They occur singly or in clump. Besides these forms there are, of course, others which, however, I pass over as of less general importance.

DISORDERS OF THE DIGESTIVE TRACT.

The Stomach Contents.—In this case the microscopic examination is, generally speaking, of secondary importance to the chemical. The vomitus naturally exhibits a vast complex of substances of no diagnostic importance, remains of meals including muscle fibers, connective tissue, elastic fibers, fat, starch, grains, many varieties of vegetable tissue, etc. Micro-organisms of various kinds are usually present in abundance; yeast, sarcinac, leptothrix, and bacteria. The principal finds of diagnostic importance are: the presence of blood, which is rarely entirely unaltered; sometimes portions of exfoliated mucous membrane in gastritis; shreds of an ulcerating carcinoma; and, not infrequently, round worms. Oxyurus vermicularis and Anchyllostoma duodenale very rarely occur.

The Feces.—What can the microscope show here? If a fragment of a stool be spread out by pressure on the cover slip, a host of objects will be seen—connective and elastic tissue fibers, muscle fibers, vegetable cells, starch grains, crystals, etc. These are unimportant. Red blood cells and leucocytes are few, and epithelia only moderately numerous, under normal conditions. Very abundantly exfoliated epithelium occurs in catarrhal conditions. Clumps of epithelial cells with adherent leucocytes and blood cells, occur in masses of mucus from ulcers. Fragments from ulcerating malignant growths, may be encountered. A great number of micro-organisms occur, most of them of little significance. The more important are the Amoeba coli, 3 to 5 microns long by 0.4 microns broad, rather actively motile and decolorizable by Gram's method; the Bacillus typhosus, 2 to 4 microns long and 0.5 microns broad, with oval ends, actively motile and decolorizable by Gram's method; perhaps tubercle bacilli; the Bacillus lactis aerogenes, etc. Of protozoa, we have the Amoeba dysenteriae, 25 to 35 microns long, with finely granular and slightly refractive protoplasm, a single vesicular nucleus, and often vacuoles, and containing in the protoplasm bacteria and red blood cells. Segments and eggs of all the tape worms may be found; also fragments of echinococcus.
cysts and hooklets. Round worms may be encountered, among them Anchylostoma duodenale, which has lately acquired importance as a prominent cause of anaemia, as shown by Stiles.

**STAINING OF THE GONOCOCCUS.**

Turning now to the genito-urinary sphere, the only subject that need detain us is the methods of detecting the Diplococcus gonorrhoeae, commonly called the "gonococcus." In the male, of course, this organism is usually encountered in the pus from the urethra, and is therefore found in specimens of urine. In older gonorrhoea, those usually pronounced "cured," the gonococcus should be sought by removing any minute shreds which are seen floating in the urine, and staining these. In the female gonococcus has two seats of election, at the meatus urinarius, and in the cervix uteri, and is much less frequently obtainable from the vaginal mucus. The method of detection is as follows: A smear is made on the cover slip and fixed as usual. The specimen is then flooded for 30 seconds with fresh anilin-water-gentian-violet, and is afterward washed in water. It is then flooded for 1 to 5 minutes with Gram's solution (iodin 1, potassium iodide 2, distilled water 300), and again washed in water. Next it is decolorized in 97 per cent. alcohol for 2 to 4 minutes, the process being watched under the microscope and arrested as soon as the nuclei of the leucocytes have lost their blue color. The decolorized gonococci are then counter stained with a saturated aqueous solution of Bismarck brown for 1 to 3 minutes. To justify the diagnosis of gonococcus, the organisms must fulfill three requirements; they must be within the cells, they must be biscuit-shaped diplococci, and they must decolorize by Gram's method.

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**PATHOLOGY AND SYMPTOMS OF CONSTIPATION.**

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Though constipation is often a symptom of other conditions, as intestinal and abdominal tumors, chronic diseases, etc., it undoubtedly exists as an idiopathic affection, and as such, it will be dealt with here.

It is an habitual retention of feces in the alimentary canal; or it may be characterized by difficult or insufficient emptying of the intestines. Constipation, or costiveness, is met with in two forms, general or peristaltic, and rectal. The second form is caused in the majority of cases by neglect of the habit of periodic relief, the impairment of the evacuant function of the rectum being a primary feature, and that portion of the bowel becoming a mere receptacle like the bowel above.¹

The frequency with which evacuations occur in the healthy person, varies with the individual. One movement daily is the rule, but in some it may be two or even three without detriment, while in others one
evacuation every two or three days or even a week, seems not to impair the health. One case is reported in which the patient, “since his 30th year, has been in the habit of passing stools once in six months or so.”

There are no constant lesions in functional constipation; but if it endures, it may cause changes which, themselves, may later become additional causes, namely, intestinal dilatation and hypertrophy.

Colonic distension, more or less, caused by gaseous accumulation, is a common accompaniment of constipation but rarely a primary pathologic condition producing it, unless preceded by either intestinal paralysis or some form of obstruction. Pouches, containing mucus and fecal matter, may form as a result of paralysis of the muscular coat, and are found at the sigmoid flexure. Dilatation may begin at a distance of one or two inches from the anus (which seems spasmodically contracted), and occupy more or less of the remainder, sometimes the whole large intestine; in which latter case the chief distension is observed in the rectum, sigmoid flexure and cecum.

Hypertrophy of the muscular coat, which almost invariably occurs, is general; but most marked in the sigmoid flexure and upper part of the rectum.

Ulceration and perforation of the dilated intestine may cause fatal peritonitis. When ulceration occurs, it is perhaps partly due to yielding of the mucous membrane from overdistension, partly to the constant irritation produced by the fecal mass. Perforation may ensue while the constipation is unrelieved, from the continuance of the ulceration or from laceration; or following evacuation, from progress of the ulceration.

A considerable amount of chronic irritation and subacute inflammation of the cecum, colon and surrounding cellular tissues exists in every case of fecal impaction due to habitual obstruction. When this becomes acute, as it not infrequently does, typhlitis and perityphlitis are present. Peristalsis is reflexly arrested as a result of the subacute inflammation, and if a purgative be given in this condition, induction of peristalsis will only result in an incomplete evacuation, and the intestine become more torpid than before.

Other results of habitual constipation are hematuria, ulcerative colitis, rectal abscess, fistulae, anal fissures, prolapus ani, hemorrhoids, hernia, vesico-uterine tumors, prostatic hypertrophy, passive hyperemia of the pelvic viscera, cerebral hemorrhage, and in old persons mainly, as the result of colonic dilatation with sacculation, enteroliths.

The symptoms of habitual constipation may be direct or local, or reflex or general. Usually, when a person whose bowels are accustomed to move daily, habitually passes two or three days without an evacuation, he experiences dyspeptic symptoms, flatulence, sometimes nausea, a sense of fulness of the rectum, etc. These symptoms, which will be more fully detailed, are also experienced by the habitually constipated, but, having become habitual, cease to be observed, or, at all events, become tolerable.

Colonic distension, when present, produces more or less pain which is nearly always referred to the chest. There may be interference with
the functions of the duodenum, and consequently, dyspepsia, from pressure upon it of the distended transverse colon. Irritation of the bladder, and of the genito-urinary tract, neuralgic pains in the ovaries, testicles, groins, loins and lower extremities sometimes result from the pressure of large fecal masses in the descending colon and cecum.

Diarrhea is often a misleading symptom in habitual constipation. The presence of scybala which have been formed in the sacculi of the colon, may excite a constant desire for evacuation, and yet they are passed only after violent efforts. In this condition, patients think they suffer with diarrhea. In those who are habitually constipated, the rectum, by reason of the loss of natural sensitiveness, becomes impacted with dry, hard fecal masses of great size. Here, catarrh may be set up, and the passage of mucus excreted as a result, sometimes accompanied by fluid fecal matter, may closely simulate diarrhea. Rarely, membranous casts of the intestine are voided from time to time. They may be several inches or even feet in length. Osler says that the membrane is due to a derangement of the functions of the mucous glands, the nature of which is unknown; but Anders believes that membranous colitis or enteritis, which he has found to be invariably associated with a decidedly constipated habit, is a secretory neurosis, and that the catarrhal process may develop as a secondary event. The passage of the membrane is accompanied by tenesmus and severe colicky pains.

The true state of affairs may also be overlooked in what is sometimes called "cumulative constipation." In this condition the rectum, owing to the hurried and inattentive performance of defecation, is not completely emptied, resulting in a feeling of fulness and a sense of incomplete relief.

General symptoms are due, in the majority of cases, to a degree of autointoxication caused by the formation of septic materials and their absorption. There are malaise, irritability, headache, vertigo, a feeling of languor, mental inactivity with insomnia, or the patient awakes unrefreshed from an unbroken sleep. The breath is foul; the tongue, which is coated and often indented by the teeth. The urine is scant and high colored. The perspiration has an offensive odor and the skin is shrivelled, pasty and sallow, or it may be, jaundiced from pressure on the biliary duct. Eruptions, such as psoriasis, eczema, prurigo, erythema, urticaria and acne, often occur. The face flushes frequently, and under the eyes are deep purplish rings. There may be frequent attacks of cardiac palpitation which cause anxiety on the part of the patient. Shortness of breath is, at times, a prominent symptom.

Those who are habitually constipated, are subject to attacks of vertigo and temporary loss of consciousness. In marked cases, attacks of nausea and vomiting with diarrhea, may ensue; fever may also be present, and even typhoid fever be simulated.

It is sometimes a question whether hypochondria and neurasthenia cause constipation or are caused by constipation. The nervous affection is often probably the primary disease which is followed by constipation; while in other cases, the habitual constipation leads secondarily to the nervous depression. The two conditions usually form a vicious circle, since each of them is able to keep up and to increase the other.
Enlargement and pouching of the lower third of the rectum is a result of chronic constipation, which may not only counterfeit, but produce uterine trouble. It is found very often in virgins, and gives the pain in the back, discomfort on standing or walking (more particularly on standing), and the sensation of dragging and fullness as if the parts would fall. This is due to the distension and varicosity of the vaginal and uterine veins caused by the formation of a proctocele which presses forward the vagina. Intense pain is caused by efforts at defecation which force the vagina and rectum downward to the pubis and perineum. These efforts instead of relieving the patient, force the uterus downward, and through traction on the vagina, produce prolapse or retroversion. It is easily understood that since the cause is primarily the constipation, correction of the displacement will not relieve the patient.

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BOOK REVIEWS.

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The May number of this series, though somewhat delayed, maintains the high character of its predecessors. It is a review of general medicine, in which the leading authorities are freely quoted.

The chapter on typhoid fever is very complete, and presents the subject matter clearly.

Other fevers are well treated and the chapters on the diseases of the stomach, intestines, pancreas and liver are models of conciseness.


This work is a continuation of the researches of Ellis in this chosen field. It presents the subject under the heads of Analysis of the Sexual Impulse, Love and Pain and Sexual Impulse in Women.

To students in psychology Ellis' books are of great value. He is a keen analyst and his writings show the results of a vast amount of research. For physicians and scientists this latest volume is of undoubted value.
EDITORIAL.

BASIS FOR RECIPROCAL MEDICAL REGISTRATION.

For the purpose of establishing medical reciprocity among the states composing it, the American Confederation of Reciprocating, Examining and Licensing Medical Boards agrees to the following propositions as a basis of reciprocal medical registration:

(a) That as a prerequisite to reciprocal registration, the applicant therefor shall file in the office of the board of the state of which he is a licentiate such evidence as will enable the said board to certify that he is of good moral and professional character.

Such certificate shall be filed with his application for reciprocal registration in another state.

QUALIFICATION NO. 1.

(b) That a certificate of registration, showing that an examination has been made by the proper board of any state, on which an average grade of not less than 75 per cent. was awarded, the holder thereof having been at the time of said examination the legal possessor of a diploma from a medical college in good standing in the state where reciprocal registration is sought, may be accepted, in lieu of examination, as evidence of qualification. Provided, that in case the scope of the said examination was less than that prescribed by the state in which registration is sought, the applicant may be required to submit to a supplemental examination by the board thereof in such subjects as have not been covered.
QUALIFICATION NO. II.

That a certificate of registration, or license issued by the proper board of any state, may be accepted as evidence of qualification for reciprocal registration in any other state. Provided, that the holder thereof was, at the time of such registration, the legal possessor of a diploma issued by a medical college in good standing in the state in which reciprocal registration is sought, and that the date thereof was prior to the legal requirement of the examination test in such state.

TUBERCULAR INOCULATIONS OF CALVES.

At the last meeting of the Berlin Medical Society Professor Kossel, of the Imperial Health Office, reported the results of the prolonged experiments of the Tuberculosis Commission in infecting calves with human tuberculosis. Professor Koch's observations, prior to the celebrated London address, caused the Health Office to appoint the commission to make systematic experiments. Prof. Kossel's paper was in the nature of a preliminary report. The Commission's investigations cover three forms of introducing tubercle bacilli in calves—first, subcutaneous injection; second, in food, and third, by inhalation. The preliminary report covers only the first form; but the experiments with the others continue.

The Commission decided to attempt the inoculation of calves not with matter taken directly from human victims, but with cultures made therefrom. The experimentation covered thirty-nine separate cultures, twenty-three from adults and sixteen from children. The results were that nineteen calves subcutaneously treated did not show the slightest effect, nine showed after four months the slightest changes of condition and seven showed more marked symptoms; but the propagation of tuberculosis in the body did not occur. On the other hand, four inoculations from tuberculous children infected calves with a disease which resembled a weak type of animal consumption and two of this number died from tuberculosis. The Commission summarizes as follows:

"The series of experiments strengthens Professor Koch's view that animal consumption as the cause of human consumption does not play the rôle generally attributed to it; but definitive judgment requires further experimentation."

In the discussion which followed, Professor Orth, the late Professor Virchow's successor, strongly combatted the view that human and animal consumption were dissimilar and non-transferable.
ABSTRACTS FROM THE BEST JOURNALS.

MEDICINE AND THERAPEUTICS.

The Red-Light Treatment of Smallpox.

J. F. Schamberg, in J. A. M. A., gives a number of objections to the use of red light in the treatment of smallpox, as proposed by Finsen. This treatment is based upon the well-known irritant action of the chemical rays of light. If this irritant influence could be removed Finsen reasoned that the degree of inflammation would be reduced. Dr. Schamberg points out that diffused light has no noxious influence upon the skin and that smallpox is essentially a cold weather disease, flourishing most in the months characterized by cloudy skies with little direct sunlight. The greater predilection of the disease for the face and extremities is probably due to the greater vascularity of the parts, rather than of the influence of light. The feet are often as severely attacked as the hands. Any irritant to the skin, such as iodin, mustard, sunburn, etc., which acts prior to the appearance of the eruption, tends to produce confluence of the lesions. After the eruption has appeared such counter-irritants do not modify the local condition. Dr. Schamberg also declares that if Finsen's theory holds good, the negro should suffer less than the white man, while, as a matter of fact, the opposite is the case. While admitting the apparent benefit obtained by the red light treatment by the Scandinavian physicians who have chiefly reported on its use, his own experience has not been so happy. Two patients treated by the red light in the Philadelphia Municipal Hospital in a room especially fitted up for the purpose, did not do at all well. One patient died and the other recovered with many disfiguring scars.

Quinine.

The Therapeutic Gazette for April asserts that many practitioners believe that quinine, if administered in full dose, is capable of producing abortion, although others claim that where abortion follows its use the real cause is the malarial paroxysm from which the patient suffered. Maggi reports 20 cases in La Clinics Obstritra, in which quinine was administered freely to pregnant women without, in any instance, producing abortion. He believes that it should always be given when malarial fever affects such patients, and that the danger from the malarial infection is far greater than the danger from the quinine; indeed, when quinine was given to pregnant women suffering from malarial fever it was noted that the infants were usually healthy and robust. Betti indorses this view and agrees that quinine should always be given to pregnant women suffering from malarial infection, the fetus and the mother thus being protected, and their general health improved.

Edema of the Glottis as a Sign of Latent Nephritis.

Professor Derville describes the case of a woman, 60 years of age, who entered the hospital on account of empyema complicated with bronchitis. After a month's sojourn she complained one morning of great difficulty in respiration. In fact, the voice was broken; inspiration was long, jerky and noisy; expiration was comparatively easy. There was slight suprasternal tugging, but neither cyanosis nor asphyxia, properly so called. Upon laryngoscopic examination there were seen behind the epiglottis, which presented no lesion, two large swellings of a pale-red color, gelatinous appearance and consisting of an hypertrophy of the aryteno-epiglottidean folds. It was these which constituted the obstacle to respiration. The case was one of edema of the glottis. But what was the cause of these tumors? After passing in review all the affections capable of producing such an edema the explanation could only be found in renal alterations. In fact, examination of the urine and the detection of albumin revealed the presence of a latent nephritis and at the same time explained the laryngeal complication. The patient was placed upon an absolute milk diet and in the course of some days the subjective symptoms disappeared. The condition progressively improved, and one month later the patient felt entirely well and asked for her discharge. Precocious edema of the glottis is not very frequent in the course of nephritis. It may be asked why, in the case of this patient, the edema affected the aryteno-epiglottidean folds. In addition to the general cause which creates a predisposition to dropsy there is often an accessory cause which determines the localization. The pa-
tient was emphysematous. She had, therefore, frequent attacks of cough, whence a fatigue and congestion of the larynx, which was the determining cause of the localization in the larynx.

The milk diet alone in this case was sufficient to bring about a cure, but one must always be prepared to perform tracheotomy if demanded by the condition of the patient. Searcifications of the aryteno-epiglottidean folds are at the present day abandoned.—Recue Hebdomadaire de Laryngologie, etc.

An Epidemic of Favus.

An epidemic of 130 cases of this disease of the scalp, all occurring on board one United States ship, is reported by Dr. Sheldon G. Evans, of the navy, in Jour. Ass. Military Surgeons. The origin of the cases was traced to a German apprentice boy who was evidently suffering from the disease when sent to the ship. From him it was spread to the others by the utensils of the barbers aboard and through the custom of changing watch caps. The diagnosis of the disease is easy: The mass of yellow scales, the cup shaped depressions and the falling hair are characteristic. The treatment followed by Dr. Evans was as follows:

The hair of every patient was cropped short and kept so during the entire course of treatment. A solution of mercuric chloride in alcohol 1 to 500 was prepared, and two stiff brushes provided. The heads of all the patients were thoroughly scrubbed with the solution every other day for a week or ten days, within which period all the scales were removed, leaving only a yellowish stain on the scalp. Then a solution of the same strength, in water and glycerin, was prepared and the patient's head bathed therewith, twice a week. Under this treatment, all the cases rapidly improved and a complete cure was effected in a very short time and none developed a second attack. If the scalp is much inflamed or tumefied a mild sulphur mercurial or zinc oxide ointment will quickly relieve it.

Iodoform-Aniline in Suppurating Catarrh of the Middle Ear.

Aniline pure, also known as aniline oil, is a good solvent for iodine, orthoform, iodoform and some other substances which are insoluble in water and most of the other customary solvents. Dr. A. A. Gray, of Glasgow, in Lancet, has employed with satisfactory results a saturated solution of iodoform in aniline (1 in 7) in a number of cases of suppurating catarrh of the middle ear. This solution is of a pale-brown color, and keeps for a considerable time—a month or two—if stored in a glass-stoppered bottle and if impurities are carefully excluded. Ultimately it turns to a crimson color, in which condition it is useless for surgical purposes.

The usual method of employing the iodoform-aniline was as follows: The ear was first syringed and dried, the drying being very carefully done with pledgets of cotton wrapped around the edge of a probe and used under the guidance of a speculum and forehead mirror in the usual way. Five minims of the solution was soaked upon a piece of cotton and applied with forceps to the secreting surface. The cotton was left in place for five minutes and then removed; the excess of the solution lying on the walls of the meatus may be removed by small cotton swabs, but that lying on the tympanum or on the membrane should not be removed. The procedure was repeated twice or at most three times a week; installations of alcohol may be used on the intervening days. Not more than 4 or 5 minims should be employed at a time; more than this may produce cyanosis. In some patients the iodoform-aniline is liable to produce erythema and even eczema of the meatus if carelessly or too frequently used. The use of the solution is considered as particularly indicated in those cases of ear catarrh which do not do well when treated in the usual way—that is, in foul-smelling and presumably tuberculous cases.

Sodium Glycocholate.

H. Richardson, in the Therapeutic Gazette, states, concerning the medical treatment of gall-stones, that cholesterin and the coloring matters are held in solution by the glycocholates and tamocholates, and their precipitation must be due to an insufficient quantity of these substances. He advises the use of glycocholate of sodium by the mouth, as it is absorber from the intestine increasing the flow of bile and preventing the precipitation of the cholesterin and coloring matters. He believes that in a large majority of cases the further formation of stones will be arrested and those present gradually dissolved by the use of their normal solvent. There is no other drug which can be given which will enter the bile and act as a solvent. Several cases of periodic hepatic colic have been permanently cured by the glycocholate of sodium 5 grains three times a day), the patient for
some time continuing to take about two
drams per month to insure that there should
be no insufficiency.

Methylene Blue in Malignant Malaria.
The use of methylene blue (medicinal)
in malaria is not new. As is known, quinine
has practically no effect on the crescent
bodies met with in malignant malarial fever.
It is these bodies which, when ingested into
the stomach of the mosquito, undergo those
changes which terminate in the formation of
the germinal rods or sporozoites. These
are carried in the body fluid of the mos-
quitoso to its salivary glands and are the
actual source of infection in man. Hence
the importance of finding some drug that
will destroy them. Dr. J. M. Atkinson, of
Hong Kong, in Lancet, says he has recently
been studying the effect of the internal ad-
ministration of methylene blue on a
Chinese boy suffering from malignant ma-
larial fever. On examining his blood num-
bers of crescents were found; and as quin-
ine administered for a week had not di-
minished these, on February 9 2 grn. of
methylene blue were given thrice daily in
the form of a pill. On the 16th, after care-
ful examination, no crescents were to be
found in his blood. As the patient was now
suffering from gastric disturbance, nausea,
vomiting, etc., which the doctor thought
might be due to the drug, it was discon-
tinued. The blood was again examined on
the 17th and 20th, and was found to be free
from crescents.

A Further Contribution to the Dietetic Treat-
ment of Epilepsy.
Balint, in Neurolog. Centralbl., No. 8,
1903: The salt-starvation method of treat-
ing epilepsy has had such varying results
in the hands of different investigators, and
so much controversy has arisen concerning
its efficacy, that Balint, who was among the
first to try it and whose original article,
published in 1901, has been so often at-
tacked, has felt constrained to experiment
further in the matter and this paper is the
result of his further observations. The
original diet proposed by him consisted of
1000 grams of milk, 50 grams of butter,
three eggs, fruit and 300 to 400 grams of
bread in the preparation of which the
NaCl was replaced by NaBr. In 80 per
cent. of his cases the attacks were less
frequent and in some of them disappeared
entirely. This therapeutic result took place
without regard to the severity of the epi-
lepsy or whether the case was recent or an
old one. In cases with the return to the
old diet the attacks appeared again with
their former intensity. In this paper Balint
attempts to answer the two following ques-
tions: 1. Whether it is possible to keep up
this diet for a long period of time, and 2,
whether toxic symptoms intervening would
necessitate an interruption of the diet. In
five cases of long-continued epilepsy, in
which the attacks persisted in spite of large
doses of bromide, the following results
were obtained: In a case with a weekly
average of eleven attacks, during nineteen
weeks of treatment the attacks, occurred
twice weekly, with six weeks entirely free
from them. In a case with ten to thirty at-
tacks weekly, during twenty-seven weeks of
treatment there were seventeen weeks free
from attacks, and slight attacks of dizziness
in the other ten weeks. In a third case,
with one to nine attacks weekly, sixteen
out of twenty-seven weeks of treatment
were absolutely free from attacks. In a
fourth case twenty-one weeks were free
from attacks, and in a fifth case twenty-two
out of twenty-seven were free from attacks.
In all the cases cited above, during a six
months' treatment, the number of attacks
was reduced by 78 per cent. In addition to
these cases, the author describes five
others in which the treatment lasted from
five months to one and one-half years. These
are ambulatory cases, and after six or eight weeks of strict diet, are al-
lowed to modify it, always, however,
keeping bread free from NaCl and the
rest of the food likewise. All of these
show the same remarkable reduction in the
number and severity of the attacks. In re-
spect to the amount of bromide given in the
food, 3 grams was the average for adults,
and 1½ grams for children. The author
concludes as follows: The diet, which con-
sists of milk, butter, eggs, fruit and bread
baked with NaBr, causes, according to al-
most all investigators, a decrease in the
number and a lessening of the intensity of
attacks. Such a diet can be used for as
long a time as the patient can stand it and
where the state of nutrition of the patient
remains good. In those cases in which the
diet cannot be used, other kinds of food,
such as vegetables, cereals and meat, which
are cooked without salt and with NaBr can
be given. In order to vary as much as pos-
sible the different kinds of food, the weight
of the patient should be taken weekly as a
measure of its efficiency. By a continuous
use of this method slight or severe symp-
toms of bromism can result, which, how-
ever, can be lessened by a variation of the
diet or by temporarily giving it up.
ABSTRACTS.

SURGERY.

Value of X-ray in Superficial Epitheliomata and Tuberculosis.

W. L. Rodman and G. E. Pfahler (Medical Record, May 30, 1903) presented at the meeting of the Association of American Physicians recently held in Washington a paper under this title.

In studying 234 cases of epitheliomata they had found 63 per cent. to have been cured and 36 per cent. much improved by the X-ray. To accomplish this the average number of treatments had been twenty-five, and the time occupied a little over eight weeks. In rodent ulcer 43 per cent. had shown marked improvement. The treatment in this type of tumor required more patience than in the foregoing. Of lupus vulgaris they had been able to collect seventy-five cases treated by the ray, sixty-five of which were reported cured. Here again the time had been eight weeks, but the treatments had been more frequent, viz., forty. Lupus erythematous, curiously enough, was shown to be just as difficult to cure. In general the final results compared most favorably with other methods of treatment. In tuberculous glands the rays had been used in ten cases, with favorable results in all, but it was in Hodgkin's disease that the most startling revelations were produced by this form of treatment. A number of cases having been recorded in which glands very deeply placed had speedily disappeared.

So far as the action of the rays is concerned, very little is as yet known about it, but certain it is that in addition to the blood vessels closing, elastic tissues develop in the surface at a rapid rate. He said the question of personal idiiosyncrasy to the rays is not a matter to be passed over lightly, because dermatitis and loss of hair had taken place in one patient who was exposed a single time to a tube under exactly the same conditions as another patient who had been treated for two and a half years with great regularity. He concluded that, for the treatment of slow-growing and not highly malignant tumors of the face, the rays are indicated because of their efficacy and excellent cosmetic effect. In lupus they are practically a certain cure. Under other conditions, however, the rays are simply an adjuvant to older methods of treatment.

Formalin Applications in Cancer.

Very satisfactory results are reported by Dr. A. F. M. Powell from the topical use of formalin (formaldehyde solution) in a number of cases of inoperable cancer and sarcoma. The method of application is as follows: Absorbent lint is soaked in 2 per cent. solution of formaldehyde (made by adding 19 parts of distilled water to 1 of formalin) and laid on the tumor; this is covered with jacovet and cotton-wool and bandaged on. The dressing is changed every six hours. According to Dr. P., after the third or fourth dressing, the discharge and fetor cease, and the further process is an aseptic one: in three to seven days the tumor loses its elasticity, and becomes darkened, friable and insensitive, and separation takes place in sixteen to twenty-four days, the time varying with the size and nature of the disease, and is completed by the aid of a pair of forceps and scissors. The treatment of the healing surface resolves itself into the ordinary method. It is claimed the method is practically painless and no sepsis occurs.—Brit. Med. Jour., 1903. No. 2213.

Abandonment of the Abdominal Belt After Celiotomy.

Dr. Kahn, of Leadville, suggests in the Phila. Med. Journal gradual development of abdominal muscles to meet the exigencies of the laborious occupation, as applied to the individual case.

With one exception he has been unable to find any expression of his conviction. That exception is the opinion held by Professor Olshausen, of Berlin, as stated by Professor Senn in American Medicine, July 19, 1902. Dr. Senn says:

"Professor Olshausen is of the opinion that ventral hernia after laparotomy only occurs when the fascia, from faulty suturing or suppuration, fails to unite. He has no confidence in abdominal supporters of this postoperative complication." Coming as it does from so high an authority, it merits and demands a consideration which the same theory could not command if promulgated by a less brilliant star in the surgical firmament.

The universal practice of prescribing the abdominal belt after celiotomy as a supposed preventive of hernia seems to Kahn to be the result, partly of irrational reasoning interspersed perhaps with a circular philosophy, and partly to the human proclivity thoughtlessly to follow, without knowing why, the practices and precepts of others.

It has been Kahn's practice for over three years, including one patient operated
upon at the second month of pregnancy and who carried to term ("Removal of ovarian cyst, broad ligament cyst and appendix at the second month of pregnancy. Delivery at term," American Medicine, July 1901), after removing the first dressing which is applied snugly for comfort, to allow patients to go without any support. This dressing is usually removed three or four days after the patient is up and around, sixteen or eighteen days after operation—and he has had no occasion to regret the practice that may appear to some to be an indiscreet radicalism, but which he is convinced is an eminently circumspect conservatism. In closing he advises: Suture accurately and securely, abandon the belt, develop the muscles when necessary and thus avoid hernia.

Course of Fistulae Which Complicate Appendicitis.

Muehsam, in Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie, Band xi. Heft 2 divides the fistula into those which arise without an operation and those which follow one. The author's observations have shown him that fistula which result from disease of an appendix which is never removed, recur until the organ is taken out, and that they then promptly heal. The danger is very slight that a fistula which has once formed between abscess and intestine, will be permanent. The same rule holds good for the vagina, provided the appendix has been removed. In the clinic there have been many pus cavities opened by this route, but never has a fistula remained. It is very different when the urinary bladder has been affected: here the fistula will persist, and, in addition, there is always the danger of an ascending infection being complicated by pyelonephritis. A post-operative fistula can result if the intestinal wall has not been properly sewn or if it be diseased (tuberculous), or if the wall of the intestine be injured at a distance from the appendix, or especially is all of this true if the little organ be not removed. Further, fistula result from the continued flow of pus from neighboring collections between the intestines. Fistula are to be prevented by care at the operation as well as by an after-treatment which protects the wall of the gut. As to treatment, one should wait a long time before operating at all, and then suture of the defect does little or no good, since the gut wall is friable; usually it must come to some sort of anastomosis or extensive intestinal operation.

Appendicostomy.

Willy Meyer reports that a woman of 53 had for two years suffered from diarrhea accompanied by pain, says Medical News. The condition was growing worse and the patient had lost sixty pounds in weight. The rectoscope showed numerous ulcerations, and from the pain and tenderness it was concluded these ulcerations extended the length of the colon. Weir's method of irrigating the bowel was decided upon. The free end of the appendix was brought out through an opening made by incising the skin and separating the muscle-fibers. It was adhered in this position, opened and a small rubber tube passed into the bowel and secured by a safety-pin and adhesive strips. Daily irrigation with silver nitrate solution, beginning with 1:10,000 and followed by salt solution, was given. Later irrigation was given every alternate day. The rectal ulcer was treated locally and medicated enemas were given. The patient was not well at the time of writing, but was much improved and had gained in weight. The author is of opinion that appendicostomy would be a method suitable in some cases for relieving the obstruction produced by malignant disease of the colon, sigmoid or rectum in elderly and weak patients.

Surgical Tuberculosis.

H. L. Burrell contributes a valuable article on this subject to the Boston Med. and Surg. Journal. In his preface he says in substance that physicians have partially recognized the value of constitutional hygienic and open-air treatment for the tuberculous. Surgeons have not been so keen to appreciate these principles in treatment. Their attention has been concentrated on the treatment of the local lesion. Many consider that a tuberculous area must be removed; some regard the area as little less than malignant. Relatively few surgeons consider that to increase the patient's power of resistance to fresh invasions of the tubercle bacillus is of as great importance as to operate. A few orthopedic surgeons and genitourinary surgeons recognize the importance of outdoor treatment. General surgeons, however, fail to appreciate that probably in many instances an area of tuberculosis is simply a local manifestation of a more or less general infection by the tubercule bacillus in an individual whose power of resistance is lowered. The author then considers the subject of tuberculosis under the follow-
ing headings: Prevalence, diminution, pathologic consideration, sanitoriums, construction of sanitoriums, hospitals outdoor treatment of tuberculosis, tent treatment, home treatment, effects of sunlight and electric light and defects of hospital construction.

Iodoform Filling for Bones.

Mosetig-Moorhof describes in Central-blatt fur Chirurgie a method he finds successful in securing prompt closure of large defects following extensive operations for chronic bone diseases. The underlying principle consists in filling the cavities made in the bone with a mass which temporarily replaces the loss of substance and is then gradually absorbed as the new bone is formed. The technique is somewhat troublesome, but when carefully carried out is said to produce very satisfactory results in a class of cases that, under the ordinary treatment, are exceedingly tedious. The prime requisite is that a perfectly aseptic cavity is made at the operation, and this is to be accomplished only through the most scrupulous removal with chisel and gauge of every particle of diseased bone, as all attempts at chemical disinfection and even with boiling oil are inadequate. The operation should therefore be conducted under hemostasis with the elastic touriquest with the greatest thoroughness, and then rendered absolutely dry by sponging and the application of filtered dry cold or, preferably, heated air. This is an essential step and requires the same care as is needed in filling the cavity of a tooth. When the entire bony surface is clean, white and shining the filling is slowly poured in, in such a manner as to exclude all air bubbles. The composition of the mass is as follows: Iodoform, 60 parts; spermaceti, and oil of sesame, each, 40 parts. The constituents are placed in a sterile flask and slowly heated in a water bath to 80° C. This temperature is maintained for fifteen minutes, and then the mass is allowed to solidify under constant shaking in order to keep the iodoform emulsified. When cold this forms a solid mass which, before use, is liquefied by heating to 60° C. The bony cavity is filled to the brim with this, and after a delay of several minutes, to permit congelation, the soft parts are sutured, leaving one or two small openings for drainage. A sterile dressing is applied, without great pressure, and only then is the touriquest loosened.

The filled cavity does not bleed nor discharge, and x-ray pictures taken at intervals bear witness to the gradual absorption and replacement of the iodoform mass. This, of course, is very slow, but is complete, and in 120 cases treated in this way no local reaction was observed.

Knock-out Blows.

J. G. Duncanson says in British Medical Journal that the general impression prevails that there is only one knock-out blow, namely, on the point of the jaw. This is an error. The temple is a particularly vulnerable point, and a blow with the bare knuckles may easily fell an opponent. A swinging short arm blow dealt on the point of the ear may cause rupture of the membra ta tympani and unconsciousness. A vigorous blow dealt on the neck when the head is thrown back is especially dangerous. A severe blow dealt over the region of the heart may cause intense agony, syncope and even death. To have the worst results the muscles of the chest must be relaxed and the lungs in a partial or full expiration when the blow is given. Diaphragmatic blows produce shock but are not especially dangerous to life. A swinging blow over the kidney is dangerous. A blow on the "mark" is most dangerous and severe in its immediate and after effects. The mark is a specially sensitive area the size of the palm of the hand on the abdomen and corresponds with the center of a triangle formed by xiphosternal articulation above, and the line joining the bony ends of the seventh ribs below. A knock-out blow on the solar plexus is impossible. The stomach is in reality the organ which receives the shock and from which the nervous disturbances originate. The vagi are powerfully affected along with the sympathetic and great solar plexus. A sudden fall of blood-pressure ensues, probably due to dilation of the abdominal vessels. The blows mentioned are only those which may occur in fair play under the Marquis of Queensberry's rules, and have no reference to fouls and others.

Pathogenesis and Pathological Anatomy of Enlarged Prostate.

L. R. G. Crandon, in Annals of Surgery, carefully examined, both grossly and microscopically, specimens from 37 cases of senile prostate. 12 of these were enlarged, 24 were normal size, and one was small. In one-half of the cases the bladder showed a lip rising above the level of the urethral floor, forming the anterior wall of the retro-prostatic pouch. Microscopic examination showed the following changes in the wall of the bladder: fatty degeneration, the formation of new connective
GAILLARD'S neoplasms in 292 acini of the tissue and changes in the muscular fibers and sclerosis of the vessels. After describing the structure of the normal prostate the author finds that compared with the latter the enlarged prostate may be either soft and spongy, or hard and fibrous. The distribution of enlargement is irregular, most often it is in the lateral lobes, next in order of frequency, in one lateral, and the middle lobe, then in the middle lobe alone, and least frequently, in one lateral lobe. The anterior commissure is rarely involved. Microscopic examination of hardened and stained sections shows that the area occupied by the glandular portions is relatively increased, that the muscular tissue, though remaining fixed in amount, shows fibrous infiltration around the acini and ducts, and in the muscular septa. That the connective tissue of the stroma is greatly increased, consisting either of small round cells, or irregular areas of hyaline fibers, which may contain the remains of glands denuded of epithelium or collapsed. That the glands and acini are widely dilated, epithelial cells are smaller, flattened, poorly stained or desquamated. Thus he shows that the enlargement of the prostate is due to the dilatation of the acini, caused by the obstruction of the ducts. Regarding the causes of prostatic enlargement, the author arrives at the following conclusions: there is a slow formation of new connective tissue, due to infection, or to infection, aggravating a senile degenerative process, the agency of this infection is probably the gonococcus; neoplasms do occur, but are rare.

OBSTETRICS AND GYNECOLOGY.

Treatment of Ovarian Cysts During Pregnancy.

Coq, in Gaz. de Gym., favors oophorectomy as soon as the diagnosis is made, believing that the earlier it is performed the greater the chance of success. If it is postponed sudden accidents may force the operation under unfavorable circumstances. The ordinary technique should be employed, but in order to avoid inciting uterine contractions an effort should be made not to exert much traction upon the pedicle. For the same reason morphine may be administered. It has been recommended, in cases seen during the late months of pregnancy, to wait or to puncture the cyst through the abdomen or vagina; but by this course the woman is exposed to the dangers of rupture or inflammation of the cyst wall or torsion of its pedicle, which would necessitate immediate laparotomy. Seen during labor, if the tumor is abdominal and not causing compression it should only be watched. If the second stage is prolonged forceps or version is called for. If the tumor is pelvic, however, it should be pushed up, under chloroform, between pains. If this succeeds the labor should be terminated by forceps or version as soon as the cervix is dilated. Failing to move the tumor in this way it should be punctured or incised through the vagina. All forcible manipulations must be avoided. Should attempts to puncture an incarcerated cyst fail version, forceps and embryotomy are dangerous and laparotomy is preferable. If the cyst can be removed in this way the labor may be allowed to proceed, otherwise Cesarean section or even abdominal hysterectomy followed by extirpation of the tumor may be necessary.

Real and Simulated Tubal Pregnancy.

The paper of C. Schambacher, in Zeit. fü Geb. u. Gym., Bd. xlvi, 43, is based upon fourteen cases diagnosed as tubal pregnancy. In four of these operation showed other conditions; in one, hematosalpinx after pneumonia; in two, chronic hemorrhagic salpingitis; in another, hemorrhage from a laceration of a vesicose vein and broad ligament during coitus. The etiology of tubal pregnancy is still uncertain. Probably the length and permeability of the tube and the degree of development which the ovum has attained while passing through it play a rôle, while inflammation is not an important factor. The development of villi in the ovum implanted in the tube may be slight or marked; the former leads to tubal abortion, the latter causes rupture. Decidua formation does not occur in the mucous membrane in all cases. In some a rudimentary decidua is found in the vessel walls adjacent to the villi. There are conditions which may closely simulate tubal abortion or rupture, especially malformations and hemorrhagic salpingitis.

Disadvantages of Ventro-fixation.

R. Gradenwitz, in Cent. f. Gym., reaches the following conclusions concerning ventro-fixation:

1. After removal of the adnexa ventro-fixation by means of the ligament-stumps is unjustifiable in itself. Ordinarily such ventral suture is unnecessary even in the presence of retroversion or a tendency thereto because of the stump-contraction.

2. Ventro-fixation by means of the liga-
ments in cases in which no operation has
been required on the adnexa, is to be dis-
carded because they risk the formation of
pockets and a better result can be attained
from Alexander's operation.
3. Direct suture of uterus to abdominal
parietes is the surest method of overcom-
ing retroflexion, but it is to be rejected
because of the dangers of metritis, ventral
hernia and the disturbances to pregnancy
and labor. There is danger of intestinal
obstruction in some cases from the adhe-
sion-ligament artificially produced. Alex-
ander's operation preceded, if necessary, by
a posterior colpotomy or in climacteric
cases, occasionally, vagino-fixation is to be
preferred.

Local Treatment in Gynecology.

F. H. Martin, in Clin. Rec., outlines the
local treatment for uterine engorgement,
endometritis and chronic metritis. He be-
lieves it is well nigh impossible to state
definitely where one of these conditions
ends and the other begins. The ideal treat-
ment for the above conditions is a thorough
curettage of the uterus with repair of
any lacerations. When they will not submit
to this procedure we must resort to the
postural treatment; this has for its object
the correction of any prolapse of the uterus.
The patient should place herself in the
knee-chest position for two minutes several
times a day; while in this position she
should press backward upon the perineum
with one finger so that air will enter the
vagina. Afterward the patient should as-
sume the Sims position for some time. Hot
astringent douches are of value and should
be given several times a day. Local appli-
cations to the cervix of antisepsics and a-
stringents should be applied three times a
week, as the local conditions indicate. Be-
fore making applications to the cervix it
must be slightly diluted and all secretions
removed. If the amount of the discharge
is considerable and an astringent is deemed
desirable, a strip of plain gauze may be
carried to the fundus of the uterus and a
considerable pad left in the vagina, the
whole to be removed in twelve hours. Tam-
pons may be used for support and for the
purpose of applying a depleting remedy.
Chronic engorgement of the uterus, simple
or complicated with endometritis, can be
very effectively treated by galvanism.

Puerperal Sepsis.

Edward P. Davis states in the Phila-
delphia Medical Journal for May 23, that
the method of treatment of proven value
in this condition is, first, to thoroughly
cleanse the uterus and vagina, using every
precaution to avoid opening channels for
fresh absorption of septic material and re-
moving gently and thoroughly possible in-
fective material within the uterus. Cold
to the abdomen over the uterus, combined
with counterirritation by a turpentine stipe
large enough to extend from the pubes to
the umbilicus, over which an icebag is
placed, is, in his experience, the best method
for combating pain in the abdomen in these
cases. For the prompt and thorough
emptying of the intestines salts are of value,
but he prefers the compound cathartic pill.
Medication should be limited to those drugs
which act as tonics and stimulants to the
nervous system and produce contraction of
the uterus. Strychnin and ergot are most
valuable and should be given together every
four to six hours until distinct improvement
has occurred. Alcohol is the best internal
antiseptic, and the only limit to its ad-
ministration here is the patient's capacity
to absorb it without intoxication. All septic
patients must be liberally fed and the use
of normal salt solution by bowels or hypo-
dermoysis should be followed in all seri-
ous cases. Methods of treatment which must
still be considered as experimental are the
use of antistreptococcal serum, the use of
nuclein to produce increased leukocytosis,
the use of Crede's silver ointment and the
intravenous injection of formalin. Methods
of treatment which he considered injurious
are, first, to give a septic patient drugs to
reduce the temperature, as no drug controls
the temperature without depressing the pa-
tient. He prefers the use of cold and the
administration of alcohol or hot sponging
followed by the use of alcohol. Another
source of useless and injurious drugging
arises from the anxiety of the physician to
stimulate the heart. There are times in
septic cases in which the value of digitalis
becomes evident, but its use is seldom ne-
necessary if the patient's nutrition is properly
secured. Drugs are also used injuriously
in these cases when an effort is made to
check the purgation which Nature often
sets up, and it is also seldom necessary to
give drugs to procure sleep in these cases.
Dr. Davis strongly emphasizes the mistake
of repeated intruterine manipulation, as
well as the dangerous results following the
use of bichlorid of mercury within the womb.
After the uterus is emptied lysol, 1 per cent.,
creolin, 1 per cent., or normal salt solution,
should be chosen. He has
never seen or known of a case of iodoform
poisoning from the use of iodoform gauze
within the puerperal uterus.
The Weight Wave of Menstruation.

W. T. Belfield gives the following summary in *J. A. M. A.:

During several days, especially the first, preceding the menstrual flow, there occurs a progressive increase in the weight of a healthy young woman, often comprising—especially in winter—from two and one-half to five pounds, which may be from \( \frac{1}{2} \) to 5 per cent. of her usual weight. The climax of this gain is immediately followed by the rapid loss of a large part, perhaps half, of this increase in weight (often within eight to sixteen hours) and then a more gradual loss of the remainder, extending over several days.

The menstrual flow begins during the rapid loss of weight mentioned, the appearance of the blood often, though not always, following immediately on the crest of the wave. The flow continues with the less rapid loss of weight during the next few days, terminating about when the woman's weight regains its premenstrual level.

The premenstrual gain in weight is due, not to increased ingestion of food, but to diminished excretion, especially of water. The rapid loss of weight following the crest of the wave is due, not to abstinence from food (nor, of course, to the trifling loss of menstrual blood), but to rapid excretion, notably of carbon dioxide and water. Thus Belfield has seen a woman lose 2\( \frac{1}{2} \) pounds in weight during the first five hours following the appearance of the menstrual flow, though neither urine nor feces had been voided during that period, and though the subject had had no exercise other than that incidental to clerical office work. (Her loss of weight during the same period, between menstruations, averaged less than one-half pound.)

The appearance of the menstrual blood does not always coincide with the beginning of loss in weight; the flow may begin before or, more often, after the loss of weight becomes distinct.

After the weight has sunk to its premenstrual level, there may occur another crescendo and diminuendo movement, lasting several days, but less pronounced and typical than the menstrual wave. Hereafter the weight shows no constant variation until there occurs a sudden, transient loss, which is the frequent forerunner of the next menstrual wave.

A girl of 14 and a woman of 23, both of irregular menstrual habit, exhibited the menstrual weight wave on several occasions when the flow was nearly or quite lacking.

A woman of 59, who had not menstruated for twelve years, shows no weight wave characteristic of the menstrual period in young women.

For two days preceding the climax in weight there is often marked torpidity of the bowels and scantiness of urine; while, with the decline in weight, excretion by bowels and kidneys, as well as by skin and lungs, is notably increased.

The temperature curve is not constant; there is usually a rise of about 1° F. during the increase in weight and a sudden fall after the crest of the weight wave is passed.

Accidental Perforation of the Uterus.

Abram Brothers, in *American Gynecology*, says he has had eight personal experiences of this kind. A photographic illustration of such a perforation will be found in the original. The literature of the subject has been fairly included in the paper. The rules of management in these cases are as follows:

1. The first set of cases are those in which during the passage of a sound or curette, the uterus is perforated. Under these circumstances the prognosis is good, provided that the instrument operator and field of operation have been aseptic. These cases will usually get well if manipulations within the uterine interior are brought to a sudden termination, and, particularly, if no intra-uterine irrigations are made.

2. If the uterus has been injured and the operator has irrigated the uterine interior, three sets of conditions may arise. In the first set a mild local peritonitis may call for nothing more than the same line of treatment. In the second set an acute septic peritonitis may call for an immediate hysterectomy (usually vaginal), with drainage per vaginam. The third set of cases may be less virulent and more chronic. They are apt to terminate in localized abscesses, which may be located in the pelvic connective tissue or in the pelvic peritoneum. According to their seat, they may require being attacked from above or below. Only very rarely will it be indicated in such cases to do a hysterectomy. The operation in most of these cases will be in the nature of an exploratory laparotomy and the exact line of work can only be determined on with the abdominal cavity opened.

3. In those cases in which the uterus has been injured and intestine has been dragged through the wound and become
strangulated. laparotomy must be done as early as possible."

**Warning on Salt Solution.**

At the February meeting of the Obstetrical Society of Philadelphia, Norris sounds a word of warning as to the use of salt solution. He has found in some cases that an excessive amount of salt solution has aggravated the condition of the kidneys, has produced edema of the lungs and helped to do the very thing one aims to avoid. He places as a limit one quart of salt solution and no more, until free diaphoresis, diuresis or catharsis has occurred. When there is edema of the lungs, it should not be employed at all. He says: "I have seen edema of the lungs aggravated and the patient's serum run out of her mouth as the result of too free use of salt solution. Large amounts of salt solution are of greatest value when profuse catharsis from saline purges has occurred."

**Toxemia of Pregnancy.**

Gastric and intestinal catarrh following influenza often act as predisposing cause of what appears to be a very resistant form of toxemia, says Dr. Wells, in Phila. Med. Journal. Plethoric rather than anemic women are affected, and the main symptoms are headache, ocular pain and soreness, photophobia, frequent micturition, urine less normal, a slight pyrosis, nausea and edema. One set of cases is marked by lesions pointing to the kidney disease. The second set presents symptoms of chronic gastro-intestinal catarrh, but with a urine characteristic of toxemia. Urea excretion should always be the principal guide in diagnosis, and the latter should never be made from the presence or absence of albumin alone. The symptoms may resemble those of hysteria, and attention is called to the fact that hysteria may be caused by toxemia. Other conditions which must be eliminated are threatened miscarriage and acute indigestion. The writer recommends as treatment measures calculated to increase elimination by bowels, kidney, liver, and skin. He advises calomel, but in fair-sized doses, 5 to 10 grains, and combines it with sodium phosphate, 1 dram in four or five powders. High rectal irrigations are of greatest value.

**Pregnancy After Rupture of the Uterus.**

The question whether a subsequent pregnancy is an indication for Cesarean section in a woman who has had a rupture of the uterus is discussed by H. W. Freund, in Zeit. für Gyn. The case upon which his arguments are based was one in which an extensive rupture of the uterus was sutured. The woman then passed without accident through five abortions brought on during the third and fourth months and a premature labor induced at the thirty-third week. Examination during the abortions and premature labor showed early stretching of the lower section and drawing into the uterine cavity of the scar area. He permitted the last pregnancy to go on nearer to term on account of an increase of muscular tissue near the scar in the previous puerperia. The question of performing Cesarean section in pregnancy following rupture cannot be answered either affirmatively or negatively in regard to all cases. To the writer it is less dependent upon the distinction of the scar tissue than upon the time which has elapsed since the rupture, the degree of regeneration of muscle tissue in the region involved, and the size of the fetus. Whether, in a case of pregnancy coming on shortly after rupture of the uterus, early induction of abortion or Cesarean section near term is preferable must be decided in the light of individual circumstances. If the history and careful examination determine the presence of atrophy of the lower segment, spontaneous labor at term is dangerous, and abortion or Cesarean section is indicated. If this atrophy is not present induction of premature labor is called for. If the rupture was not confined to the lower uterine segment and circumstances are generally favorable spontaneous labor may be awaited. When rupture has taken place total hysterectomy is not necessarily called for. If the general condition is not bad and there has been no infection abdominal section is not more dangerous than vaginal, and gives an open field for hysteroscopy and cleansing and draining the peritoneum while maintaining fertility.
MEDICAL HAPPENINGS IN NEW JERSEY.

The following physicians have been granted certificates to practice in New Jersey: Leon Hamilton Bossert, of Millville; Arthur W. Beltig, of Trenton; Joseph Howard Cloud, of Ardmore, Pa.; Francis R. Di Matteo, of Newark; John Edward Donley, Jr., of Orange; Harry Stokes Doriss, of Atlantic City; Joseph William Dwyer, of Passaic; Edmund Eastwood, of Burlington; Walter Roland Elliott, of Philadelphia; Mary E. Esser, of Philadelphia; James Aloisius Gormley, of Vineland; Earl Stephen Hallinger, of Camden; Pomp. Long Hawkins, of Atlantic City; Charles R. Heed, of Philadelphia; William Thomas Hilliard, Jr., of Salem; Howard Franklin Hoffmeier, of Phillipsburg; Smith Hamil Horne, of Atlantic City; Charles Albert Keating, Jr., of Paterson; Raymond Arndt Kiefer, of Millland Park; Joseph William Kenney, of Philadelphia; John William King, Jr., of Newark; Edward Isaac Leonard, of Atlantic City; Fred Irvin Longstreet, of Manasquan; John Carmelia Loper, of Bridgeport; Harry George Macdonald, of Hackensack; Calvin Edward MacMillan, of Lakewood; Emil Manner, of Newark; Harold Philip Martin, of Newark; Thaddeus P. Martin, of Atlantic City; Charles Holmes Mayhew, of Port Elizabeth; Dennis Ralph McElhenny, of Long Branch; Frederick W. A. Mayer, of Jersey City; John Lewis Meeker, of Newark; James Percival Morrill, of Paterson; Edward Ralph Myers, of Atlantic City; Marcus Ward Newcomb, of Newport; Jeremiah Francis O'Connor, of South Amboy; T. Richard Paganelli, of Hoboken; Edward Parry, of Camden; Thomas Heritage Platt, Jr., of Bridgeport; Jacob Wilson Reed, of Pleasantville; Siegmund Albert Reich, of Jersey City; Joseph England Roberts, Jr., of Camden; Edward Bancroft Rogers, of Mt. Holly; Horace Lewis Rose, of Camden; Israel Jay Rachlin, of Newark; William Satterer, of Newark; John Berkey Seeds, of Trenton; Frank Remington Sheppard, of Cedarville; William Rice Silverstein, of Newark; Howard Sedgwick Smith, of Newark; Katherine Louise Storm, of Philadelphia; Edmund Brewster Terry, of Atlantic City; Claude Wellington Thomas, of Medford; William Hibbs Tomlinson, of Trenton; Helen Frances Upham, of Asbury Park; John Van Ess, of Paterson; Joseph Smith Van Dyke, of Cranbury; William John Ward, of New Brunswick; Victor Egbert Watkins, U. S. Army; Absalom Steelman Wescot, of Atlantic City; Herbert Heisler Wilson, of Bridgeport; Emanuel Yadowsky, of Newark; J. John Lee Young, of Newark. The following candidates having attained a general average of 90 or over, were placed on the honor roll: Francis R. Di Matteo, of Newark, 92; Jeremiah Francis O'Connor, of South Amboy, 92; Howard Franklin Hoffmeier, of Phillipsburg, 91.1; Joseph England Roberts, Jr., of Camden, 91.1; Joseph Smith Van Dyke, of Cranbury, 91; James Percival Morrill, of Paterson, 90.6; John Edward Donley, Jr., of Orange, 90.1; William Satterer, of Newark, 90, and William John Ward, of New Brunswick, 90.

Licenses to practice dentistry in New Jersey have been issued by the State Board of Examiners in dentistry to the following: J. F. Casey and H. M. Zeitlein, of New York city; W. H. McDermott, of Trenton; A. C. Haggerty, R. J. Inglis, J. C. Habben and G. Carr, of Paterson; H. J. Parker, of Bridgeport; R. W. Welch, of Morristown; C. L. Moore, of Plainfield; A. C. Smith, of Bayonne; C. Faupel, H. A. Kuhl, of Jersey City; A. M. Knight, of Clinton; R. Wakefield, of Cranford; C. M. Taylor, of Philadelphia; H. J. F. White, of Butler; F. B. Burdge, of Asbury Park; C. H. Clark, of Pitman Grove, and H. A. Fordyce, of Bloomington.
Dr. Charles Lancaster, one of the oldest and best known literary men of Plainfield, died July 6. Death was due to an attack of pneumonia. Dr. Lancaster was born in East Winthrop, Me., March 29, 1808, and during his early manhood was intimately acquainted with Emerson, Longfellow and other New England poets. He had a natural taste for writing, but entered the medical profession and practiced until twelve years ago. Since then he had devoted his time to literature and wrote many articles for magazines and newspapers and also published several text books which are used extensively. He lived for some time in Philadelphia, and at Norristown, Pa., where he practiced law and came to Plainfield in 1896. He leaves two sons.

Dr. G. Dalton Hays, who died at his home in Tenafly, N. J., on July 3, took the gold medal at the College of Pharmacy, and served as instructor in the college for many years. He graduated at the College of Physicians and Surgeons in 1884, became a member of the Academy of Medicine and was secretary of one of its departments. He was also a lecturer at the Post-Graduate Medical School, and Training School for Nurses. Dr. Hays was a son of David Hays, who was vice-president and treasurer of the College of Pharmacy for many years.

Dr. Lucius F. Donohoe, of Bayonne, is abroad for several weeks, during which time he will visit parts of Europe, Asia and Africa. He is spoken of as a candidate for Mayor of Bayonne on the Democratic ticket.

Dr. Robert A. Giuliana, of St. James' Hospital, Newark, is in Europe for several weeks. He will return September 15.

Dr. G. E. McLaughlin, of Jersey City, sailed for Europe on July 18.

Dr. D. C. Babbitt, of Morristown, has gone to South America on an exploration trip.

Dr. T. O'Conor Sloane and family, of Vose avenue, South Orange, are at their summer home, at Great Neck, L. I.

Dr. William A. Wakeley, of Orange, has been enjoying a yachting trip up the Hudson.

Dr. Eugene Clancy, of Chicago, has during the last week been installed as new house physician at the Alexian Brothers' Hospital, Elizabeth.

The bonds of Jersey City Hospital Trustees, Dr. George W. Shera and Dr. Frederick E. Lambert, who were appointed by Mayor Fagan last month, have been approved by the Board of Finance. The bonds are for $10,000 in each case.

The St. Andrew's Convalescent Hospital for Women and Girls, at 213 East Seventeenth street, New York, has closed its city quarters and opened a summer rest at Woodcliff, Bergen County, N. J. It is a benevolent institution, incorporated within the past year and provides medical care and rest for those women and girls who have been discharged from the various city hospitals, but are as yet unfit to take up their duties.

A number of prominent women in Bayonne have started a house-to-house canvass for contributions for the Bayonne Hospital, a charitable institution, which is in need of about $5,000 with which to meet debts.

Dr. J. T. Briskell, of Rahway, has been spending the heated term at Green Pond.

Dr. McClellan, of Harvard Medical School, is acting as assistant to Dr. Edwin Leonard, Jr., president of Reed & Carnrick, Jersey City, during the summer.

Dr. W. D. Garrett, of Orange, and his family, have taken possession of their summer home at Norton Hills, in the foothills of the Catskill Mountains.
Dr. and Mrs. S. I. Myers, of Bayonne, are spending August in Maine.

Dr. and Mrs. F. H. Humphreys, of Morristown, have been summering at Lenox, Mass.

Dr. I. P. Brokaw, of Freehold, have been visiting in Central Bridge, N. J.

Dr. M. Herbert Simons, of Orange, has been spending some time in the Catskills. His son will enter the mechanical department of the New York University this fall.

Dr. and Mrs. Thomas McNamara, of Hoboken, are enjoying the summer at Atlantic Highlands.

Dr. and Mrs. David Pindar, of Hoboken, are occupying a cottage at Hacketts-town for the summer.

Dr. H. B. Rul, of No. 931 Bloomfield street, Bloomfield, is summering at the Passaic House, Asbury Park.

Dr. G. Carlton Brown, of Elizabeth, has been appointed chief consul of the New Jersey division of the American Motor League. Dr. Brown has assumed the duties of the office, and reports excellent progress for the league in New Jersey.

Dr. and Mrs. William H. Lawrence, of Summit, spent a couple of weeks among the Thousand Islands.

Dr. John D. Moore has taken a residence in State street, Bloomfield.

Dr. Henry Lehman, of Montclair, is in California for a two months' sojourn.

Dr. and Mrs. Henry N. Dodge, of Morristown, have been spending the summer on the Connecticut shore.

St. Francis Hospital, Jersey City, is in receipt of an ambulance donated by an anonymous friend of the institution. A horse and set of harnesses were given by several gentlemen who are interested in the hospital.

Dr. T. J. McLaughlin, of 538 Jersey avenue, Jersey City, claims that his removal from office as a member of the Jersey City Board of Pension Examiners is a gross violation of the civil service rules. “Will you take steps to test the legality of your removal?” he was asked to-day.

“I don't know what I might do under advice,” he replied. “This disregarding of the civil service rules has been going on in different Federal departments for quite a length of time and I suppose my case has been brought to the attention of the public at this time as a specimen of the most pronounced violation so far in the matter I have specified. Many other Democrats besides myself have suffered by being forced out of their official positions in defiance of civil service regulations.”

Commissioner of Pensions Ware, in Washington, claims that he acted under the instructions of President Roosevelt in removing Dr. McLoughlin from office after the latter had failed to send a reply to a written demand for his resignation.

The free dispensaries in Jersey City have been reopened for the summer. They are located in drug stores, and at each is stationed a physician, who remains on duty from 5 to 6 P. M. and from 8 to 9 P. M. each day. The appropriation to run the dispensaries is made by the Board of Finance. All worthy persons without means, and especially mothers, with ailing children, will receive free medical advice and the necessary remedies.

A separate ward for erysipelas cases is to be added to Paterson’s Isolation Hospital.

Dr. Joseph I. Simpson, of Butler, spent part of his vacation in Atlantic City.
THE ETIOLOGY AND PATHOLOGICAL ANATOMY OF ANEURISM.*

By W. LOWNDES PEPLE, M.D., of Richmond, Professor of Histology in the University College of Medicine.

Before opening the subject of aneurism, let it be remembered that in spite of the various divisions and subdivisions of the wall of an artery, it is built of but two elementary tissues endowed, so far as our subject is concerned, with but three functions. The involuntary muscle lies in the middle coat and under the influence of the sympathetic nerves controls the vessel caliber, thus, under usual conditions, maintains a uniform blood pressure. In the fibro-elastic tissue reside the other two functions. The yellow fiber is an elastic cushion upon which the force of the heart beat falls, rendering an intermittent stream continuous. Of the white fiber is woven a resisting wall to stand guard lest elasticity be overtaxed or contractility should fail.

In the walls of the large arteries there is relatively little muscle and much elastic and fibrous tissues. As a consequence, in the variations of the general vascular capacity, these greater trunks bear but a small part.

In a paper of this scope it is deemed best to avoid the discussion of the circoid aneurism, the false aneurism, the aneurismal varix and the miliary cerebral aneurism, giving the time to the common varieties met with in the larger vessels.

A true aneurism is a permanent circumscribed dilatation of one or more coats of an artery. There are three varieties—the tubular or fusiform, the saccular and the dissecting aneurism.

A tubular consists of the dilatation of all the coats of an artery involving the entire circumference for a greater or less extent.

A saccular is a sac-like dilatation upon the side of an artery or upon a tubular aneurism. This never retains all three coats if the sac attains a considerable size.

A dissecting is one in which the blood makes its way between the coats of the vessel, dissecting them apart and making there an abnormal space. This latter condition is rare.

Aneurism occurs in a previously diseased large artery of a man past

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forty who is subject to violent intermittent muscular exertion. Aneurism occurs in man because his occupations are more laborious than those of woman. It occurs in middle life because, while this is the age at which degenerative changes begin, he has not discontinued the heavy, laborious work of youth.

It occurs in a large vessel by reason of its structures, for the bulk of the wall is composed of connective tissue, which is especially prone to degenerative changes, and the muscular tissue which might supplement the elastic is here very scant. It occurs in a large vessel by reason of its anatomical location, for the great trunks not only bear the brunt of the heart beat, but they also lack the sturdy support of muscle, bone and tendon enjoyed by vessels elsewhere.

The occurrence of aneurism in a healthy vessel, unless one or more of its coats be mechanically severed, is so rare that it scarcely need be mentioned.

There are certain constitutional diseases and conditions, namely syphilis, gout, rheumatism, alcoholism, etc., which are accompanied by changes within the vessel wall which may be said to precede aneurism. These changes consist either of a softening of one or more of the coats, which allows dilatation to take place at the diseased area, or a hardening, which destroys the normal elasticity, and, by throwing the strain elsewhere, gives rise to dilatation.

Atheroma, a rather vague term used to denote a local softening, seems to have for its direct cause the obliteration or plugging up of one of the vasa vasorum. There is first a round cell proliferation in the intima, which forms a whitish patch and projects as an elevation in the lumen. Fatty degeneration and finally disintegration takes place in the cells, and an atheromatous ulcer is formed.

Gumma, the tertiary syphilitic lesion, is followed by softening similar to atheroma.

Where isolated calcareous plates slough into the lumen a vulnerable point is left.

Arterio-sclerosis predisposes of aneurism by destroying the elasticity of the vessel wall. It consists of a marked increase of fibrous tissue of both intima and adventitia and, to some extent, of the media, which undergoes more or less contraction. Robbed of its elasticity, the vessel wall gives way in some weak or less affected point.

Calcareous degeneration, when involving considerable areas, may give rise to aneurism. Where the entire circumference is involved in a chalky cannula for instance, there would be undue tension at the mouth of this tunnel. The causes enumerated may act singly or together. Syphilis, by many authors, is claimed to be a most fruitful source of aneurism.

Of direct injury as a cause, it may be mentioned that with the advent of the modern high velocity small calibre projectile, there will doubtless be more true traumatic aneurisms, for these bullets cut the outer coats like a knife and allow hernia of the inner to take place.

Microscopic section of an aneurismal wall would, of course, vary with each case and would present the normal tissues greatly infiltrated and stretched, with external fibrous thickening of the adventitia, which
THORACIC ANEURISMS—PARKER.

is frequently amalgamated to all surrounding structures. The interior of the sac, especially if its orifice be small, contains a lamellated deposit of fibrin on the intima.

Having weakened the wall and provided an exciting cause, I now leave it to my colleague to say whether or not my patient has developed aneurism.

CONCERNING THE SYMPTOMATOLOGY OF THORACIC ANEURISMS.*

By TRUMAN A. PARKER, M.D., of Richmond,
Instructor in Physiology in the University College of Medicine.

We all know that an aneurismal tumor of the ascending arch will present a train of symptoms differing somewhat from those consequent upon a tumor in the course of the descending aorta. But I shall leave to the professional diagnosticians the symptomatology of this condition, and speak of the symptoms arising from an aneurism of the thoracic aorta.

Personal observation, apart from the experience of others, has forced upon me the conclusion that many a patient has received anti-rheumatic, anti-neuralgic and anti-bronchitic treatment ad libitum, because he was innocent enough to carry a thoracic aneurism engendering pressure symptoms.

You will doubtless be impressed by the undercurrent of doubt and uncertainty which permeates this article. It must needs be so. The symptom complex of this condition is as varied in degree as it is in character. It is in recognition of this fact that Bramwell, in classifying aortic aneurisms, gives first place to "those which are entirely latent, giving no physical signs;" and again, "secondly, those giving signs of intrathoracic pressure, but in which the nature of the cause can not be ascertained;" and thirdly, "those which form distinct tumors and give well marked pressure symptoms and external signs." Let us then not postpone the consideration of aneurism until there appears a pulsating distensible tumor in the neighborhood of the upper portion of the sternum associated with intense, boring, aching pain. Such manifestations are concomitants of thoracic aneurism in a limited number of cases only.

The tumor may project posteriorly; it may ulcerate into the esophagus, a portion of the respiratory tract, the pericardium and even into one of the great veins of this region. Bloody expectorations then, may be due to nothing more nor less than an aortic aneurism. Musser speaks of a case coming under his observation, which had been treated for pulmonary tuberculosis. This treatment was based upon the following symptoms: Emaciation, fever and loose cough with bloody expectorations. Autopsy revealed aneurismal tumor rupturing into the bronchus, which it had previously occluded, causing bronchiectasis, etc.

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Nor is pain, which it is well to remember as a very constant symptom, always of the same character. At times, it is sharp and lacerating, occurring in paroxysms. Again, it may be anginal in character, or neuralgic, extending down the arm into the neck, or along the course of the intercostal nerves—symptoms of nerve pressure from the growing tumor. Tracheal tugging, or Oliver's sign, is another well remembered symptom of this condition; but in remembering this sign, which is only present when the tumor presses upon the left bronchus as it passes under the arch, or when it is adherent to the trachea, we are prone to forget dyspnea and dysphagia from pressure upon the trachea and esophagus.

So too, we are familiar with the "brassy cough," paroxysmal and ringing in character, laryngeal in origin, and dry, due to pressure upon the recurrent laryngeal nerve. But we ignore the irritative, hacking cough with thin, watery expectoration resulting from pressure upon the trachea proper; or the loose cough with copious, ropy discharge, when a bronchus has been compressed and bronchiectasis, with fever, has set in. Pressure upon the recurrent laryngeal may also produce dyspnoea, with stridor, aphonia, hoarseness, and "a peculiar monotone and inability to reach a high note," due to paralysis of one or both vocal cords. Not that this entire train of symptoms is always present when the laryngeal nerve is compressed. There is often no other symptom save the brassy cough. There may be some other one symptom, e. g., Moritz Schmidt has reported a series of fifty-four cases, in all of which the patients first consulted him on account of hoarseness. Thirty-eight showed paralysis of the left cord, the one most frequently involved. In one case both were involved.

Occasionally the tumor will encroach upon the thoracic duct, causing inanition and wasting which may divert one's attention to phthisis. Again, it may partly occlude one of the venae cavae, with resulting engorgement of the head, neck, thorax, etc., perhaps with edema. Occasionally, there is seen clubbing of the fingers of one hand with incurvation of the nails and congestion, due to venous engorgement.

The sympathetic system has a minor role in this symptomatology. Pressure-irritation gives dilatation of the pupil on one side, with pallor; while pressure-paralysis results in pupillary contraction and hyperemia. Unilateral sweating is sometimes present.

The physical signs are most varying in degree. We have noticed that they may be altogether lacking. On the other hand, they may be most pronounced. Not infrequently, inspection reveals a pulsation. It may be slight and without visible swelling, or marked, diffuse and heaving in character. When present, it is synchronous with cardiac systole. There may be a pronounced tumor with ulcerating skin and slight leakage. These signs are chiefly found above the third right rib and to the right of the sternum, sometimes to the left, some over that bone. Pulsation is quite often noted in the supra-sternal notch, or above the clavicle when the innominate is involved. The apex beat is displaced downward and to the left. It is frequently heaving in character.

Palpation should be performed thoroughly, single handed and bimanually, on full inspiration and full expiration. Usually, the tumor when appearing externally, is hard and non-expansible from fibrinous
deposit. It may be soft and compressible. Thrill, systolic in time, may be present; also a diastolic shock, which, when present, is diagnostic.

Percussion furnishes very reliable evidence when the tumor is not too deeply seated or small in size. Accordingly, dullness is obtained in varying degree. When the tumor is superficial, it may yield flatness; or relative dullness only may be obtained. It is usually found on either side of the sternum and over the same; sometimes in the left interscapular region. Percussion both in the upright and in the recumbent posture should be performed. The occurrence of severe paroxysms of coughing or the complaint of pain while percuting the anterior chest, Eichhorst considers almost diagnostic. The difference between the percussion note and the shape of the dulness on full inspiration and full expiration may influence a wavering judgment.

Anuscaltory percussion is regarded of much value. Aneurismal tumor may be present without thrill or murmur, but yields signs of dulness on percussion.

Auscultation. Murmur, when present, is usually best heard over the tumor or abnormal pulsation. It is usually systolic in time and transmitted in the direction of the vessels. It may be best heard over the vessels in the neck or in the course of the aorta. Sometimes the double murmur of associated aortic regurgitation is present. Occasionally only a diastolic murmur is heard. As a rule, the aortic second sound is markedly accentuated and ringing in character.

I have intentionally omitted fluoroscopy up to this point, in order to emphasize its importance. By its means a condition of deeply seated tumor may be diagnosed when paucity of other symptoms confounds us.

Diagnosis.—Of this I shall speak but scantily. It must be based upon the etiological factors and the pathological condition of the vessels; upon the occurrence of pain, of pressure symptoms and of the physical signs already alluded to. Among the chief conditions confusing the diagnosis are the following: Carcinomatous disease of the mediastinum. This is to be differentiated by history and glandular involvement elsewhere on the one hand, and expansile pulsation on the other. Some of the physical signs, too, are of assistance. Benign tumors are rare in this locality. Pulsation from simple aortic regurgitation with dilatation must be considered; also neurotic pulsation in anemic individuals.

In pulsating empyema, percussion-dulness is at the base of the chest and quite extensive—usually upon the left side and at a distance from the median line. Pulmonary phthisis is to be differentiated by sputum examination and a consideration of the vascular and other signs of aneurism. Before closing, I would call attention to Musser’s opinion that inasmuch as aneurism may be present without diagnostic physical signs while on the other hand, pressure symptoms may be in abeyance, if one of the two is present in the male subject past forty, with a previous history of gout, syphilis, alcoholism or muscular strain, the probability is that aneurism exists.

Literature: Musser’s Medical Diagnosis.
Sajous’ Analytical Cyclopaedia of Practical Medicine.
Butler’s Diagnosis of Internal Medicine.
Bishop on Ear, Nose and Throat.
Hare’s Medical Diagnosis, etc.
GELATINE TREATMENT IN ANEURISM.*

By ENNION G. WILLIAMS, M.D., of Richmond,
Professor of Pathology in the Medical College of Virginia; Pathologist to the
Memorial Hospital, Etc.

In 1901 I made a preliminary report of a case of abdominal aneurism in a colored woman forty years of age, treated with injections of a solution of gelatine. The mass extended from the ensiform cartilage to within five centimetres of the umbilicus, and laterally, to the parasternal line on the right side and slightly beyond the parasternal line on the left side, producing a markedly visible elevation. It was rather firm and expansile. A loud bruit could be heard over it.

The patient was very emaciated and had been confined to her bed most of the time during the preceding year, and constantly for the previous six weeks. The pain was so severe that morphine had to be taken regularly every day and night.

The first injection of gelatine on September 16th consisted of 10 c. c. of a warmed aqueous solution containing 10 per cent. gelatine and 2 per cent. calcium chloride. On September 29th, a similar injection was given. On October 7th, 15 c. c. of a solution containing 10 per cent. gelatine only was given; October 15th, 20 c. c., October 21st 15 c. c., and November 4th, 20 c. c. of a solution containing 5 per cent. gelatine. This made a total of seven weeks of six injections—90 c. c. of solution containing six and a half grammes of gelatine and four-tenths gramme of calcium chloride.

At the end of this seven weeks' treatment the patient said she had not felt so well for more than a year. There was no longer the continuous pain in the back and sides. She took morphine only occasionally at night, and was so much stronger that she spent much of her time out of bed, and could walk about with comparative ease. The aneurismal mass was firmer and the bruit less distinct and of a higher pitch. The injections of gelatine solution were continued through the following eight months at intervals of about two weeks, but larger injections were given, from 20 c. c. to 60 c. c. of the solution at each injection. The patient continued to grow stronger and could walk up and down the stairs and out into the street. She never gave up the morphine entirely, but would usually take one-fourth of a grain at night. Towards the following summer, the pains increased and her strength grew less, although the abdominal mass was apparently the same. The injections did not seem to give her the same relief. In July, after two weeks of agonizing pain in the left side which morphine would not relieve, she died.

On account of my absence from the city, Dr. Greer Baughman kindly held the autopsy for me, three hours after death. The arteries were sclerotic; the abdominal cavity was filled with clots. The aneurismal mass was adherent to the liver, stomach and intestines, and partly to the diaphragm. The adhesions were so dense and the organs so

* Read before the Richmond Academy of Medicine and Surgery, July 28, 1903.
massed together that great difficulty was experienced in separating them. The dilatation extended from two inches of the iliac bifurcation to and including part of the thoracic aorta. The 7th, 8th and 9th dorsal vertebrae were eroded to a considerable extent. The large sac of the aneurism was anterior. Against the anterior wall of this sac, also the summit, there was a dense laminated ante-mortem coagulum, crescent-shaped and thickest in the middle. This coagulum did not appear to be very closely adherent to the wall, as there seemed to be a very narrow space (1mm.) between the wall and the clot. Microscopic examination of the clot showed it to consist of a dense mass of fibrin apparently deposited in layers at different times. Within the cavity of the aneurism was much coagulated blood, more than one would expect only three hours post mortem. This firm, dense clot lining the anterior part of the sac of the aneurism, readily accounted for the relief of pain and throbbing at first experienced by the patient, and the tumor becoming firmer and less pulsating. Posteriorly, the aneurism had eroded three vertebrae, leaving not much more than the upper and lower surfaces and the intervening cartilages. The rupture was found to have taken place posteriorly. The erosion accounted for the pain never having been entirely relieved and increasing so greatly toward the close.

Another case was that of a colored man aged 55, a hard drinker, with sclerotic arteries. He had had pain in his chest for two years. There was a large pulsating expansile mass projecting just to the right of the sternum. At about intervals of ten days he was given three injections, 30 to 50 c. c. of a solution containing 10 per cent. gelatine. He said that several days after the injections the pain was much less. He left the hospital intending to return, but grew worse and a month later died.

A post mortem was made five hours after death. No rupture was found in the aneurism. The dilatation began at the aortic orifice and extended to the descending aorta. There were some clots in the aneurism, but they were all, doubtless, post mortem. The 3d, 4th and 5th ribs were eroded through, and the 2d and 6th partially eroded. The right lung was collapsed, and the left, emphysematous. The abdominal and pleural cavities were filled with yellow fluid. The feet and legs were greatly swollen and oedematosus.

I have given the injection to two other cases of suspected aneurism of the thoracic aorta, but without result except that the patients believed that the pain was temporarily relieved.

In the treatment of the first case mentioned, from two to three hours after the first few injections, the patient had a chill followed by an elevation of temperature, which, when I saw her the next morning, was 100° to 101°. This gradually subsided in twenty-four hours. Although the quantity of gelatine was kept up, the reaction lessened until there was neither chill nor fever. The lessening of the reaction was partly coincident with the use of a purer gelatine rather than the gelatine bought in bulk for making culture media. In the second case, in which the purer gelatine was used, there was no chill and only a very slight rise in temperature. This was the result in the other two cases.

Just what effect the calcium chloride has. I have not sufficient experi-
ence to say. It was added because it has the reputation of increasing the coagulability of the blood. I thought it hindered the prompt absorption of the solution, and therefore left it out after the first two injections.

During the treatment of the first case, I made fifty-one tests of the coagulative power of the blood, with a modification of Wright’s Coagulometer, before and after the injections. I will only summarize the results. Before an injection of 50 c. c. of a 10 per cent. solution of gelatine, the blood coagulated in two and a half minutes; 30 minutes were consumed in giving the injection. Five minutes after the last injection the blood coagulated in one and a half minutes. Twenty-four hours after another injection, the blood coagulated in one and a half minutes. Having coagulated before the injection, in two and a half minutes. Three days afterwards, it coagulated in one and a half minutes, and five days afterwards, in two minutes. These tests tend to show that the gelatine promptly increases the coagulative power of the blood, and that the blood retains this power at least five days.

The solution used for the injections is prepared by adding the gelatine gradually to water just below the boiling point, and keeping the solution at a slow boil for ten minutes. It is then filtered and kept in small flasks, plugged with sterile cotton. It should be sterilized in a steam sterilizer for thirty minutes, on three successive days.

The deaths so far reported in this treatment have been due to the gelatine being contaminated with tetanus germs. Great care should, therefore, be used to thoroughly sterilize the solution. At the same time, it should be noted that excessive heating weakens the coagulative power of the gelatine. Just before administering, the solution must be thoroughly liquefied by immersing the flask in hot water. It is needless to mention the usual aseptic precautions necessary in using the antitoxin syringe.

My experience has been that there is hardly any pain if the injection is given carefully and slowly, and with the solution hardly above the temperature of the body. I have given the injections beneath the breasts, in the back and in the thighs. In the selection of the site, one can consult their convenience. I usually apply a hot water bag after the injection to hasten absorption. The patient should be kept absolutely quiet for at least five days, and then allowed to move about a little until the next injection, two or ten days later, to keep up the general health.

I believe the blood will only clot in saccular aneurisms, and the treatment is applicable only to such cases.

Lancereux, who first announced this treatment, and others who have since reported cases, have used 1 per cent. to 2 per cent. gelatine in normal salt solution, and given 200 to 250 c. c. at one injection. I prefer to use a 5 per cent. to 10 per cent. solution, and to give about 50 c. c. at one injection instead of 200 c. c. of a 1 per cent. to 2 per cent. solution; because the larger the quantity of solution injected hypodermically, the greater is the circulation stimulated. If the same amount of gelatine can be injected with a smaller quantity of solution, the greater will be the tendency of the blood to clot.

In conclusion, the treatment is one that should be given a thorough trial. So far it seems to be harmless if the solution is properly sterilized.
MATAS TREATMENT—BULLOCK.

It is practically painless if given with due care. The gelatine undoubt-
edly increases the coagulative power of the blood. In the treatment of
aneurism, it is probably of value only in cases of the saccular type. In
is doubtless of great value in many cases of hemorrhage and other con-
ditions where a prompt increase in the coagulative power of the blood
is desired.

THE MATAS TREATMENT OF ANEURISMS, WITH REPORT OF A CASE.*

By W. O. BULLOCK, Jr., M D., of Lexington, Ky.

The history of aneurism and its treatment is one so replete with
dismal pictures of failure and disaster that it is with more than a little
apprehension that we welcome any method of treatment that promises a
more encouraging outlook to the possessors of this affliction. Aneurism
has always been justly regarded as a very serious condition, and before
the fourth century its victims were left to their fate, no treatment being
considered justifiable. From the fourth to the eighteenth century if any
progress or improvement was made the record thereof has been de-
stroyed or lies unread among some dusty archives. During the eight-
eenth century the first change since Antyllus was made by Anel ligating
the vessel close above the sac. Hunter and Brasdor, each describing
a distinct method familiar to all, followed later in the same century, and
Wardrop, modifying the procedure of Brasdor, performed the operation
that bears his name in 1825. The results obtained in following any of
the methods mentioned were very frequently not the results aimed at.
and the statistics of operators in the pre-antiseptic era presented such
a discouraging prospect that it is no wonder that the great number of
means and devices for applying compression were evolved and that
patients were subjected to one or more of these before resort to the
knife and ligature was considered justifiable. In the report of cases of
traumatic aneurisms tabulated in the "Medical and Surgical History of
the War of the Rebellion" there were 74 cases; of these 23 patients re-
covered and 51 died, a mortality of 68 per cent. No mention is made of
the failures and the possible few who survived amputation. Of the 74
cases 42 patients were treated by ligature with 29 deaths and 32 by other
means with 22 deaths. As might naturally be inferred, a great improve-
ment in the mortality of operative cases has been wrought since the
advent of aseptic surgery (or I might have said, the aseptic ligature),
and the specters hemorrhage, rupture, gangrene, embolism, pneumonia
and sepsis that once hovered so close to the bedside of the patient
are now reduced in numbers and kept at greater distance. But even so
recent statistics, while showing that the mortality has been brought
within reasonable limits, show also a discouraging number of failures,
8 per cent, to 20 per cent., and that in this respect at least there is still

*Read before the Kentucky State Medical Society, April 23, 1903.
much to be desired from the means heretofore employed. Such a large percentage of failures makes us rightly guarded in prognosis and justifies us in attempting any method that is based on sound pathologic principles and a thorough understanding of the reparative process. Such a method is that proposed and carried out by Matas, of New Orleans. The method in its technical details is briefly described as follows:

Control circulation by compression on the proximal side of the tumor. Incise the sac longitudinally its entire length, avoiding dissection of the sac more than is necessary to expose and protect important overlying structures. Evacuate the blood and clots and examine carefully for openings of the vessels. There are two large openings in a fusiform, and one in a sacculated aneurism. Look closely for mouths of collateral vessels, and close these at once by suture if there is hemorrhage. Scrub the interior of cavity gently with gauze soaked in sterile saline solution. Close all visible openings of the sac by sutures with chromicized catgut on round full curved needles. The continued suture, as a rule, will do well in all cases. Eight or ten sutures to the inch are more than sufficient. In dealing with the larger openings the needle should penetrate one-fourth inch or one-sixth inch beyond the margin of the orifice, and then after reappearing at the margin dip again into the floor of the artery and continue to the opposite margin as in the start. It is frequently advantageous to continue the line of suture from one orifice to the other; these sutures include the floor of the sac and are applied on the Lembert plan. The constrictor should now be removed, any oozing will usually be stopped by pressure, and the subsequent part of operation. A second row of Lembert sutures over the first is sometimes useful when the sac is very large. The skin flaps lined on their inner surface with smooth sac wall, can, as a rule, be made to touch the bottom of the cavity by one or two relaxation sutures on each side. The sutures are best applied with a large-size, full-curve intestinal needle, which is made to grasp a considerable portion of the sac wall in its bight. The needle should penetrate the entire thickness of the sac. The ends of the loop thus formed are carried through the skin flaps by transfusion with a Reverdin needle and tied firmly over a loose pad of gauze. A few sutures through the skin complete the operation.

Such is the method of procedure in aneurism of the fusiform type and those cases of traumatic aneurism in which the communication between the sac and the vessel is by two openings separated to a greater or less extent. The operation has been further modified to restore the continuity of the artery in sacculated aneurisms where there is but a single opening of the vessel into the sac, and it has been proposed to bridge over the space between the two orifices in fusiform aneurisms, but of this modification of the operation I shall speak later. The case I have to report is one of a large diffuse aneurism of the femoral artery of traumatic origin.

E. C., aged 35, is a short, muscular and well-nourished negro. He was admitted to St. Joseph's Hospital February 18, 1903, and gave the following history: While moving some household effects in September, 1902, a mattress fell from the wagon. He was thrown on the mattress and a wheel of the wagon passed over his thigh. Shortly after the acci-
dent he noticed a small lump, the size of a walnut, on the inner side of his thigh at the point of injury. The knot was painful, but did not prevent the patient's working. It grew slowly and a month ago was about the size of a goose egg. From this time on the growth was very rapid, increasing to its present dimensions. The increase in pain was correlative with its growth, rendering the patient unable to work at his occupation of laborer.

The present condition shows an otherwise healthy negro, presenting on the inner side of his right thigh a mass corresponding about to the middle two-fourths of the femur and about the size of a large coconut. The mass is firm, clearly circumscribed, and not perceptibly expansile, though pulsations in it can be made out. Pressure on the surface produces pitting, and the skin over the most prominent part is thin and blackened from stretching. A distinct bruit is heard over the tumor. Fluctuation is indefinite. There is some edema of the leg and foot, and pulsation of the dorsalis pedis artery is markedly weaker than on the opposite side. Pain over the tumor is intense, and the whole leg is painful. The pain is worse at night. The temperature is normal and pulse 110 to 120, and irregular. On account of the position of the original lump (over the femoral artery) more than anything else, together with the history of the increase in size, a diagnosis of probable aneurism was made, though at the operation I was prepared to amputate should the tumor prove malignant. On February 23, under ether anesthesia, the circulation of the limb being completely controlled by an elastic tourniquet, a vertical incision seven or eight inches long was made over the prominence of the mass, and an aneurismal sac was entered. The clots and some fluid blood were turned out; the contents measured at least a quart. On inspection of the cavity that had been filled by the clots, it was seen that over its most superficial part the intima was not complete, either it had been torn away in detaching the adherent laminated clot or the growth of the tumor had been so rapid that the wall of the cavity had not had time to assume an endothelial character. The openings of the femoral artery were seen in the bottom of the sac, separated by nearly an inch. The sac was washed out with normal saline solution, and the surface of the sac rubbed quite vigorously with gauze sponges. The openings of the artery were closed by sutures. No. 2 chromicized gut being used, the technic of the operation as advised by Matas carried out fully, folding a second layer of aneurismal intima over the first. This reduced the size of the sac more than I could have believed possible. The tourniquet was now released, there was absolutely no bleeding from the sac and but little oozing from the cut edges superficial thereto. The floor of the sac was now brought into apposition by retention sutures, two on each side, and the skin wound closed by a continuous catgut suture. The operation took 45 minutes. The patient left the table in good condition and was put to bed with an elastic tourniquet thrown loosely around his thigh above the wound.

The patient ran a little temperature, the highest, 100.4°, for three days, when it fell to normal and remained there. Relief from pain was prompt and continuous, circulation in the leg was good, but slight stinging was complained of for several days. Wound was dressed first on
March 1. About two drams of bloody serum escaped from the lower end of incision, there was also some infection about the skin sutures. The wound continued to discharge a little seropurulent fluid from the lower angle for several weeks, when it finally ceased altogether. The patient was allowed to get up after three weeks, and after another week was assisting the orderly in his work about the ward. When I saw him last, on April 2, the wound was completely healed, a hard painless disc occupying part of the space that was formerly occupied by the tumor. The infection in this case came, I believe, from the skin which was tense and inflammatory over the prominence of the mass, and from each stitchhole at the time of the first dressing there exuded a drop of pus.

A single case, such as the one just described, can demonstrate but little, and yet in such a case if the patient was treated by any method that effects a cure by clot formation, months probably would lapse before the limb would be restored to usefulness. If treated by either of the open operations, that of Antyllus, an open wound would be left; if the sac was excised the operation would have been much more difficult and dangerous, and removal of the entire sac would have been almost impossible. So from the simplicity and ease of execution, and from the prospects of an immediate and radical cure, for aneurisms of this class at least, this operation should be one of choice.

Another thing demonstrated by the case reported is that the presence of a mild grade of infection is not necessarily fatal to the success of the operation, though it may and does delay the same.

In addition to the diminished danger of gangrene from interfering with the collateral circulation, which as the author of the operation states is most free in the immediate vicinity of the sac, the operation presents another advantage in that it preserves every available inch of the artery that is capable of aiding in restoring the circulation in the part beyond.

The operation as modified to restore the continuity of the vessel in sacculated aneurisms by bringing the serous intima lining the opening of the vessel into the sac, in apposition by means of Lembert sutures is, it seems to me upon theoretic grounds, defective, and the same statement is doubly true when applied to the operation proposed for bridging over the gap between the orifices in a fusiform aneurism by using the sac wall for that purpose.

Further investigation will be required to demonstrate whether or no a complete restitution of the integrity of the media can take the place, such as occurs after enterotomy repaired by the Lembert suture. This would seem improbable, to say the least, because the parts of the serous intima apposed at the time of operation are not analogous to nor are they exposed to the same conditions as the corresponding parts in intestinal suture. The conditions necessary for sloughing, absorption and regeneration being absent, the parts between the sutures and adjacent thereto will undergo fibrous change and remain as an impenetrable barrier to perfect union of the muscular coat of the vessel. And so in any case treated by this method, for such an interval as exists between the proximal and distal openings of the vessel, if a fusiform aneurism, and for a shorter distance, if a sacculated aneurism, there will be a vessel
whose walls are histologically defective, and unless the mass of fibrous tissue between the two layers of muscular tissue is sufficiently large and strong to compensate for the lack of media, recurrence of the condition previously existent would seem most probable.

BOOK REVIEWS.

PEDiATRICS, edited by Isaac A. Abt, M. D., Assistant Professor of Pediatrics in Rush Medical College.

ORTHOPEDIC SURGERY, edited by John Ridlon, M. D., Professor of Orthopedic Surgery in Northwestern University Medical School. Published by the Year Book Publishers, 40 Dearborn street, Chicago.

Volume VII. of this admirable series on the year's progress in medicine and surgery is given over to pediatrics and orthopedic surgery. Both authors have epitomized their subjects in a systematic manner and have crowded more facts into 225 pages than are usually found in 500. The chapter on dietetics is especially helpful.


The standing of the authors of Vol. VIII. is a sufficient guarantee of the excellence of the contents of this volume. Of the 315 pages Dr. Butler takes half the space for a careful elucidation of therapeutics. The chapter on preventive medicine is elaborate and convincing, and Dr. Brower's review of the field of suggestive therapeutics presents many new thoughts. This volume is the best of the series thus far.
EDITORIAL.

IMMUNITY AGAINST TUBERCULOSIS.

Dr. Neufeld, of the medical staff of the Koch Institute in Berlin, writing to a German medical weekly, reports that successful experiments have been made to produce immunity in animals against tuberculosis by injecting into the blood vessels of mules, goats and cattle living bacilli from human beings. Dr. Neufeld has been unable, however, to produce the same effect with dead culture. The experiments will be carried on at some length and it is believed that important results will follow.

CONSERVATISM A NECESSITY.

There appears to be a spirit of retrenchment in the medical field. During the past summer several medical colleges have consolidated or have entered into negotiations looking to that end. Some of the medical journals have found it advantageous to combine with others, while in
other ways conservatism is noticed. Medicine, not unlike other professions, has more followers than necessity requires. The law of supply and demand is not observed in medical circles. The profession at large would be vastly better off if there were 25,000 less physicians in the active field. The profession and the country would be better off if fifty per cent. of the medical colleges now in existence went out of business or consolidated with other schools.

Medical journalism would be much improved if some astute promoter were to form a combine, buy up the best of the journals and, from a business standpoint, run them as most of the great combines are run to-day, taking care to in no way injure their ethical standing. If one hundred journals were taken out of the field, the physicians would never notice the loss, for it would give added strength to the remainder.

In England the number of medical journals and medical colleges is comparatively limited, and no one will deny that the medical men of England do not compare in every way with their American copatriots. The major part of the medical students' work to-day is done in the hospitals. For that reason the medical colleges should be in the large cities, where clinical material is abundant.

Some of the most honorable institutions of medicine are located in the small cities, but owing to their limited facilities for giving clinics, the better class of students is going to the large city schools.

In a few decades the country school will be a thing of precious memory. They have served the profession well in the past, but they must succumb to the aggressive march of progress.

With the requirements for admission to medical schools raised to the proper standard and with the elimination of the weak institutions, the profession will be augmented with fewer but better equipped men. A four years' course for college graduates or a five years' course for non-college men would very rapidly make medicine what it should be, but which, it is regretfully said, it in many cases is not to-day—a learned profession.
ABSTRACTS FROM THE BEST JOURNALS.

MEDICINE AND THERAPEUTICS.

Primary Retroperitoneal Tumors.

Richard Douglas reports the case in Annals of Surgery. Patient was a woman of 31 who had previously enjoyed good health, with the exception of typhoid fever 6 years ago. Since 1891 she had suffered with frequent attacks of abdominal pains, accompanied with vomiting and obstinate constipation. A marked swelling developed in the epigastric region, which grew perceptibly, distending the entire abdomen. Palpitation, difficult respiration and obstinate constipation were constant features, varied by severe attacks of vomiting, recurring at intervals of about 10 days. With the abdomen opened, the tumor had the appearance of an ovarian cyst. A trocar was introduced, but no fluid obtained. The tumor was found to lie retroperitoneally, encircled by the colon and its encleation seemed feasible. The overlying peritoneum was incised, the mass easily and quickly enucleated from its bed in the cellular tissue of the loin to the right of the spinal column. It had grown between the folds of the ascending mesocolon. The recovery was uneventful, and at the time of writing, 4 months after the operation, the patient was well. The removed tumor weighed 14½ pounds. The laboratory report showed it to be a lipomyxoma with a round-cell sarcomatous base. The types of the retroperitoneal tumors belonging to the connective tissue. The innocent tumors are lipomamyxoma and fibroma and the malignant is sarcoma. They usually occur between the ages of 30 and 50. The surgical procedure when feasible is an enucleation of the tumor, but in doing this we must bear in mind that the intestinal circulation may be cut off. Drainage should be provided and is usually best obtained through the loin.

The Light Treatment in Lupus and Other Diseases of the Skin.

The physical principles on which Finsen's method of treating lupus and other diseases of the skin by means of the chemical rays of light is based are summed up in the following propositions by Morris and Dore in the Practitioner for April, 1903:

1. Light acts as a stimulant of organic life. The stimulating property has been shown to reside chiefly in the actinic or chemical rays of light.

2. The chemical rays have the property of causing an inflammation of the skin. "Erythema solare" is due to the action of the actinic rays.

3. Light has bactericidal properties. The bactericidal action increases in direct proportion to the degree of concentration of the rays.

4. Light can penetrate the skin.

5. Other facts bearing on the point are the effect of light on plants, the protective value of pigmentation in animals, and the exclusion of the chemical rays in the treatment of variola.

Finsen's method has now become established as a recognized method of treatment for lupus in most of the medical centers of Europe. The percentage of successes claimed by Finsen in the treatment of 804 cases of lupus vulgaris is ninety-four, while that of failures is only six.

The authors' results, thought not so brilliant as those claimed by Finsen, have been satisfactory in a considerable number of cases of lupus vulgaris treated by them.

In order that good results may be obtained it is imperative that the patient be kept under observation for a long time. If this condition is not enforced, the disease may recur and much valuable time will be wasted. In none of the extensive cases under the authors' care can they yet claim a complete cure. Relapses, however, are becoming fewer, and the interval between them far longer. Of the sixty-five cases of lupus vulgaris, eleven have remained without relapse for periods varying from six months to two years. In ten of them, all favorable cases in which the disease was of small extent, recovery has been complete. In the eleventh, where the disease was more extensive, there has been no recurrence for a year. In fifteen cases slight remnants of the disease remain or slight relapses have occurred from time to time, and the patients are still kept under observation. In five of these the affected surfaces were very extensive, in five of medium extent, in four of slight extent, and in one—treated with x-rays only—the disease involved the mucous membranes of the upper lip and gums. Eight were discharged with no visible trace of disease, except in
two cases, on the mucous membrane of the nose; they have not been seen since. Fifteen are still under treatment. Of fourteen patients in whom treatment was not completed, all who remained sufficiently long markedly improved. Four have almost recovered, while four did not have sufficient treatment for much good to be done. In two cases, in which ulceration was the marked feature, Finsen’s light was useless. In both the ulcers healed rapidly under the application of the x-rays. In one the ulcerated part has, so far as known, remained soundly healed; in the second healing took place, but relapse occurred, and the lesion was excised. In all the cases but one, disease of the mucous membranes, when present, was treated by means of x-rays, and in all except one, in which there was no improvement, with good results.

Of eleven cases of lupus erythematosus, great improvement took place in seven; in one patient in whom the result was the most successful the disease relapsed as soon as the patient ceased to attend. The other six patients have not been seen since they discontinued the treatment, but in none of them was the disease completely eradicated. In one patient no benefit resulted, and in another sufficient time was not given to the treatment. All these cases were treated with Finsen’s light.

Of twenty-seven cases of rodent ulcer, favorable results were obtained in twelve. In most of these Finsen and x-ray treatment was combined. In most of them slight relapses have occurred, necessitating a second or third course of treatment. Sufficient time has not yet elapsed to make it possible to say if recovery is likely to be permanent. Nine of the twenty-seven cases were in the non-ulcerative stage, and the disease was of small extent. In one case in which the upper and lower eyelids, the inner canthus and the adjacent side of the nose were involved, improvement was very marked after many exposures to x-rays. A somewhat severe dermatitis ulcer followed during which the deepest ulcer healed. This patient had undergone eight surgical operations. There has been no recurrence of the disease for over a year. In eleven treatment was not completed; in six of these great improvement or apparent disappearance of the disease resulted at the time, but they have either not reported themselves since or have had treatment elsewhere. Of the other five, two have been operated upon, two discontinued their attendance, and one patient, a very bad case, showed great improvement under x-ray treatment, but has since written to say that the disease has relapsed. Three are still under treatment.

In two cases of alopecia, one improved under Finsen’s treatment, but the new hair fell out again, and treatment was discontinued; in the other there was no effect, but the patient only had a few exposures at rather long intervals. In one case of keloid the result was unsatisfactory.

The process of concentrating or focusing the rays of light before they reach the skin is the principle on which the original Finsen lamp is constructed, and in the newer small Finsen-Reyn lamp the same principle is adopted.

The disadvantages of the treatment are the great length of time required—the patient must be kept under observation from one to three years; the tediousness of the treatment for one hour daily, and the loss of time which it involves; the occasional pain during the application; the inconvenience and pain caused by continual inflammatory reaction in parts treated; the expense of outfit and working.

The advantages are the excellent cosmetic results; no bad scar or disfigurement results from the continual application; no anesthetic is required; no injurious effect is produced on the general health; the trustworthiness of the method—improvement may be expected in all cases, provided sufficient time is given to the treatment.

The following conditions are unfavorable for the treatment:

1. Factors which hinder penetration of the light, and thus prevent a good reaction. Among these are pigmentation, dark complexion and thick skin; great depth and infiltration of the disease; scarring from previous treatment; great vascularity of the parts.

2. Great extent of the disease.

3. Inaccessible position—e.g., mucous membrane of the nose, etc.

4. Certain general factors not specially applying to the light treatment. Among these are:

(a) Age. In general terms, the older the patient the worse the prognosis.

(b) Sex. Males as a rule cannot give up sufficient time to the treatment.

(c) Predisposition. A marked family history of tuberculosis is somewhat against the patient, as are other tubular tendencies or manifestations in the patient himself.

(d) Occupation. Unhealthy surroundings or dirty occupations make septic infection probable, and also reduce the vitality of the patient’s tissues.
Therapeutic Uses of Preparations of Benzoin.

H. R. Coston, in *Therapeutic Gazette*, says he uses the compound tincture of benzoin to seal an incised wound in healthy tissue, or cracked nipples, granulating surfaces, bed-sores, chapped hands, anal fissure and the secondary periods of frost-bite. Chronic forms of eczema are benefited by painting them with the tincture of benzoin, or dusting with the benzote of bismuth. Liver spots will be removed by the use of tr. benzoin. comp. 3iss; hydragyri chlor. corrosiv. 5i; Aqua cologniensis q. s. f. 5ii., applied twice daily. Sore throats are much improved by the acid in solution or the tincture applied locally. The great indication for the internal use of the benzotes is ammoniacal urine. In cases of chronic cystitis the author gives 15 or 20 grains every two or four hours. For nocturnal enuresis with neutral or alkaline urine give three- to five-grain doses after each of the principal meals. Headache of lithemic organ will be cured by the use of these remedies. The benzote of bismuth may be given with excellent results in diarrheal troubles in children. In chronic bronchitis benzoic acid or benzote of ammonium will be found of signal service. All forms of influenza are benefited, and if there is much arterial excitement add two or three drops of tincture gelsemium to each dose. As antiperiodics the benzotes are worthless; as antipyretics they are reliable in so far as they exert their specific effects upon the disease for which they are given and because of the slight diaphoreis and diuresis which is caused by them.

The Blood-pressure of Acute Cerebral Compression.

Harvey Cushing, in *Am. Jour. Med. Scien.*, in a sequel to the Mütter lecture for 1901, reports several cases occurring since that time which have made it possible to demonstrate in clinical cases reactions corresponding to those which at the time had only been experimentally produced in animals. The cases reported form an exceedingly interesting and instructive series, but cannot be detailed in a brief extract. Broadly speaking in cases of intracerebral or extracerebral hemorrhage accompanied by elevated blood-pressure, the relief of cerebral compression almost immediately caused a drop in blood-pressure. Cushing says he would not have advised operation in every border-line case of basal fracture with concussion, especially when increase of intracranial tension is not marked, yet the records show that of 2 patients with supposedly similar lesions, the operated case with an opening left in the skull makes a more rapid recovery than the unoperated one and seems less likely to suffer from the post-traumatic sequel of epilepsy and late mental derangements. Temporary amelioration of the severe symptoms in 2 cases of apoplexy are considered sufficient justification for future attempts to afford surgical relief to certain carefully selected cases of cerebral hemorrhage. In the light of experience, the routine therapeutic measures of "bleeding" in these cases is considered hazardous. The final conclusion of Cushing as regards increased intracranial tension is as follows: "In conjunction with other symptoms, a progressive increase in arterial pressure or a high degree of the same, which has been already reached, or a pressure which exhibits from moment to moment great alterations in level may be taken as a certain indication of the advisability of early operative intervention. In case there are localizable symptoms the site of trepanation is plainly indicated. In case of generalized compression from widespread hemorrhage when there are no localizing indications, the intracranial tension should be relieved by the elevation of a large osteoplastic flap from one hemisphere or the other with a corresponding opening in the dura."

Bactericidal Power of Human Blood Serum in Disease and Health.

Löwenstein, in *Archf für klin. Medizin*, studied the bactericidal power of blood serum derived from the umbilical cord of newly-born infants and from venesections in the adult. He showed that the blood serum of the human adult possesses a marked bactericidal power to typhoid and cholera bacilli, and a weaker one for the anthrax, while staphylococci and diphtheria bacilli grow rapidly on it. The serum taken from the umbilical cord in infants possesses the same bactericidal power as that taken from the adult. Diabetic serum loses its bactericidal power for the anthrax. In infectious diseases the bactericidal power of the blood for the infecting germ is completely lost.

Cirrhosis of the Stomach and Colon.

J. B. Cleland, in *British Med. Jour.*, records a case of this extremely rare condition. The patient, a man of 39, had had an attack of indigestion, lasting a week, six
months before admission; otherwise no previous illness. When taken to the hospital he had been suffering from diarrhea and vomiting for about two months; for the last ten days he had noticed a tender and somewhat painful lump in the right side of the abdomen. No blood had been passed by the rectum, but the patient has lost nearly 28 pounds in weight during the last six months. On admission he was found to vomit from ten to fifteen minutes after food, and to have a rounded, ill-defined mass to the right of the umbilicus. An exploratory laparotomy was performed. The mass was found to be associated with the colon, was considered to be malignant and the wound was closed. Death ensued five days later. Post mortem, the principal changes found were in the stomach and colon, in each of which there was a thick cartilaginous-looking layer immediately beneath the mucous membrane. This layer consisted almost exclusively of fibrous tissue, which was massed especially round the vessels. The circular layer of the muscles was cut up by bands of fibrous tissue into lobes and lobules like those of a cirrhotic liver. The masses of fibrous tissue were in places separated by clusters of small young cells surrounding small vessels. The mucous membrane was nowhere ulcerated, though its defective blood-supply had led in places to an increase of small round cells. The author considers this case to have been one of fibrosis, started by the presence of a toxin circulating within the blood vessels.

A Delicate and Simple Test for Sugar.

Riegler, in Deutsche med. Woch., gives the following test: Place one cubic centimeter of urine in a test-tube and add as much oxalic acid phenylhydrasin to cover a knife point and ten cubic centimeters of water; this mixture is boiled over a small flame, continually agitating until completely dissolved. Ten cubic centimeters of a 10-per cent. solution of potassium hydrate is then added, the test-tube closed with a cork and thoroughly shaken. If sugar is present the mixture at once or in one minute turns a reddish-violet color. Sugar in a solution of .05 per cent. may be demonstrated. The presence of albumin does not interfere with this reaction.

Obliteration of the Superior Vena Cava.

William Osler reports, in Johns Hopkins Hosp. Bull., 2 cases of this condition which he describes as being extremely rare. One patient was under observation for 3 years and the diagnosis of the fibroid obliteration had been made by exclusion. In the second case obliteration was due to compression in Hodgkin's disease. The first patient was a colored butcher of 25, who had a history of hard work, alcohol and exposure. Among his symptoms were swelling of the neck and face, cyanosis and gradual dilation of the veins of the upper extremities, thorax and epigastria regions and evidences of tuberculous. Autopsy revealed the following: "Chronic tuberculosis; tuberculous caries of the spine; fibrous tissue growth in the adjacent regions, with involvement and occlusion of the vena cava superior and of innominate veins; establishment of extensive collateral venous circulation; tuberculous meningitis." The collateral circulation is thus explained: "The left jugular vein being occluded, blood from the head must have passed out mainly by way of the right jugular, through the right subclavian through the prepectoral anastomosis with the anterior perforating branches of the internal mammary and with the subcutaneous tortuous veins to the superficial epiastrics and thence to the inferior vena cava, which was normal throughout its course. An alternate course would have been from the subclavian to the upper right intercostal veins through the perforating branches of the latter and thence to the azygos, which was very large." Excellent plates accompany this article. A summary of the 20 cases of fibroid obliteration of the superior vena cava, collected from the literature by Dr. Hume, is appended.

Neurofibromatosis of Nerves of Tongue and of Certain Nerves of Head and Neck.

F. C. Abbott and S. G. Shattuck report the case. The patient was a female child, aged 4 years. Family history was negative. Enlargement of the tongue was first noticed when she was 2 months old, and it is believed there was abnormality at birth. When the child cried the left side of the face and ear always became red. The tongue steadily increased in size and at 18 months it began to protrude from the mouth, which condition became constant from this time. The teeth were not disturbed and dentition was normal. Speech grew worse as the tongue enlarged. Fullness of the left side of the face and swelling in the neck increased as the tongue grew larger. The child was bright mentally. Examination before operation showed the tongue tough, firm and cord-like in con-
sistence. Its mucous membrane was dry, thick and opaque. The left ear was somewhat deformed, larger and thicker than its fellow. Operation was performed on the tongue and the redundant portion removed. Three weeks later a second operation was done for the enlargement of the neck. The tumor was found to consist of worm-like coils of semi-transparent white cords of nerves inextricably twisted. Left facial paralysis followed the operation, the child was discharged two months after the first operation, being able to keep the tongue entirely within the mouth, but the facial paralysis remained to some extent. Her articulation became much improved. Microscopic examination of the removed tongue showed it to be a fibromatosis of the nerves, or a plexiform neurofibroma. The nerves involved appeared to be the hypoglossal, facial and motor branch of the third division of the fifth nerve, the glossopharyngeal, the lingual and auriculotemporal branches of the third division of the fifth nerve, and the transverse cervical, suprasternal and supraclavicular descending branches of the cervical plexus. There was undoubtedly some disturbance in the function of the cervical sympathetic.

**Tumors of the Prostate in Children.**

L. Levy reports, in *Munch. Med. Woch.*, a case of myxosarcoma of the prostate in a boy of 4 years. The onset was sudden and the course rapid, death occurring about two months after the first symptoms. Abdominal pain with difficulty in micturition was followed a few days later by absolute necessity to catheterize; even this soon became impossible; the posterior urethra becoming impermeable to even the finest filiform. A mass bulging on the perineum could easily be seen. The bladder was opened at the fundus and neck to relieve symptoms. The tumor masses later ruptured the peritoneum and also invaded the peritoneal cavity. At autopsy the main tumor was found to fill the entire pelvis, being of the size of a fist. Many of the organs were found to have metastases.

**Empyema in Children.**

Stanley Blaker, in his interesting paper, in *British Med. Jour.*, reports 81 cases of empyema in children. He announces his conviction that the empyema is such in almost all cases from the beginning, that it starts as such and very seldom if ever as a simple effusion which later becomes purulent. In every case except one of those reported, pus was found from the very beginning. For the sake of convenience he classifies empyema into acute or primary, and late or secondary. The latter variety would include about 80 per cent. of all cases. Nearly all of the cases reported were associated with an attack of pneumonia either croupous or catarhal in form. Contrary to the general statement that the prognosis is good in children, the author states that this depends entirely on the age of the child. Acute cases under 2 years of age nearly all die. They may live for a few days, but eventually almost all succumb. Treatment by drainage was adopted in all cases, either by previously removing a portion of rib or else by making an incision into the pleural cavity through one of the intercostal spaces; 52 of the 81 cases had rib resections and 26 had merely a simple incision, the remaining three being moribund on entrance into the hospital and were not operated upon. He states that the one great mistake that is repeatedly made is that the drainage-tube is not dispensed with early enough. The longer the tube is retained the longer will the wound continue to discharge. In his earlier cases the tube was kept in for a much longer period than in the later cases, and latterly it was frequently dispensed altogether within the first week after the operation. He holds that the cavity of the empyema may be irrigated without special danger to the patient, provided it is done slowly and without much force, and frequently this is a valuable adjunct in the method of treatment.

**The Formalin Treatment of Inoperable Cancer.**

Powell calls attention to the antiseptic and deodorant power possessed by formalin, in *British Med. Jour.* It also possesses the faculty of hardening tissues. Used in sufficient strength it is an escharotic. He therefore conceived the idea that it could be used beneficially in the treatment of inoperable cancer, holding that since the cancerous growth is of lower vitality than the normal tissues, the formalin would first act on the malignant tissue. He asserts that in clinical practice this proved true and that soon a line of demarcation is formed between the malignant and benign tissues. His method of application is as follows: Absorbent lint soaked in 2-per cent. formalin is laid on the tumor, this is covered with cotton wool and bandaged. The dressing should be changed every six hours. After the third
or fourth dressing the discharge and fetor cease and the further progress is an aseptic one. He states that in about 3 to 7 days the tumor loses its elasticity, becomes dark, friable and insensitive, and the further use of formalin is painless. He asserts that the malignant tissue sloughs away and leaves the normal tissue to heal by granulation.

Treatment of Hydrocele.

Roldan describes, in Havana Rev. Sta. Med. y Cir., two modifications in the treatment of hydrocele, which he has devised. the one consisting in a special apparatus for the introduction of medicinal fluid into the sac after evacuation of the hydrocele's contents; the other a new method of suture after the tumor has been treated by incision. The former is made up of a gutta-percha cannula, capable of adjustment to any trocar, and a vulcanized rubber tube, thirty centimeters long, which connects the cannula with a graduated glass vessel having a capacity of 150 Cc. After insertion of the cannula into the tumor the fluid is made to flow into the sac by raising the glass vessel containing it above the level of the cannula; and if it is desired to wash out the sac, this may be accomplished by alternately raising the vessel above and carrying it down below the level of the tumor. The fluid may also be siphoned out of the sac entirely by inverting the vessel and lowering it below the level of the tumor. After evacuation of the hydrocele, it is the author's practice to inject from forty to sixty grammes of a in 100 solution of cocaine, by means of the apparatus described; this is retained for about two minutes, when, anesthesia having been effected, the vessel is inverted and lowered so that the cannula is allowed to flow out. Tincture of iodine is then poured into the glass vessel and made to flow from it into the sac. This is retained for from three to four minutes, at the end of which time it is siphoned out and the sac thoroughly washed with sterilized water by alternately raising and lowering the glass vessel containing it. This whole procedure is accomplished without withdrawal of the cannula. The author's method of closing the wound after radical treatment of hydrocele consists essentially in two rows of continuous sutures; one for the vaginal sheath, the second for the skin. One end of each suture is first attached to a small piece of drainage tube. Then each one is passed through a needle at its opposite end. These are now carried through the skin about two centimeters from one extremity of the incision the drainage tube lying upon the surface of the skin and holding the ends of the suture. One suture now closes the vaginal layer and is brought out through the skin at the opposite extremity of the incision also two centimeters from its beginning. The second suture now closes the cutaneous wound, and with the first, is tied to a second piece of drainage tube. After healing has taken place, both sutures may be simultaneously and painlessly removed by cutting the attachment of the sutures to the drainage tube at one end and drawing upon the opposite end. A complete review of the various methods of treatment of hydrocele, together with several diagnostic points, is presented by the author.

Actinomycosis.

R. von Barace reports, in Anna's of Surgery, 60 cases seen during the last 14 years. He says the reason of its frequency in Galicia is the extensive farming in that country; 52 showed actinomycosis of the jaw and neck, 3 of the tongue, 3 of the thorax and lungs, and 2 of the abdomen. He states that the fungus enters the body through the mucous membrane of the mouth or air passages, and very rarely through the skin. The teeth are never the portal of entrance, though decayed teeth play an important etiologic role, since the soft swollen gums permit the easy entrance of the fungus. Bones are never primarily attacked in actinomycosis of the jaws, either in man or animals. His method of treatment in the first 40 cases was operative, consisting of curettement and extraction of teeth. In the latter cases he attempted to produce a hard, inflammatory wall around the diseased area by means of hypodermic injections of tincture of iodin and silver nitrate. In this manner he was able to cure the last nine cases without operation. Silver nitrate in 20-per cent. solution not only produces such boundary of connective tissue, but kills the fungus. He expresses the opinion that intravenous injections of collargol in actinomycosis of the lung and thorax would be of service.

Spontaneous Gangrene of the External Genitals.

M. Druelle and S. Nicolau report, in La Med. Mod., the case of a man of 47 who presented a typical instance of spontaneous fulminating gangrene of the external genitals, infection from the urinary passages
being excluded. Following this there developed a suppurative lymphangitis of the abdominal wall. Streptococci of nearly equal virulence for animals were obtained from each lesion. The successive development of these different affections in the same individual and as a result of the same organism is explained by assuming that the action of the infecting agent in the first instance was overwhelming before the tissues had time to react. When the abdominal wall was involved a certain degree of immunity had been caused and the manifestation was less marked than in the primary infection. The patient recovered, but only after a prolonged convalescence.

Symptomatology of Carcinoma of the Prostate.

H. Doerrfler, Munch. Med. Woch., reports the case of a man of 62, whose illness began with symptoms of nervous dyspepsia and frequent micturition. A typical attack of appendicitis was recovered from next; albuminuria beginning at the same time persisted. Examination by the rectum about this time revealed an enlarged prostate, and in its substance could be felt two stony, nodular, isolated tumors, absolutely painless to touch. Each time the patient left his bed thinking himself sufficiently well, he was taken with fever, feeling of slight fulness, and pain over the right kidney and increased albuminuria; later also some tenderness of gall bladder. He recovered from these attacks by lying in bed. The patient not getting any better, an exploratory operation was performed. The kidneys and gall bladder were examined, but nothing discovered. At autopsy, four days later, a carcinomatous prostate was found pressing against terminal part of right ureter and bladder, and obstructing flow of urine whenever patient was in an erect position, thus causing the attacks of fever and collapse noted.

The Germicidal Action of Alcohol.

Harrington and Walker, in Boston Medical and Surgical Journal, say that different investigators have obtained discrepant results in their investigations of the germicidal action of alcohol. These discrepancies are due to two chief causes. First, to the use of different dilutions of alcohol, and, second, to the use of different kinds of organisms. The authors review the work that has been done in this field of medicine and then report the results of their own work. They append their conclusions at the end of their article. In general it may be said (so far as regards the more common forms of pathogenic bacteria): (1) That against dry bacteria, absolute alcohol and ordinary commercial alcohol are both totally lacking in germicidal qualities. Preparations of alcohol of a strength of 70 per cent. or less do have germicidal actions. (2) Against the commoner non-sporing pathogenic bacteria, in a moist state, any dilution of alcohol above 40 per cent. is effective. Dilutions of less than 40 per cent. are too slow and uncertain in their action against either dry or moist bacilli. (3) The most effective dilutions of alcohol, for disinfecting purposes, are those containing from 60 to 70 per cent. by volume of alcohol. This is true both with regard to dry and moist organisms. Such solutions will usually kill any of the ordinary pathogenic germs in five minutes. (4) The Bacillus anthracis is not affected by alcohol.

Physical and Therapeutic Value of Cathode and Ultra-Violet Rays.

Roswell Park, in Medical News, says that the rays afford methods of treatment for extremely new growths of limited area and superficial character, which, while not exactly certain, are extremely promising. They not only cause no pain, but tend to relieve pain, both superficial and deep, in a most pleasing and satisfactory way. They are adapted to cases which can hardly be submitted to any other method of treatment, and they afford more hope in delayed or inoperable cases than does any other method of treatment. It will be found that the odor of putrefaction may often be suppressed by their use and the putrifying process itself checked. Burns and intense dermatitis, so frequently noted when the treatment first came into vogue, may now be almost certainly avoided. More than this, they afford a supplementary method of treatment after operation, by which the benefits of the same may be enhanced and enlarged. It is not necessary to intermit such work as the patient may be engaged in, in order to carry out the x-ray or phototherapeutic method of treatment.

Osler’s New Disease.

At the recent meeting of the Association of American Physicians, in Washington, Dr. William Osler discussed a series of cases, some of which he has found in the literature, and others which have come un-
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der his personal observation, that present features of a new clinical entity. The new affection is by no means difficult to recognize. Patients are usually able to walk about, presenting symptoms of chronic cyanosis, which is suggestive of either advanced emphysema or congenital heart disease. Yet the lungs and heart are normal, and the kidneys show no marked evidence of disease, only slight albuminuria being present. Further, these patients are often past middle life, a feature which also excludes congenital heart disease. There is usually a history of the condition having extended over many years, and, despite the cyanosis, the patients do not suffer from dyspnea. The examination of the blood furnishes, in conjunction with the cyanosis, another distinctive feature of the disease. There is a marked polycythemia with an increase in the red blood cells up to 10 or even 12 millions per cubic millimeter. With the increase in the number of red cells there is a proportionate increase in the hemoglobin value. This may reach as high as 150 per cent. or 180 per cent. The renal condition appears to be functional in character rather than organic, since casts are rarely found and, if present, consist of a few hyaline forms. All the patients have suffered from chronic constipation and show an enlarged spleen. A number of physicians who took part in the discussion following the reading of this paper, reported similar observations, which, however, had not been recognized as clinical entities.

Strychnine and Persodin.

Prof. G. Bufalini, Archivio di Farmacologia Sperimentale, II, II; ref. in Centr. f. d. Ther., Vol. 21, H. 4: But a short time ago several cases of tetanus were reported cured by the injection of a 5 per cent. solution of sodium persulphate. This was thought to be accomplished by neutralizing the tetanus toxin by means of persodin. The author was thereby induced to publish several tests he had made concerning the antitoxic action of persodin in experimental strychnine poisoning. The thought that lay at the root of his investigations depended on the strong oxidizing power of persodin, which could be ascribed to the instability of persulfuric acid: \( \text{S}_2\text{O}_7^2- + \text{H}_2\text{O} = 2\text{H}_2\text{SO}_4 + \text{O} \).

Persodin is a mixture of sodium and ammonium-persulphate, prepared according to a special method by A. and L. Lumierie, and it was only to be expected that this remedy would prove a chemical antidote to strychnia, inasmuch as it converts strychnine to oxystrychnine or strychnine acid, both of which are far less poisonous than strychnine itself. It is also possible that the elimination of the poison occurs not only through oxidation, but also through the formation of persulphate of strychnia, which is only slightly soluble. As a matter of fact, after strychnine has been treated with persodin, the well-known characteristic strychnine reaction by means of nitric acid and potash can no longer be obtained. Experiments were made on rabbits with doses of strychnia always in excess of the fatal amount (0.0006 per kilogram). The solution of persodin was injected either before or afterward, in the vicinity or distant from the point where the strychnia had been applied. The experiments showed that persodin had a favorable influence on the course of the poisoning both before and after the injection of strychnine, even where the dose reached double the fatal quantity. If a solution of persodin and strychnine be injected into the peritoneal cavity, either independently or at the same time, the symptoms of strychnine poisoning either disappear, if they have already developed, or may not be manifest at all. If persodin is previously neutralized, it cannot retard strychnine poisoning. Since we cannot here be dealing with a physiological antidote, for persodin possesses no sedative powers either on the spinal cord or on the sensory nerve endings, the action must be ascribed to a chemical neutralization. This is confirmed by the observation that even if seven times the fatal dose of strychnine be mixed with persodin, the injection causes no symptoms of the action of strychnine. Hence the antitoxic action of persodin is stronger if persodin and strychnine are introduced into the body in the same manner than if they do not act upon one another except by means of the circulation. At any rate, persodin can be regarded as an effective antidote against strychnine.

Ethyl Bromide as an Anesthetic in Adenotony and Tonsillotomy.

Dr. A. R. Solchenberger, of Colorado Springs, in St. Louis Med. Rec., considers ethyl bromide a perfectly safe anesthetic when given to a healthy child and under certain precautions. There should be a reasonable certainty of the healthiness of the lungs, liver and kidneys. The stomach must be empty and the chest unrestricted. The drug should be pure; only that which comes in hermetically sealed amber tubes should be used. It should be given en
Diseases of the Circulatory Apparatus During Pregnancy.

E. Castelli, in *Am. J. Med.*, finds that the mitral lesions, especially stenosis, are more affected by the changes in the vasomotor system during pregnancy and labor, than are the aortic lesions. The asystolia in pregnancy assumes a special character due to the predominance of pulmonary troubles. The asystolic troubles assume the character of regularly intermittent crises and are accompanied by pulmonary apoplexy. Besides those cases in which the mechanical troubles are more evident we have those in which the predominant symptoms are due to a want of compensation of the cardiac innervation.

If the patient with cardiac trouble does reach full term one of the most common and very dangerous complications is the metrorrhagia during or after labor; the hemorrhage endangers the life of the patient, and when death is not the immediate result, a severe chronic anemic state follows. If the woman develops dangerous symptoms during pregnancy, induce abortion or premature labor. If she dies in the last weeks of pregnancy, and the fetus is alive, Cesarean section should be performed. During labor the strength of the heart should be kept up with digitalis. If necessary, on account of untoward symptoms, dilate the cervix and deliver manually. Prohibit the mother from nursing the child.

Surgery and Pathology.

Dangers of the Trendelenburg Position.

Professor Kraske (*Lancet*, July 11, 1903), at the recent meeting of the Berlin Surgical Congress, said that although the Trendelenburg position is attended by manifold advantages under numerous conditions, it might nevertheless occasionally lead to serious accidents. Instances of paresis of the peroneal muscles and emphysema of the abdominal walls have already been recorded. These are only temporary lesions, and their after-effects are of little if any consequence, but the interference with the circulation which attends the production of anesthesia in the Trendelenburg position is of much greater importance. In two cases of myocarditis the administration of ether as an anesthetic led to a fatal issue, which in Professor Kraske’s opinion was due to acute dilatation of the heart, the result of increased blood-pressure caused by the Trendelenburg position. In a third case the patient suffered from ileus for four days, but recovered on the fifth day. In a fourth case, in which the symptoms of ileus became very alarming, he reopened the abdominal wound and found that the omentum was doubled up and lying above the liver, the effect being to cause obstruction of the transverse colon. He freed the omentum, but the patient died. Similar observations had been made by Professor Schauta, of Vienna, who found that after the intestine had undergone displacement in consequence of the employment of the Trendelenburg position it did not spontaneously return to its normal place when the patient lay horizontally; he therefore recommends that the surgeon before closing the abdominal wound should correct any displacement of the intestines there might be. Professor Kraske is of the opinion that the hematemesis observed after laparotomy is due to distension of the gastric veins.

Professor Trendelenburg said that he doubted whether the cardiac embarrassment in the case of myocarditis mentioned by Professor Kraske was really caused by the elevation of the patient’s pelvis and lower extremities. Such patients are not good subjects for the inhalation of an anesthetic in whatever position they might be. With very corpulent patients he does not employ elevation of the pelvis for more than five or ten minutes at a time.
Moist Dressing in Treatment of Compound Fractures.

C. H. Lemon gives, in Wis. Med. Jour., the reason for so many failures in the treatment of compound fractures is a misplaced confidence in the ability of bone structure to successfully combat infection. The abdominal cavity more readily takes care of infection introduced from without than do the fractured ends of a bone. Lemon emphasizes the difference between a "moist" and a "wet" dressing. A wet dressing soon becomes a dry dressing except on the wound side it is covered with a layer of pus. A moist dressing remains moist and does not become plastered with pus next to the wound. The moist dressing promotes by capillary attraction the absorption of wound secretion, removing it from the cut surface to the most distant parts of the overlying dressing. To those who object to the moist dressing because it is faulty in a clean wound, macerates the skin, acts as a poultice and induces infection by retaining heat and moisture, Lemon urges the use of the dressing along the lines he indicates. They will have better results in their work.

The Operative Treatment of Purulent Meningitis.

Haberer reports, in Wien. Klin. Woch., a case of leptomenigitis involving the entire hemisphere of the brain, in a woman of 36. The condition developed from a phlegmonous process in the temporal region, and was probably localized in the beginning. The patient was trephined twice, and in spite of the extensive exposure of the brain it was impossible to see the healthy dura. Notwithstanding the fact that there was temporary improvement after each operation, the patient died three days after the last operative interference. The question arose whether a more extensive exposure in the beginning would not have resulted more favorably. Lumbar puncture the day after the first operation gave negative results.

Uses and Abuses of the Urethral Sound.

J. H. Dowd, in American Medicine, lays down the following rules concerning the use of the sound:

1. When the urethra has been involved by inflammation, specific, or otherwise, no instrument, and especially the steel sound, should be used until the urine is clear excepting for shreds of floating particles. (Prostatic plugs.)

2. The urethra should in all cases be flushed with an antiseptic solution (formaldehyde, 1-3,000) before the passage of any instrument. Following its withdrawal an astrinquent should be used, preferably silver nitrate 1-10,000.

3. A sound should never be passed for at least three months following acute gonorrheal infection, and then only when the urine is as in No. 1.

4. When dilatation of a stricture will answer, sounds are increased in size according to the tissue forming the pathologic growth and its location. True gonorrheal strictures of the deep urethra may be dilated five or six numbers at each sitting, up to 18 or 20 F.; following this two or three numbers should be the rule.

5. In case of the traumatic or gonorrheal stricture in the pendulous urethra, or when the sound is followed by marked irritation, etc., cutting gives the best result.

6. When the contraction seems not to dilate without too much force, weekly treatments being followed by considerable irritation, making the interval 10 to 14 days, is generally followed by the most gratifying results.

7. Stricture can be permanently eradicated. This occurs when after dilating the circular muscles of the canal to their fullest extent, without rupturing, no bloody string is found in the washings after four to six dilations which have varied from one to four months apart.

Artificial Respiration for Four Hours, With Recovery.

H. H. Everett, of Lincoln, Neb., in the Medical Record, reports a case operated upon for acute appendicitis. The patient was a man of twenty, and at the time of operation had a pulse of 130 and a temperature of 103° F. Free pus was found in the abdomen, and a badly gangrenous appendix. The operation was completed in the usual way and the abdomen flushed with hot salt solution when some respiratory embarrassment appeared. Ether was discontinued and 1-30 grain of strychnin ordered hypodermically and 30 minims of adrenaline chlorid by the mouth. The respiration became slower and slower and ceased within ten minutes. The pulse, just before giving the adrenaline, was 120 and poor. Artificial respiration was instituted, the cyanosis became less marked and the pulse slowed to 90. The patient was put to bed and the artificial respiration continued for four hours and thirty minutes before any sign of returning respiration.
became apparent. It was then continued thirty minutes longer until respiration was established. Various medicines were tried: strychnin and atropin, and salt solution, whiskey and black coffee by the rectum; lingual traction, faradism and flagellation proved valueless and dilatation of the sphincters caused no improvement. Dr. Everett thinks much of the credit for saving the patient's life is due to the adrenalin chlorid, which was continued for a day after the operation in to minium doses every two hours.

The Relation Between Tonsillar Angina and Appendicitis.

Dr. H. Weber says: "It is known that the tonsils may serve as a gate of entrance to a great number of micro-organisms, and that certain infectious conditions, whether general or local, very often have as their point of departure an infection of the tonsils manifesting itself in most cases in the form of an angina, simple and benign in appearance. Since the attention of the medical world has been drawn to inflammation of the vermicular appendix we have not been long in recognizing the existence of a certain relation between the angina of the tonsils and appendicitis; some cases have been observed in which the first of those affections seemed to be the direct and immediate cause of the second disease."

The author has had occasion to witness at the clinic of Professor Kast, of Breslau, a case in which the casual relationship between angina and appendicitis appeared very probable. The patient was a girl of 17 years who contracted a streptococcic angina accompanied by glandular engagement and some general symptoms. The examination of other organs showed at first nothing abnormal. Nine days later the patient could be regarded as completely cured. Her condition remained satisfactory for seven days, when the temperature again rose; there were vomiting, abdominal pains, localized especially in the ileo-cecal region, and dullness at the outer part of Poupart's ligament and above the anterior superior spine of the ilium. This zone of dullness, broad as two fingers, was very sensitive to contact; vaginal and rectal examination revealed a great sensitiveness in the right iliac fossa. Four days afterward the same symptoms persisted, as intense as at the beginning, and palpation also revealed, in the right iliac fossa, a certain resistance, accompanied by peritoneal pains which extended as far as the linea alba. The patient recovered without operation, and it must be stated that the most careful gynecological examination practiced during that period showed nothing abnormal in the uterus and its annexes.

In consulting the registers of the clinic the author discovered two similar cases. In one of these the appendicitis displayed itself before the cure of the tonsilitis. The other concerned a female patient who entered the service on account of inflammation of the throat coexisting with appendicitis. Both these patients were cured without recourse to surgical intervention becoming necessary. If it had been possible to demonstrate the identity of the infectious agent in both affections, the existence of an etiological connection between them would remain in no doubt. In none of the cases cited, however, could such proof be obtained in the absence of operation. Nevertheless the cases present so much analogy to others in which the identity of the agent of infection has been demonstrated by bacteriological examination that the author has no hesitation in admitting the same pathogenic explanation.

According to the author, the micro-organisms localized in the tonsils enter the bowel and penetrate the appendix. Infection of the latter part is consecutive to deglutition of virulent material inclosing bacilli.—Revue Hebdomadaire de Laryngologie, etc.

Indications for Operation in Hypertrophy of the Prostate Gland.

The following indications for operative treatment in hypertrophy of the prostate are given by A. J. Ochsner in Chicago Medical Recorder:

Perineal prostatectomy is indicated in all cases of obstruction due to hypertrophy which cannot be relieved for any considerable period of time by hygienic measures and medical treatment. This is especially true in old men past the period of virility because in these cases it is not necessary to preserve the seminal vesicles. In younger patients more persistent efforts should be employed to obtain relief with non-operative treatment, and in the case of operation the seminal vesicles should be preserved. In the presence of stone in the bladder complicating results from the obstruction due to enlargement of the prostate gland, the latter should be removed and the stone extracted through the perineal wound. The contra-
indications to the operation are: (a) acute infection; (b) advanced nephritis with or without pyelitis; (c) other coexisting conditions of sufficient importance to make any major operation unsafe. If possible, thorough preparatory treatment should precede the operation. This should consist in hygienic measures, rest in bed, drinking distilled water, irrigation of the bladder, and the administration of non-irritating remedies which have a tendency to render the urine sterile. In case the obstruction is complete and catheterization impossible because of the obstruction or on account of the resulting hemorrhage, immediate operation is indicated. The operation should be performed before patients have advanced to this condition.

**Dry Superheated Air in the Treatment of Septic Infection.**

Clarence Edward Skinner declares in *J. A. U. G.* that although dry hot air in the treatment of septic infection is a “good thing,” still its results are not invariably successful. Individual idiosyncrasy, or variations in the inherent malignancy of different instances of even the same types of infection often present themselves as powerful factors working against the satisfactory action of any curative agent. Dry hot air will, alone and unaided, cure many cases; others will require all the remedial sources at our command, while still others will resist our every effort. It is simply a rational curative measure exerting a known and constant physiological action, and which, either alone or in combination with other agents, greatly increases our power to overcome this condition in the majority of cases. The writer then cites several cases illustrative of the beneficial effects of this treatment. In cases in which streptococci have been found in the blood, and in puerperal sepsis, there is apparently no reason why these should not be beneficial results from this method of treatment. It affects physiological function in two ways: first, by a direct stimulation of cell metabolism in the part treated, due to the raising of its temperature *en masse*; and second, by a reflex acceleration of cell nutrition set up by the stimulating influence of the heat upon the numerous nerve endings in the skin. The copious perspiration relieve the general circulation of a certain proportion of the toxin which is impregnating the body fluids. To the influence upon the circulatory function of the part whereby stasis is relieved, is probably due to the powerful influence of dry hot-air treatments in relieving pain and swelling. The physiological action of the body treatment is predominantly reflex through the spinal sympathetic, the area of skin affected being so great that the capillary circulation is able to dissipate the heat before it penetrates deeply enough to any great extent, therein differing from the local application. In case of pus, it must be evacuated, but even then hot air will localize the inflammatory action closely to the abscess cavity when a stroke of the knife will end the trouble once and forever.

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**Results of Operations for Liberation of Radial Nerve Following Fractures of Humerus.**

Lounois & Lejars, in *Revue de Chirurgie,* report a case which is especially interesting from a diagnostic standpoint, as well as from the fact that a complete recovery rewarded the efforts of the operator. In this case the etiology had been so neglected by a good observer that he was misled into making a diagnosis of sarcoma, when he felt the callus, and supposed in consequence that the paralysis was a “pressure symptom” pure and simple.

The patient broke his arm by trying to catch his weight and save himself from a sudden fall, the injury healing kindly under ordinary treatment without any unusual incident. After several months there appeared a vague sensation of pain, and soon there was wrist-drop in addition. An operation was decided upon, and the nerve found bound down in a callus, as might be expected. This was relieved and the wound healed by first intention; but it was six months before there was any return of movement, though from this time on the improvement was most rapid till the end of eight months, when all movements were possible in their old-time freedom and strength.

This operation was performed four months after the receipt of the injury, which in itself gave a better prognosis than if it had been postponed to a later time. The author makes one good suggestion, which is that the motor condition of the radial region should be explored daily while the arm is immobilized after such an injury. In sixty-eight similar operations there has been a positive result in fifty-eight cases, there being forty-one complete cures. The restitution of function is, however, always slow.
Auto-Epidermic Skin-Grafting.

H. F. McChesney, of Brooklyn, calls attention to a method of skin-grafting which he has found to be painless and practicable. In a case of quite extensive burn, the first dressing consisted of sterile gauze and "carron oil," which was replaced the following day with wet dressings of normal salt solution, which in turn was replaced finally by borac acid solution. When the granulating surface cleaned up an ointment composed of ichthyol, balsam of peru, resorcin, alum, boric acid, glycerin, wax and petrolatum was applied, and there was no subsequent rise of temperature. The area to be grafted was cleaned off with Tiersch's solution and then irrigated with normal salt solution. The granulating surface was then dried with gauze sponges. When the granulations were firm and healthy, the graft was placed on them; ever areas of exuberant growth they were cut down and compressed until bleeding stopped. Soft and flabby granulations were scraped away. The thin blue line of epithelial cells that had started to creep in along the edge of the wound was desiccated up, and small pieces, about one-eighth of an inch square, were cut off and placed on the granulating surface already prepared. These were placed with the raw surface against the newly prepared surface, and covered with pieces of oiled silk protective about one inch square, other transplanted areas were protected with plain sterile gauze. But little discomfort is experienced by the patient while the epithelial line is being raised and cut off. It does not disfigure or scar, and at each dressing several new islands can be started without discomfort to the patient. They are very active in their growth and the grafts take well. The part should be put up in splints if necessary to prevent contractures, and also to keep the parts quiet, so that the grafts will not be replaced.

OBSTETRICS AND GYNECOLOGY.

Effects of the Toxemia of Pregnancy Upon the Cardiovascular System.

Norris observes, in Am. Jour. Obstet., that the effects of the toxemia of pregnancy have been studied after death from eclampsia, and such lesions found as punctate hemorrhages and areas of cellular necrosis in the liver, liver cell emboli, thromboses, emboli of placental giant cells, disintegration of the blood with consequent destructive effects upon the walls of the vessels, areas of gangrenous pneumonia, hemorrhagic foci in the brain and various pathological changes in the kidneys. This variety of conditions indicates that no single organ is uniformly diseased, in eclampsia, and that toxemia is the important factor in its etiology. The cardiovascular system in pregnant women who suffer with toxemia may be profoundly affected, the toxemic storm spending its fury upon the heart, or upon its nervous mechanism and the circulation. It is probable that when the toxines have sufficiently accumulated to produce irritation the vasconstrictor nerves of the heart are stimulated and the customary high tension pulse follows. When the poisons are sufficient in volume to overwhelm the patient, pulse tension falls and then, in fatal cases, disappears. The most important clinical and constitutional sign of a beginning toxemia in pregnancy is to be found in the pulse. Whenever a coated tongue, headache, nausea, extreme nervousness with insomnia and disturbance of the special senses are observed in a pregnant woman the pulse will show increased tension and the headache will be relieved by those drugs which relieve arterial tension. Prophylactic measures against eclampsia should be instituted and the pulse studied not less carefully than the urine. When convulsions occur the value of venesection, chloral and veratum viride is shown in the relief of pulse tension. Such treatment is not indicated in cases which are almost overwhelmed with toxines and show a rapid low tension pulse. The author desires to emphasize the fact that while the grave toxemia of pregnancy, by means of cardiovascular changes, causes brain disturbance which is manifested by convulsions in rare cases, some other organ, for example, the heart, may bear the brunt of the attack and the patient may be overwhelmed and even die without convulsions. In other words, there may be a cardiac eclampsia resulting from the toxemia of pregnancy. Three cases of this character are narrated, two of them being fatal. The details of the autopsies are also narrated.

Injuries to the Child During Spontaneous Labor.

Dörner calls attention to the fact, in Vriert. Ger. Med., that injuries may occur during the normal birth of a child, which especially in appearance may simulate injuries inflicted for criminal purposes. He relates such a case. The patient, a primi-
para, was in labor 2 days and 3 hours, and gave birth spontaneously to a living child; it lived 2 days. Among the injuries the child was found to have, the following are especially noteworthy: Hemorrhage beneath periosteum of temporal bone with external ecchymosis, hemorrhage beneath skin of right cheek, beneath skin over left frontal bone, abrasion of neck covered with bluish scars (they look as if the child had been choked). The trunk and limbs also presented numerous injuries. He explains the manner in which the various lesions, and especially those of the neck, may be produced during delivery, and warns against judging such a case too hastily. The importance of a careful anamnesis and examination is well illustrated by this case.

Cause of Inversio Uteri.

F. Schauta, in Wien. Klin. Woeh., refers to a case of inversio uteri in a woman 78 years old, and says that inversion in an old woman with highly atrophied uterus brought him to the conviction that the inversion of the puerperal and the non-puerperal uterus was due to the same cause; that it was never due to muscular activity, but to muscular weakness or deterioration through atrophy, or through thinning of the walls combined with pressure from above or tension from below. Pozzi says that to produce inversion of the uterus it is necessary that one part of the organ, having become inert and thin, be seized by contraction of the part of the uterine muscle situated below it. MacNaughton Jones states that the essential—as it always is—the predisposing element—in inversion is an atomic state of uterine parenchyma, favoring relaxation of the muscular fibers. This leads to a partial prolapse of the uterine wall; the prolapsed portion is treated by the uterus as a foreign body; it excites contractions which end in expulsion of a part or the whole of the fundus. Schauta, however, claims that the inversion of the uterus never occurs during a contraction, as during contraction the uterus is hard and stiff, and this condition is unfavorable to inversion. After reviewing the opposing views of Treub and Thorn, he asserts that contraction plays no part in inversion, but that inversion is caused by weakness of the organ through paralysis, atrophy, thinning of the walls, or distention of the uterine cavity by a myoma, etc.

Accidental Perforation of the Uterus.

Brothers, in American Gynecology, notes that the first set of cases of perforation of the uterus are those which occur during the passage of a sound or curette. The accident is recognized from the fact that the instrument passes to a depth beyond that of the size of the uterus previously mapped out by bimanual examination. The suspicion that the instrument has passed into a Fallopian tube may justifiably arise, but in the present state of our knowledge cannot be safely assumed. These cases will usually get well if manipulations within the uterine interior are brought to a sudden termination, and particularly if no intra-uterine irrigations are made. If the curette or sounding was preliminary to an intraperitoneal operation, this may be proceeded with and the injury to the uterus repaired with several catgut sutures. No drainage is necessary. If no intraperitoneal operation was originally projected, the patient ordinarily can be safely put to bed with an ice-bag over the hypogastrium and given morphine or opiates.

If the uterus has been injured and the operator has irritated the uterus, three sets of conditions may arise. In the first set a mild local peritonitis may call for nothing more than the same line of treatment. In the second set an acute septic peritonitis may call for a hysterectomy (usually vaginal) with drainage per vaginam. The third set of cases may be less virulent and more chronic. They are apt to terminate in abscesses, which may be located in the pelvic peritoneum. According to their seat they may require being attacked from above or below. Very rarely will a hysterectomy be indicated in such cases. The operation will be in the nature of an exploratory laparotomy, and the exact line of work can only be determined on with the abdominal cavity opened.

When the uterus has been injured and the intestine dragged through the wound and become strangulated, laparotomy must be done as early as possible. If the strangulation has been fatal to the vitality of the gut, this must be excised. The uterus may then, according to the judgment of the operator, be repaired or removed. That even this state of affairs is not necessarily fatal can be inferred from the studies of Miquel, who reports five recoveries in eight operations.

Cancer of the Uterus: Its Cause and Cure.

J. B. Perkins, in International Journal of Surgery, makes the following conclusions:

1. That cancer in all parts of the body appears to be more prevalent than it was a few years ago.
2. That cancer in the beginning is purely a local disease, and may at that time be completely cured by operation.

3. That other forms of treatment are not curative, and should be used only in inoperable cases.

4. That cancer of the cervix occurs much more frequently where lacerations exist, small tears being apparently as apt to produce the trouble as more extensive ones.

5. That in every operation for lacerated cervix the tissues removed should be subjected to a histological examination.

6. That in every case where there is the slightest suspicion of cancer a section should be taken and subjected to examination.

7. That occasionally from curettings of the uterus a diagnosis of cancer may be made.

8. That heredity does not appear to play any very important part in the etiology of cancer.

9. That the family physician is the one who, above all others, can do most to lessen the mortality of all kinds, and especially from cancer occurring in the uterus.

Diffuse Tumor in the Pelvic Cavity.

H. Kellfer, in Bull. de la Soc. Belge de Gyn. et d'Obst., records an unusual case of pelvic tumor. The patient, a woman of thirty-two, had suffered for two years from indigestion, obstinate constipation, constant pain in the whole abdomen and loss of size of the abdomen, but no fever or peritonitis. Examination showed that the entire pelvic cavity was filled by a tumor whose size and attachment could not be determined. No vesical or menstrual symptoms, rectal examination negative. Laparotomy showed a diffuse mass including bladder, uterus, appendages, small intestine and descending colon. In lifting the mass to determine its point of attachment it was easily torn off, showing that it was a friable growth from the intestine. After removing the rest of the diseased intestine it was impossible to find the rectal stump so an artificial anus was formed by suturing the upper stump into the lower end of the abdominal incision. Recovery was rapid. Two years later a curettagc for metrorrhagia permitted an examination which showed the rectum closed above at a point reached by the end of the finger, the uterus slightly enlarged but movable and the broad ligaments palpable, though the genitals were left matted together at the time of the intestinal resection. The intestinal tumor consisted of a healthy mucosa, a nearly normal muscular layer, and a subperitoneal connective tissue which was the site of a fatty growth. Four years after the operation the artificial anus was closed. The rectum was too low and too much atrophied to unite with the upper stump of the intestine, and the exclusion of the entire large intestine with the union of the small intestine to the rectum was also not feasible for this reason. The transverse colon was liberated, drawn down and sutured to the margin of the anus, the rectal stump having been freed from this and dissected off by the finger. The result was perfect except that the anal sphincter was tender.

Intra-Abdominal Torsion of the Great Omentum.

Vignard and Giraudet report in Revue de Chirurgie, No. 4, Tome xii, two of these rare cases which came under their care. Their first patient experienced a sudden onset of abdominal symptoms, but suffered no vomiting or arrest of stool; there was a large mass in the right side of the belly, which at the operation was seen to be the omentum. This was twisted three times near the colon, thus forming of itself a comparatively small pedicle, which was ligated and the whole removed. On the twenty-second day the patient left the hospital completely cured. The case of the second patient was unique, in as much as he suffered from recurring attacks of severe colic; his illness consisting of six attacks, covered a period of some years. In this case a diagnosis of appendicitis was made, but at the operation it was seen that the lower two-thirds of the omentum was twisted upon the upper third. After removal of the mass the patient was sufficiently recovered to permit of his leaving the hospital on the fourteenth day. The literature shows that such accidents have been much more common with women than men. It is also interesting to note that almost every patient has been afflicted with an inguinal hernia, which factor must, of course, have something to do with the trouble. The torsions have been at one point, at two points, or multiple. There have been as many as six twists at one point, and the direction has always been from right to left. The onset has been extremely acute always, but there have been no pathognomonic symptoms, and the diagnosis has not been made in a single reported case, prior to the operation.
Operative Treatment of Myomata in Pregnancy.

Frank, in Monatschr. f. Geb. u. Gyn., Bd. xvii, H. 4, discusses the indications for operative treatment of uterine fibroids during pregnancy on the basis of seven reported cases. He considers operation indicated only under the following circumstances:

1. During pregnancy: (a) When there is rapid growth of the tumor or respiratory or circulatory disturbances. Under these conditions myomotomy is to be preferred; hysterectomy if this is not feasible. (b) When it is supposed that the tumor may cause premature interruption of pregnancy; (c) When the growth causes peritoneal symptoms or signs of incarceration; (d) In cases of myoma of the cervix, particularly the vaginal portion, since these tumors may be removed without interrupting pregnancy and since this class of myomata easily becomes gangrenous and causes serious disturbances in the puerperium; (e) When the myomata are polyloid. (b) During labor may be performed: (1) Vaginal operations, version and extraction, if the tumor is not too great an obstruction; perforation if the child is dead, version fails or fever is present; vaginal enucleation of myomata of the pars intermedia if it is improbable that the child can pass the obstruction. (2) Cei tomy, either enucleation of the tumor of the supra-vaginal portion of the cervix and spontaneous termination of labor, removal of subserous growths reaching into the true pelvic cavity; Cesarean section with or without removal of the tumor and followed or not by castration or hysterectomy, total or supra-vaginal.

Treatment of Puerperal Sepsis by Nuclein and Saline Solution.

J. Hoffbauer, in Arch. f. Gyn., Bd. 68, H. 2, has treated nineteen cases of puerperal infection with nuclein and injections of saline solution, all severe cases with either negative gynecological conditions or such slight local lesions as apparently failed to account for the serious symptoms of intoxication. The uterine secretion was found to contain streptococci in seven cases, bacillus coli in three, staphylococci sometimes accompanied by saprophytes in five, the others not determined. The first series of seven cases was published in 1896; the present of twelve shows eleven recoveries. The nuclein was usually administered by mouth, the reaction being more prompt and durable than in the two cases in which it was at first given subcutaneously. Large quantities of normal saline solution were given by hypodermatic injection or by rectum. The exact dosage and frequency are described in the paper. The treatment with nuclein was continued until a reaction of the bone marrow was shown by clinical blood examination or tenderness of the bones. The saline injections were employed for several days after this reaction appeared. Large amounts of alcohol were given only in the early stages as its prolonged use seemed to lead to collapse and cardiac weakness. Cold packs were substituted for baths when the temperature was high on account of the tenderness of the bones. The article contains a discussion of the theory of the treatment, which depends upon stimulation of the bone-marrow resulting in blood-cell production and increase of the formation of antibodies.

Hot-Air Treatment of Gynecologic Diseases

Oskar Burger, from the study of a series of reports, is convinced, says Wien. Klin. Woch., that hot-air therapy is a valuable conservative treatment in certain known gynecologic diseases, because of its sedative effects upon pain, and because it promotes absorption. For the latter reason it is especially valuable in cases of hard pelvic exudates frequently of puerperal origin, since under this treatment these exudates are often rapidly absorbed. In carefully selected cases with the treatment adapted to individuals, hot-air therapy is in many instances more potent in producing favorable results than are older customary remedies.

Bloodless Case of Placenta Previa.

W. G. Moore reports a case in St. Louis Courier of Medicine which he believes to be unique in obstetric history. The patient was a young woman with a previous history of 3 miscarriages. One physician who examined the patient after the beginning of labor suggested the diagnosis of placenta previa, his opinion being based solely on the thickened feel of the sac. When the membranes ruptured a half placenta, with 4 inches of cord, protruded from the vault. The head could be felt against the pericardium. The next pain delivered a fetus of 7 months. The remaining half of the placenta was found adherent to the os, and was easily removed. At no time was there any hemorrhage. Moore believes that there was a central placenta, thinner than usual, which was sufficiently elastic to allow the small head to engage and act as a plug until the placenta ruptured.
The Jersey City Board of Finance has appropriated $400,000 for the erection of a new city hospital. The hospital will be on the site of the present building at Baldwin avenue and Montgomery street, with an additional plot on the south side. The plans have already been prepared by C. F. Long, city architect. The new building will be 40x121 feet, three stories high. There will also be additional buildings for insane and alcoholic patients and consumptives. Besides these there will be a morgue, stable and power-house for electric lighting. All the buildings will be erected under the supervision of Mayor Fagan and the hospital trustees, Dr. George W. Shera, Dr. F. E. Lambert, E. M. Watson, Andrew Phelan and Henry Vogel.

According to a strict interpretation of the new State law enacted for the protection of graduate trained nurses in New Jersey, a large number of nurses who have obtained diplomas in other countries, principally Canada, will be obliged to return the certificates issued to them and take the regular examination provided in such cases. An effort will be made at the next session of the Legislature to have the law changed so that an examination will not be necessary for those coming to New Jersey from foreign countries.

A bequest of $10,000 was made to the Newark Charitable Eye and Ear Infirmary by Eugene Vanderpool.

Dr. George W. Roloffort, a prominent negro physician in New Jersey, and a Republican politician in Essex County, died in Newark on August 6, of apoplexy, having been stricken the previous afternoon while at the City Almshouse, of which he was medical supervisor. He had practised in Newark for thirteen years and had built up a large practice. He was born at Lexington, Va., on June 20, 1860. By working as a barber and as a waiter he made enough to pay for the first part of his education at Morgan College, Baltimore. For a three years' course at the Leonard Medical School of Raleigh, N. C., from which he was graduated in 1889, and for a special course in gynecology at the University of Pennsylvania, a patron supplied the funds.

The report of the Chemical Department of the Laboratory of Hygiene of New Jersey for the year ended April 30, 1903, contains some very interesting data regarding the foods and drugs sold in that State. Of 1,476 samples received for analysis, 836 were classed as foods, 616 as drugs, and 24 as miscellaneous. Of these the following numbers were found to be adulterated: Foods, 341, or 40.8 per cent.; drugs, 370, or 60 per cent.; miscellaneous, 7, or 29.1 per cent. This gives a total of 718 adulterated samples, an average of 48.6 per cent. The report gives briefly the methods of analysis used in each instance which makes it valuable for reference.

Dr. Phanetta C. Barker, of Morristown, N. J., died August 21, aged 68. He was graduated from the College of Physicians and Surgeons, New York city, in 1860. He founded the Morristown Memorial Hospital Association, which built the Morris-town Hospital, the finest institution of its kind in Northern New Jersey. He was a Fellow and ex-president of the New Jersey Medical Society and ex-president of the Board of Health.

Three well known New Jersey doctors have died recently, Dr. William E. Forest, of Elizabeth, who died in Rockaway Park, N. Y., July 28, at the age of 57; Dr. Joseph Melvin, of Atlantic City, who died July 29, aged 35, and Dr. Albert J. Shureman, of Newark, who died July 29, aged 74.
METHODS TO HASTEN EPIDERMIZATION, WITH SPECIAL REFERENCE TO SKIN GRAFTING.*

By STUART McGUIRE, M.D., of Richmond, Va.
Professor of Principles of Surgery and Clinical Surgery, University College of Medicine; Surgeon in Charge St. Luke's Hospital; Visiting Surgeon Virginia Hospital; Consulting Surgeon Home for Incurables, etc.

Every practitioner is frequently called on to treat loss of cutaneous surface due either to injury or disease. If the area is small repair is usually rapid and complete, but if it is large repair often progresses to a certain point and then ceases. In the one case the capacity of the germinal cells is sufficient to meet the demand made on them, in the other the amount of material required is more than they can produce.

It is the object of this paper to discuss methods to hasten healing in cases where the process is slow or at a standstill. No effort will be made to review the literature of the subject and only the results of practical experience will be given.

To secure epidermization the first step should be to stop suppuration. The second should be to stimulate normal regeneration and to protect the embryonal cells resulting. The third, in case the first two are insufficient, should be to augment nature's reparative forces by grafting the bare area with epithelial tissue of sufficient vitality not only to live but to grow.

These three indications for treatment must be followed in the management of every granulating wound, whether it be a small ulcer or an extensive burn. They cannot be carried out independently, but must be combined. They will not be discussed separately, but collectively under the different dressings commonly employed.

Moist Dressings.—After the preliminary cleaning of the wound and adjacent surface, the first treatment usually tried is the moist dressing, the character varying from the cold water dressing of our forefathers to the moist corrosive sublimate dressing of the antiseptic extremist of the present day. The method of application consists in saturating a pad of absorbent cotton with the fluid selected, applying it to the

*Read at the Meeting of the Medical Society of Virginia, held in Roanoke, Sept. 15-17, 1903.
raw surface, and preventing rapid evaporation by covering it with a layer of oil silk. The cotton should be wet as often as it becomes dry, and should be changed as often as it becomes soiled. The solution employed should not be a strong antiseptic, as it would kill cells as well as germs, and it should have an inhibitory action on microbic life. The three that will be found most satisfactory are chloral hydrate solution (chloral hydrate $\text{iii}$, water $\text{ii}$), Thiersch’s solution (salicylic acid $\text{ss}$, boric acid $\text{iiii}$, water $\text{ii}$) and acetate of aluminium solution (alum $\text{vi}$, acetate lead $\text{ixss}$, water $\text{ii}$). They may be used either hot or cold and should be employed in conjunction with rest and elevation. I have had many a swollen and rebellious leg ulcer come to me, scarred with caustics, gritty with antiseptic powders or filthy with greasy ointments, but not one that did not yield readily when the patient was put to bed, the limb elevated and the part treated with hot chloral dressings.

Dry Dressing.—The treatment of granulating surfaces by dusting them with antiseptic powders has been made undeservedly popular by the advertisements of firms that had proprietary preparations to sell. The powders most frequently employed are iodoform, arsene, dermal, bismuth, boric acid and oxide of zinc. In some cases they do good, but in most instances they do harm. Chemically they destroy germs and lessen suppuration, mechanically they destroy embryonal cells and retard healing. When first applied to a wound decided improvement is seen, but continued use is followed by irritation due to absorption of serum and the formation of crystalline concretions that act as foreign bodies, or broad incrustations that prevent the escape of pus or other wound secretions. I am free to say that I do not use dusting powders. There has not been a grain of iodoform in my private hospital for the last three years, and its banishment has not proved detrimental to patients, but exceedingly beneficial to the atmosphere of the institution.

Oleaginous Dressings.—The use of salves and ointments in the treatment of superficial wounds has fallen into unmerited disfavor. Because, before the day of antiseptic surgery, they were abused is no reason why they should now no longer be used. Some preparations quickly become rancid and should be avoided; others remain sterile indefinitely and may safely be employed. Vaseline, lanoline and castor oil, plain or medicated, will give better results in some cases than any other applications. They exert a feeble antiseptic action, thus lessening suppuration; they exclude the air, thus relieving pain; and they prevent the adhesion of overlying dressings, thus saving the embryonal cells from mechanical injury. In extensive burns I have found nothing better in the early stages than a $5$ per cent. mixture of ichthyol and vaseline, and in sluggish granulations, especially of a tuberculous character, I have never failed to see good to come from the application of a combination of $1$ per cent. carbolic acid, $5$ per cent. Balsam Peru, and $94$ per cent castor oil.

Nutritive Dressings.—Considerable benefit will sometimes be derived in the treatment of a granulating wound by the use of a dressing that supplies food directly to the germinal cells and their offspring.
SKIN GRAFTING—McGUIRE.

Proliferation is often arrested by starvation and feeding is the logical remedy. The agent employed should be aseptic, non-irritating, and should contain nutritive material in an easily absorbable form. The preparation that in my opinion most nearly meets these requirements is Valentine's Meat Juice. It is sterile, contains no alcohol, is rich in food stuff, and has practically the same percentage of sodium chloride as the normal serum of the blood. It should be diluted with three-fourths water, warmed to the temperature of the body, and applied on cotton in the form of a moist dressing. My experience has been that it does a great deal of good for a short while, but then loses its effect. As soon as pale granulations become pink and healthy it has fulfilled its function and should give place to some other dressing.

Alterative Dressings.—Cells, like individuals, sometimes without assignable reason develop disturbances of nutrition requiring alterative treatment? In the management of a granulating wound there is often call for local medication. Experience alone can teach the surgeon the agent to employ and the time and method of its application. Nitrate of silver, mercurial ointment, chloride of zinc and sulphate of copper are all useful and time honored remedies. Among newer preparations must be mentioned protonuclein. I have several times seen indolent or foul granulating areas that had defied a half dozen other lines of treatment improve under its use as if by magic.

Protective Dressing.—In direct contrast to granulating surfaces that need stimulating or alterative treatment are those that are doing well and only require protection. When the wound is healthy and healing progressing satisfactorily nothing is more mischievous than meddlesome interference. All that should be done is to prevent infection by cleanliness, and to avoid injury to the newly formed cells by mechanical protection. Cleanliness is secured by changing the dressings as frequently as they become soiled and bathing the wound with normal salt solution. Protection is best accomplished by interposing some impervious material between the granulations and the meshes of the overlying gauze, into which they would otherwise become entangled. In my experience the best results follow the use of strips of rubber dam, collodion film, or Cargile membrane placed lattice-wise so as to afford drainage. Rubber dam is the material used by dentists and can be sterilized by boiling. Collodion film can be prepared by pouring collodion on an aseptic sheet of glass, allowing it to harden and then cutting it in strips. Cargile membrane is made from the peritoneum of an ox and can be bought on the market in germ-proof envelopes.

Proliferating Dressings.—When the destruction of skin is so extensive that the normal reparative power is insufficient to cover the granulating area with epithelial cells, recourse must be made to skin grafting. It has long been known that bits of cuticle properly planted on fresh wounds or healthy granulating surfaces would become adherent and grow, thus protecting underlying structures and acting as independent foci of epidermization for adjacent tissue. The application of this fact with epithelial cells secured from different sources and applied by various methods has enabled the surgeon to heal wounds
quickly and certainly which otherwise would be slow to close or per-
haps become permanent ulcers.

Skin grafting, when practiced on newly made wounds is called
primary grafting. When practiced on granulating surfaces it is called
secondary grafting. If the surface be a fresh one care must be taken
to perfectly arrest hemorrhage before applying the grafts, otherwise
bleeding will detach them. If the surface be an old one care must be
taken to stop suppuration before applying the grafts, otherwise pus
germs will devitalize them.

Skin grafts may be obtained from the patient and then are called
autographs; they may be cut from another person and then are called
heterographs, or they may be secured from an animal and then are
called zoographs.

There are three recognized methods of skin grafting. Reverdini’s,
consisting in cutting small particles from the superficial layers of
the skin with scissors and planting them at intervals over the surface to
be covered. Thiersch’s, consisting in cutting broad strips from the
superficial layers of the skin with a razor and placing them so as to
completely cover the wound area; and Wolfe’s, consisting in the dis-
section of a piece of skin the entire thickness of the structure and fitting
it to the defect to be remedied.

The dressing after any of the above methods consists of a lattice
work of protective strips over which is placed a pad of gauze wet
with normal salt solution. This should be removed and replaced at
the end of the third day, and the subsequent management of the case
carried out on general surgical principles.

The instruments required for skin grafting are so few, the opera-
tion itself so simple and the results secured so immediate and satisfac-
tory that the surgeon who does not avail himself of it in suitable cases
does an injustice both to himself and his patient.

Primary Skin Grafting should be employed after the removal of
an epithelioma or other superficial growth, provided infection can be
prevented, hemorrhage arrested and ligatures and sutures avoided.
The depression due to the removal of tissues will fill up beneath the
grafts and the deformity will be less than anticipated. I have removed
a growth the size of a silver dollar from a nose, grafted it at once with
skin from the arm, and discharged the patient with a perfectly healed
wound in ten days from the operation.

Secondary Skin Grafting should be employed when ligatures are
used to arrest bleeding, or sutures to secure partial coaptation; where
infection is likely or already exists; or where the excavation is deep
and a large amount of granulation tissue is necessary to fill it. In
operating for cancer of the breast, where approximation of the mar-
gins of the wound is secondary to extirpation of the diseased tissue,
I remove the malignant growth as completely as possible, bring the
cut edges of the skin together as nearly as practicable, apply a pro-
tective dressing, and a week or ten days later remove the stitches and
then skin graft the granulating area.

Reverdini’s Method should be employed where the area to be
covered is small, and where the administration of a general anesthetic
is contra-indicated. The surface to be grafted and the site from which the grafts are to be taken should both be prepared. The skin is then elevated into a cone by means of a sharp tenaculum and a small piece snipped from its superficial layer by means of a pair of curved scissors. The fragment is at once transferred to the area to be grafted and carefully seated on the granulations, care being taken to prevent the edges curling inward, thus preventing apposition of raw surfaces. This is repeated until a sufficient number of grafts have been planted to thickly stud the bare area. The operation of cutting the grafts can be made painless by the use of the chloride of ethyl spray. I have found the above method very satisfactory, especially in weak, nervous patients where a more formidable operation would have a bad effect. The space between the grafts is rapidly covered and the resulting scar is good.

Thiersch's Method should be used when the surface to be covered is large and when the patient is either under an anesthetic or its administration will be compensated for by the more rapid recovery it promises. The grafts are obtained by making the skin tense and flat, either manually or by special hooks, and cutting off the superficial layers by a to and fro sawing motion of a sharp razor. The larger the size of the grafts the better. Usually they are an inch wide and four or five inches in length. Care should be taken to remove only the upper layer of the skin, otherwise the wound inflicted may prove as difficult to cure as the wound the surgeon is endeavoring to remedy. As the grafts are cut they are dropped into a basin of warm saline solution. Afterwards they are carefully placed on the area to be grafted, the edge of one graft overlapping that of the adjacent one. Thiersch's method of skin grafting is the one most frequently practiced and the one that gives the most brilliant results. The objections to it are that it necessitates the use of an anesthetic and the site from which the grafts are cut is painful and takes some days to heal.

Wolfe's Method should only be employed in exceptional cases. The surface of the area to be grafted should be thoroughly revivified and the margins made fresh and vertical. All bleeding should be completely arrested. The new skin to be used as a graft must be dissected from some other site. The entire thickness of the skin should be removed, but no subcutaneous fat taken with it. The outline of the incision should preferably be an ellipse to permit of closure of the defect by sutures. The skin removed should be one-third larger than the defect to be covered to allow for shrinkage. The graft after having been placed in its new position may be retained by sutures or reliance placed on overlying dressings. The method is uncertain in results, but may sometimes be used with advantage. I remember one case where I planted a single piece of skin having an area of some 16 square inches. The graft was obtained in retrenching the scrotum of a man for varicocele and was planted on a woman who had been operated on some days previously for cancer.

In addition to the recognized methods of skin grafting just described occasional reference will be found to grafting wounds with the skin of an egg, with the pellicle of a blister, and with dry epidermal
scales, such as scrapings from callosities or dandruff from the head. I have tried all these expedients with unsatisfactory results. The only reasonable sources from which to obtain vital epithelial tissues are the skin of the patient, autographs, the skin of another individual, heterographs and the skin of a lower animal, zoographs.

Autographs are usually cut from the patient’s thigh or shoulder. They furnish the material most likely to prove successful and should be employed except in cases where the patient’s general condition is bad or where the area to be grafted is very extensive. The practice, however, is not free from annoyance or distressing complications. A woman came to me not long ago with an epithelioma of long standing on the vertex of her head. It originated in an old scar and was about four inches in diameter. I shaved her head, made an incision around the growth, and scalped her. The wound was treated with a moist antiseptic dressing until it had filled with healthy granulations to the level of the margins. I then skin grafted the bare surface by Thiersch’s method, cutting the grafts from the deltoid region. The grafts took beautifully and in two weeks she was apparently well. Several months later she came back to the hospital. Her head looked like a tonsured monk and the skin on the bald area was perfect, but the shoulder from which the grafts had been cut gave her much pain. On examination it was found to be the seat of a keloid growth, the size of a man’s hand. I had cured her of cancer only to give her keloids.

Heterographs are obtained from another individual, from amputated extremities or from fresh cadavers. They usually grow well and should be employed when they can be secured from a satisfactory source. They entail the danger of infecting the patient with syphilis, tuberculosis, and other diseases, which must be carefully guarded against. The question of the necessity of the grafts being the same color as the skin of the patient on which they are planted is still unsettled. It is claimed that a negro skin grafted on a white person will lose its pigment, and that white skin grafted on a negro will become pigmented. A few years ago I had an opportunity to test the question. A negro man as black as the ace of spades had his leg crushed. It was amputated, but the flaps sloughed, leaving a granulating area three or four inches in diameter. It was determined to skin graft it and my assistants were directed to prepare the man for the operation at the next clinic. When the patient was brought into the amphitheatre I had just finished amputating the leg of a white man. On the spur of the moment I decided to cut the grafts from the white leg and plant them on the black one. The operation was done by Thiersch’s method with satisfactory results, the patient being discharged as cured in three weeks’ time. Two years afterwards the man came back to the clinic on account of some other trouble. An examination of the grafted stump showed that the grafts were as white as they were on the day they were planted. While one case proves little the result is significant. It has for obvious reasons deterred me from reversing the experiment and grafting a negro’s skin on a white patient.
Zoographs are obtained from one of the lower animals, the frog, chicken, pig, dog, cat, rabbit, or guinea pig being most commonly used. They do not grow as readily as grafts from the skin of a human being, and they should not be employed when other sources of supply are available. Still there are certain conditions where they are not only useful but are the only means by which a patient can be cured.

A small negro child was brought to the clinic last winter, who had been severely scalded several months before. Some healing had occurred at the margins of the burns, but effort at repair had ceased and there was a granulating surface on the body covering an area of over one hundred square inches. The child was treated until the granulations were healthy and then came the question of where to get the skin with which to graft it. The child was too small and its condition too feeble to furnish the grafts from its own person. The mother, relations and friends all declined to make the necessary sacrifice. No jail bird would volunteer as a victim, even at the promise of liberty, and applications to all the hospitals in the city seemed to show that for the time at least surgeons had stopped amputating limbs. As a last resort recourse was made to zoographs. A healthy six weeks pig of chocolate color was purchased. It was carefully shaved and given frequent scrubblings and antiseptic baths. The day before the operation the belly was prepared as if for abdominal section. The grafting was done before the class of the University College of Medicine. The pig was brought in on one table, the pickaninny on another. Grafts were cut from the belly of the pig and planted on the back of the child. The usual dressings were applied and for two weeks everything went well, and it was thought the operation had been completely successful. The wound itched, however, and one night the child got its hands beneath the dressing and scratched off a large portion of the new and tender skin. While the result was a partial failure enough of grafts remained to demonstrate the fact that pig skin would grow. More recently I have had other cases that were perfectly cured by this method.

Dr. William Flegenheimer, a graduate of the Medical College of Virginia and formerly Resident Physician to the City Hospital, reports in The Virginia Medical Semi-Monthly (issue of June 26, 1903), a case of successful pig-skin grafting in which an extensive defect in the cutaneous surface of a man was restored by grafting with the entire thickness of the pig-skin. He states that “at the present time the wound is completely healed, and strange as it may appear, it has a nice growth of fine hair upon it.” This is the only case to my knowledge where pig-skin grafting has been done by Wolfe’s method, and it will be interesting to watch the development. In grafting by Reverdin’s or Thiersch’s method the hair follicles are of course not transplanted.

Dr. J. Hamilton Browning, of the University of Virginia, in a personal letter, dated February 5, 1903, has reported another interesting and successful case of pig-skin grafting. The case was one of railway injury of the thigh, resulting in the loss of 225 square inches
of cutaneous surface. The grafting was done in three stages, with a week's interval between each, one-third of the wound being covered at a time. During healing there was infection of the wound with the bacillus pyocyaneous causing so much exfoliation that it was feared the operation had proved a failure. The surface remained covered, however, with a thin white film that looked like coagulated albumen, and microscopic examination of this film proved it to be epithelial tissue. The wound ultimately completely healed and the result was all that could be desired. Dr. Browning concludes his letter as follows: "I had pig prepared just like I do a patient for an abdominal operation. I always selected a sow pig, as they are easier to keep clean." Whether the last statement is based on fact or on prejudice I leave my country friends to discuss.

ONE HUNDRED CONSECUTIVE CASES OF MYOMA OF THE UTERUS.*

By G. L. Hunner, M.D., of Baltimore.

Associate in Gynecology, Johns Hopkins University.

During a five years' hospital experience I have become more and more impressed with the seriousness of myoma of the uterus as a disease. This series of 100 cases occurred in the service of Dr. Howard A. Kelly during my term of eighteen months as Resident Gynecologist, from January 1, 1901, to April 1, 1902; and my thanks are due Dr. Kelly and his pathologist, Dr. Cullen, for the privilege of reporting them. The series is particularly valuable as representing 100 consecutive and unselected cases of operation upon myomatous uteri, some of the patients having been operated upon primarily for some other malady. No case was closed as inoperable.

It must not be forgotten, however, that the list is not a representative one of myomas as they occur in your practice; for while they are unselected as regards the Hopkins Clinic most of them were selected by practitioners of the country as cases demanding operation, and some of them were twice selected, having passed from the general practitioner to the local surgeon and from him to Dr. Kelly. Therefore, the percentage of serious and fatal cases is undoubtedly high. But this will not detract from the value of my report, as my purpose is not so much to draw conclusions as to show you a few of the dangers that must be watched for and avoided in your daily rounds as a general practitioner.

I shall consider the more important clinical features of the series and draw illustrations from a very few out of a large number of interesting and instructive cases.

There were in my series 31 colored and 69 white women, showing a greater frequency of myoma in the colored race, for the admissions in the gynecological wards for all diseases averages about one

*Abstract of a paper read before the Alabama Medical Association.
colored to five white women. The youngest patient was 24 years of age, the oldest 67. The numbers in decades were as follows:

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<th>Age Group</th>
<th>Frequency</th>
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<tr>
<td>20 to 29 years</td>
<td>7</td>
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<tr>
<td>30 to 39 years</td>
<td>45</td>
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<td>40 to 49 years</td>
<td>30</td>
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<tr>
<td>50 to 59 years</td>
<td>10</td>
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<td>60 to 69 years</td>
<td>2</td>
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This corresponds closely to the tables of other authors, and shows that of all cases operated upon for myoma about 80 per cent. are in the period from 30 to 49 years.

Twenty per cent. of the women were not married. Of the 80 married women, 26 or 32 per cent. had never been pregnant, while of the 54 women who had been pregnant, 11, or about 20 per cent. had borne but one child, and six had never carried a child to viable age. One woman had miscarried six times, the foetus at no time going beyond the fifth month. Another woman had borne one child and subsequently suffered five miscarriages. Of the 54 women who had been pregnant, 20 had miscarried at some period in life.

I operated upon one patient for a right tubal pregnancy, associated with a small myoma in each horn of the uterus, causing pressure at the proximal ends of the tubes. She was 33 years old, had been married ten years and this was her first pregnancy.

I removed from a colored woman, aged 38 years, a dead abdominal foetus of five months' development, together with a large multinodular fibroid uterus and a large cyst springing from the right infundibulo-pelvic ligament. She had one child, 21 years old, and had had a miscarriage three years before her admission.

A white woman, aged 29, had been married five months, and came to the hospital because of a movable abdominal tumor and pain. A diagnosis was made for four months' pregnancy, associated with an ovarian cyst. At operation I found a large soft pedunculated myoma and two small subserous myomata. These were removed and the woman was delivered of her child at full term.

I believe the instances to be rare in which myoma interferes with labor if the patient has reached full term. The chief danger in the case just reported would be from twisted pedicle during the pregnancy or, more particularly, just after the expulsion of the child and descent of the fundus.

We must constantly guard against error in diagnosis between fibroid and pregnancy. During the 18 months several cases were anesthetized before the diagnosis could be made, and I have seen patients return to the ward and temporarily dismissed to await developments because the diagnosis could not be made, even under anesthesia. In one case I had the disagreeable experience of opening the abdomen before making the diagnosis of pregnancy, and I think this same error occurs sooner or later in the experience of most men who do much pelvic surgery. One of this series, Gyn. No. 8427, was reported by Dr. Kelly in a recent paper (“The Mimicry of Pregnancy by Fibroid and Ovarian Tumors.” Am. Gynecology: 1902; Vol. 1, P. 449) and
illustrates the difficulties in making a diagnosis from the history. The patient was 45 years of age, had given birth to one child, and was certain that she was again pregnant. She had some disturbance of menstruation in June, 1900, but had menstruated regularly from that time until seen in December. In July and August she had indigestion and nausea. Since August she had felt fetal movements on both sides of the abdomen. At times so distinct were these movements that she could feel them with the hand. Her abdomen had gradually enlarged since August and she had been pronounced pregnant by her family physician. Her breasts were enlarged and on pressure yielding a whitish secretion. Dr. Kelly saw her at her home and made a diagnosis of multinodular fibroid uterus, this being confirmed at the operation in January, 1901.

Of the chief symptoms noted in this 100 cases, 35 patients complained of an abdominal tumor. In two cases this was the only sign or symptom. Dr. Russell removed a tumor weighing 27 pounds from a colored woman aged 39. As is usual in these large tumors this one was parasitic, containing a free blood supply from the greatly enlarged omental vessels.

Pain in the abdomen or pelvis or dysmenorrhea were complained of by 53 patients. The pain usually depends upon some other factor than the size of the tumor. A very small subserous tumor, too small to be detected by bimodal palpation may be the cause of serious dysmenorrhea. The pelvic inflammatory disease often associated with myoma and adherent ovarian cysts is more frequently the cause of pain than the tumor itself.

Increased menstrual flow was noted in 41 cases and copious hemorrhages at or between the menstrual periods in 15 cases, making 56 per cent. in which myoma caused unusual loss of blood. The haemoglobin at time of operation was 46 per cent. or lower in nine cases. It was 33 per cent. in three cases and but 22 per cent. in one case. Although anemia is a serious complication, recovery followed operation in all of these cases. A patient living in Baltimore entered the hospital with haemoglobin of 15 per cent. She was given iron as a tonic and remained at home or at the seashore for several months, entering the hospital at every menstrual period when she was kept absolutely quiet in bed. Her haemoglobin gradually increased until it reached 46 per cent., when Dr. Kelly removed a large myoma with a right pus tube. Within a year from her first examination her haemoglobin had increased from 15 to 80 per cent.

Of the twelve patients 50 years of age or older hemorrhage was a prominent symptom in nine, and three of these had carcinoma of the fundus, associated with myoma. In only three of the nine was the hemorrhage of the menstrual type. Thus, you see, there were six suffering with more or less profuse and irregular hemorrhage and carcinoma existed in half of the number.

One patient, 58 years of age, had had severe uterine hemorrhages 12 years ago, for which double oophorectomy was performed 11 years ago, resulting in the cessation of hemorrhage for three or four years. For the past five years she had again suffered with severe hemorrhage.
MYOMA OF UTERUS—HUNNER.

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together with constipation and frequency of micturition. Dr. Kelly removed a large multiple fibroid and found both ureters enlarged from pressure at the pelvic brim. The case illustrates the futility of double cophorectomy, an operation that, as you know, was in vogue a few years ago. It also illustrates another very serious and not infrequent complication in fibroids, viz., pressure on the ureters. This was noticed in but 4 per cent. of this series, but systematic observation would undoubtedly have revealed more affected ureters.

Gastric symptoms were prominent in six cases. Sixteen patients complained of bowel symptoms, such as unusual constipation, defecation pains and pressure symptoms. A feature not often mentioned in the literature is disturbance of the urinary function. Twenty-eight per cent. of this series complained of urinary symptoms, apparently dependent upon the presence of the tumor. These symptoms varied in importance from a simple frequency of urination to absolute retention.

Complications: I have already mentioned some of the complications occurring with myoma of the uterus. Carcinoma of the fundus occurred in 3 cases, of the cervix in 2 cases. Sarcoma was present in 2, making 7 per cent, in which malignant disease existed. Adenomyoma was present in 2 cases. One of my difficult operations was upon a stout woman of 50, who had an umbilical hernia a large multinodular myoma of the uterus raised out of the pelvis by a cyst of the right ovary, and a tubo-ovarian abscess on the left side. Examination of the pus showed streptococci, necessitating liberal suprapubic packing. On opening the uterine cavity after the operation an adenocarcinoma was found in the fundus. She returned to me one year later for a radical cure of a suprapubic hernia resulting from the drainage. At the same time I removed the healed remnant of the left tubo-ovarian abscess.

In the case of a colored woman I removed the left inguinal glands, and an extensive pelvic tuberculous disease together with a myomatous uterus.

I did not follow all of the tumors to the pathological laboratory and therefore will not speak of the various degenerations noted. Two cases, however, of infective necrosis deserve mention. A woman aged 51 had been at Dr. Kelly's private sanitarium a few years previously and was in the operating room ready for myomectomy when her husband, a physician, decided he did not believe in operating for myoma when a woman was at the age of menopause. In the summer of 1901 she was hastily brought to the hospital suffering from severe symptoms of shock. Operation by Dr. Russell revealed several myomata, one of which with twisted pedicle had become necrotic and infected. A rapid operation was performed but the patient never rallied from her shock, and died in ten hours.

A patient aged 36 came to the hospital in September, 1901, complaining of dysmenorrhea and severe bladder and rectal symptoms. She was the mother of two children, aged 13 and 7 years. Three years ago she suffered a miscarriage at the third month—cause unknown. After an illness of a few months she entered the hospital, and examination under ether revealed a myoma in the left broad ligament and
another at the right cornu. She refused operation. Again in July, 1901, she aborted a 3½ months fetus and afterwards suffered such severe pelvic pain that she came to the hospital for operation in September. I found a general inflammatory condition in the pelvis, a small intraligamentary fibroid on the left and a pedunculated tumor about 3 inches in diameter springing from the right cornu. This tumor had become adherent to the cecum and was covered and nourished by the omentum. After freeing the cecum the tumor was easily rolled from its necrotic attachment to the uterus and as easily rolled away from the cecum. On detaching it from the cecum a hole one-fourth inch in diameter was found to have existed between the head of the cecum and the tumor. The tumor had necrosed internally and was a mere shell filled with intestinal material and drawing a precarious substance from the omentum. The appendix lay under the tumor in a mass of indurated tissue. After freeing the appendix a large area of cecum was resected, including the base of the appendix and the opening of the tumor.

Time does not permit me to dwell upon the many serious complications found outside of the uterus and tumor involving the uterine adnexa. Pus tube or tubo-ovarian abscess was present in 6 cases either hydrosalpinx or perisalpingo-oophoritis was noted in 15 cases; ovarian cysts, not counting the approximately normal cystic ovaries were present in 9 cases; ovarian hypertrophy of marked degree was noted in 3 cases.

Six patients died. Our average death rate for all gynecological cases is 3 per cent. When one considers the many cases of advanced carcinoma, and the relatively large number of serious puerperal cases that come to the hospital, and then sees that the percentage of death from myoma is double that for all gynecological cases, myoma included, I think the effect is both surprising and suggestive. I regret that time does not permit a detailed study of these cases resulting in death. In five of them the tumor was complicated by serious pelvic inflammatory disease. One died on the sixth day from septicemia, one on the third day from general peritonitis, one on the fourth day from thrombosis of the left common iliac vein with embolus carried to the pulmonary artery, one I have already cited as suffering with an infected tumor and dying in ten hours from shock, which was profound even before the operation. Two died in twenty hours and four hours respectively, from shock due to loss of blood at operation. One of these and possibly both of them could have been saved had more time been taken and the tumors removed by slow dissection and careful control of hemorrhage by the usual method of working across the pelvis from left to right. In all six of these fatal cases the pelvic mass was removed by the method of bisection, an invaluable procedure in a very few selected cases.

The following operations were done for the 100 cases: Myomectomy, 19; panhysteromycotomy, 14; supravaginal hysterosalpingo-oophoromyectomy, 40; supravaginal hysteromyectomy, leaving one or both ovaries, 16; vaginal myomectomy, 5; vaginal hysteromyectomy, 6. Nine cases were treated by the method of bisection.

I have presented facts; you must draw conclusions. Such a report
BOOK REVIEWS.

Pathology and Anatomy. By W. S. Evans, M.D., Professor of Pathology in the Chicago College of Physicians and Surgeons.

Physiology, Bacteriology and Hygiene. By Adolph Gehrmann, M.D., Professor of Bacteriology in the Chicago College of Physicians and Surgeons.

Dictionary of New Words. By William Healy, M.D., Instructor in Gynecology, Northwestern University Medical School.

The Practical Medicine Series of Year Books. Issued monthly under the editorial supervision of Dr. G. P. Head, and published by the Year Book Publishers, 40 Dearborn street, Chicago.

The August volume of this popular series is a veritable multum in parvo. The chapters on bacteriology and pathology are excellent. In 140 pages they cram in an enormous amount of valuable matter, going thoroughly into the essential features of these two subjects.

The dictionary covers the field of new words, which have been coined since the last editions of the standard dictionaries were published. The one criticism that can be made is that while some of the more recent proprietary remedies are mentioned, many of the best known in the field are omitted. Why should analgesine, aseptinol, cypridol, prunol, diastin, formacetone, satyrice, gynecine, etc., be used and not antikaminia, listerine, peptenzyme, antiphlogistine, peptomangan, protonuclein, cyclo-thymoline, bovonine and many others of equal reputation and merit?
NITROUS OXIDE IN THE PRODUCTION OF SURGICAL ANAESTHESIA.*

By IRVING A. MEEKER, M.D., of Upper Montclair, N. J.

Before proceeding to the main part of our subject, it may, perhaps, be not entirely devoid of interest to glance very briefly over the history of this agent and note some of the salient points. The gas has been known ever since the beginnings of the science of chemistry, but it remained for Sir Humphrey Davy to make a thorough investigation of its properties, and he, as early as 1799, asserted that in view of its power to destroy physical pain it might probably be of use in surgical operations which did not necessitate too great effusion of blood. For many years, however, no practical application of this knowledge was made, beyond the fact that certain individuals at various times and places did inhale this vapor for the pleasure and amusement of themselves and their friends. It was probably inhaled, however, with a considerable admixture of air, and consequently the so-called stage of excitement was much exaggerated, with the final result that the gas came to be commonly known as laughing-gas.

Finally, in 1844, at an entertainment where the gas formed the principal means of amusement, a dentist, Dr. Horace Wells, of Hartford, noted that one of the gentlemen injured his leg while under the influence of the gas, without any sensation of pain whatever. The next day the dentist himself took the gas and demonstrated in his own person that a tooth could be extracted without a trace of pain. He continued to use it in his practice with varying success, but for twenty years more the gas did not come into general use for dental extraction, and so far as its employment in general surgery was concerned, it was almost a century after Sir Humphrey Davy's announcement before the gas came to be used in this connection with any degree of generality.

Nitrous oxide is, under ordinary conditions of temperature and pressure, a gas both odorless and colorless and with a slightly sweetish taste. At a temperature of 45° and under a pressure of 50 atmospheres the gas is readily condensed into a liquid and may be placed in cylinders of steel or cast iron ready for delivery to the consumer. Burning substances thrust into an atmosphere of nitrous oxide burn with greater brilliancy, owing to the relatively increased amount of oxygen present, as the result of the decomposition of the gas by the heat of the burning substances, the quantity of oxygen present being just double that of ordinary air. The heat of the body, however, is not sufficient to produce such decomposition, so that the nitrous oxide alone is not capable of supporting respiration indefinitely. The gas is simply dissolved in the blood—not decomposed. Accordingly inhalation of the pure gas without admixture of air or oxygen produces pronounced states of asphyxia and some have held that its anaesthetic action was due largely if not wholly to the asphyxia resulting from

*Read before the New Jersey Chiron Club.
its administration. That this is not the case, however, at least to any considerable degree, is shown by the fact that even when moderate quantities of air or oxygen are administered with the gas, so that the asphyxia is altogether relieved, an entirely satisfactory narcosis may be maintained, thus evidencing the fact that the gas is a true anaesthetic agent, acting in all probability directly upon the central nervous system and not indirectly by a process of paroxysm of asphyxia.

Turning now to the methods of administration, we find that special apparatus is necessary for the successful production of satisfactory anaesthesia, because the agent is in gaseous form, and because any considerable amount of air administered with the gas at the outset seriously interferes with the induction of anaesthesia, if indeed it does not absolutely defeat this purpose. There are many forms of apparatus, but I will not take the time for a lengthy description of any of these more or less complicated pieces of machinery. There are, however, a few points of prime importance in any apparatus of this description to which we may profitably devote our attention for a few moments. In the first place it is necessary to have an accurately fitting face-piece, thus rendering the convection between the respiratory apparatus of the patient and the gas-containing cylinder practically air-tight, with the exception that there should be a valve which when shut allows the passage of the gas and when open cuts off the gas and allows free ingress of air. A set of valves must also be arranged in the face-piece, so that the gas inhaled, with each respiration is exhaled into the outer air. Another essential in the connections is a gas-bag with a capacity of from two to seven gallons, close to the face-piece, from which the patient may draw his inspirations and thus avoid the sensation of suffocation which is likely to result from the effort to breathe through a tube direct from the cylinder, without the intervening reservoir of gas under ordinary conditions of temperature and pressure. In other words, our chief object in the production of a single complete anaesthesia is to exclude air as far as possible and give simply a pure, unadulterated nitrous oxide.

Passing now to the symptomatology of this form of anaesthesia, we find that the period of unconsciousness is very rapidly induced—usually in 20-30 seconds—and that anaesthesia is complete in from 60-75 seconds. Furthermore, as a rule there is no stage of excitement, so-called, and if this does occur, it is usually indicative that air in considerable quantity has been allowed to enter with the gas into the lungs. The symptoms of complete anaesthesia are stertorous respiration, fixation of the eyeballs, insensibility of the conjunctiva, twitching of the extremities and marked cyanosis, which to an uninitiated observer is often little less than appalling. Just at this point, however, the administration is stopped, and during the ensuing period of a minute or a minute and a half any brief minor operation can be done entirely without causing pain. A tooth may be extracted, an abscess evacuated, and adhesions of the clitoris or prepucce may be broken up. If a longer period of anaesthesia is necessary, say from 5-30 minutes, then instead of stopping the administration finally, as soon as anaesthesia is complete, the gas is shut off and a few breaths of air are given,
until the cyanosis begins to abate, and the respiration becomes more natural. This result occurs with considerable rapidity, so that by the time two or three respirations have been taken it is necessary to shut off the air and return to the gas until the symptoms of the deeper anaesthesia reappear once more. This process of backing and filling, so to speak, must be continued throughout the time of operation. This method is known as the "gas and air" method, and as it is necessary to give the gas for a much larger proportion of the time than it is possible to give air, the patient is cyanosed by far the greater part of the time and often presents a very uncanny appearance. It is of course readily seen that the carrying on of this form of anaesthesia requires the closest possible attention on the part of the administrator, if he desires to obtain results which are gratifying to the patient, the operator and himself. The signs which require watching are the same as under ether or chloroform, although less dependence can be placed upon the color, because of the cyanosis which naturally occurs with this agent. Sudden and extreme dilatation of the pupil is, of course, a grave danger sign. The pulse is ordinarily little if at all accelerated, and although good and regular, is usually feeble and lacking in volume. The most important point of all, however, which requires attention is the respiration; as the anaesthesia becomes complete the respiration is regular and somewhat increased in frequency, but deep and stertorous. If now the administration be pushed still farther, the breathing becomes feeble, irregular, and of a frequency about one-half the normal. These signs of respiratory failure are of the very greatest importance and should be heeded immediately by a brief cessation of the anesthetic until the patient returns to a more normal condition—a change which usually occurs with considerable speed after stopping the gas inhalation. When more than a 30-minute period of anaesthesia is necessary, resort should be had to the use of oxygen in combination with the nitrous oxide. The oxygen, however, is not used intercurrently simply, as is the air, but is supplied from the very inception of the administration. At the outset it is used to the amount of 2 to 3 per cent. and is gradually increased to 10 to 12 per cent. as the anaesthesia progresses—it having been found by experience that such an amount can be given, while yet complete anaesthesia is maintained, without the development of cyanosis whatever. The proportions, however, must be varied constantly to suit changing conditions—the patient being, perhaps, more thoroughly under the control of the administrator, than with any other anaesthetic. At the same time a correspondingly greater skill and watchfulness are required on account of the rapidity and facility with which these changes may occur. In cases of nephritis this should always be the anaesthetic of choice, as its effect on the kidneys is practically nil.

Another use of nitrous oxide, and that perhaps in which we are all most interested, is its administration as a preliminary to ether anaesthesia. For this purpose there is required some special form of inhaler, such as the Clover-Hewitt, or that of Bennett, which is commonly used in and about New York. When administering the gas in this connection it is not necessary or even desirable to produce a
complete gas anaesthesia; on the other hand, the aim should be so to blend the latter part of the gas administration with the beginning of the ether, that the change will be imperceptible to the patient; by this means we avoid the tendency to coughing and strangling, which frequently occurs in the ordinary way of giving ether.

Another feature of value is that the amount of ether necessary for the induction and maintenance of anaesthesia is greatly reduced, thus sparing the eliminative organs of the patient and the purge of the anaesthetist, and, for a similar reason, subsequent nausea and vomiting are much reduced. The so-called stage of excitement is entirely eliminated in the majority of cases, and inquiry after operation will disclose the fact that the patient has had no recollection of anything after the first three or four inhalations of gas until he begins to wake from his anaesthetic sleep. This method is particularly useful in the case of plethoric and atheromatous individuals, in which it is so necessary to prevent the vascular engorgement which regularly occurs during the stage of excitement. If for any reason it is desired to use gas as a preliminary to chloroform, the sequence should not be direct on account of the cyanosis and respiratory depression caused by the gas. It is perfectly safe, however, to follow the gas with ether, a respiratory stimulent, and the ether in turn with chloroform.

The advantages of nitrous oxide are that marked anaesthesia is rapidly induced and recovery occurs with equal rapidity. With respect to safety, it is probably the safest anaesthetic which we possess, especially for short operations. Colton has reported 100,000 cases without a single fatality. No ill effect is produced on any organ. No elimination is necessary, or even possible, by way of the kidneys or intestinal tract, for by the time the patient awakes practically all of the agent used has been exhaled with the air expired from the lungs.

The disadvantages, while requiring consideration, are not of serious moment. In the first place, the simple gas anaesthesia is very brief, but here the air and oxygen combinations step in to fill the breach. Another item is that of expense, on account of the amount of gas and oxygen required if the operation is a lengthy one; but this is more than overbalanced by the corresponding gain in safety. Occasionally an alarming degree of asphyxia is developed, but I have been able to find no record of a fatal case. Another condition which sometimes occurs is incomplete muscular relaxation, although this disappears, as a rule, very soon after the anaesthesia is well under way.

The preparation for this form of anaesthesia should, when possible, be the same as for other modes. In any event, however, bladder and rectum should be emptied to prevent the occurrence of evacuation during the course of the induced sleep. An empty stomach is likewise a desirable feature, but is not so much a matter of necessity as with chloroform and ether.

Nitrous oxide is contraindicated, as a rule, in all cases of respiratory interference of whatever kind, such as that resulting from the pressure of tumors, paralysis of the respiratory muscles, or stenosis from the presence of croupous membranes or compression from effusions. Fleshy people likewise are bad subjects, on account of the well-
known difficulties which they have with respiration. It is also said to be contraindicated in children, although I have seen it administered to children of all ages from six months up without ill effect.

Nitrous oxide is especially indicated in many minor surgical operations, such as incisions of felon and abscesses—in short, operations about the rectum, in examination and reduction of fractures, and especially for painful dressings in children or highly strung individuals of older growth. In fact, at the Hospitals for Ruptured and Crippled in New York all children requiring dressings which are at all painful are anaesthetized with this agent. The time required for each dressing is from five to twenty minutes, and if necessary the anaesthesia is repeated daily, and seems to be absolutely without ill effect.

It is generally conceded that nitrous oxide is the safest of all anaesthetics, not even excepting cocaine, and if we look over the list of conditions in which this agent has been used, we find a category long and varied that will undoubtedly be greatly augmented with the development of new devices for the handling of the gas and the increased skill in administration resulting from extensive experience.

SOME CAUSES OF FAILURE OF OPERATION TO CURE GALLSTONE DISEASE.*

By WILLIAM J. MAYO, A.M., M.D.,
Surgeon to St. Mary's Hospital, of Rochester, Minn.

Surgery of the gallbladder and bile passages is one of the most satisfactory branches of our art. The relief is perfect and rapid, leaving little to be desired. The death rate, taking the cases as they come, is hardly more than 3 or 4 per cent., and in uncomplicated cases less than 1 per cent., depending to a large extent on the condition of the patient. Including all causes of failure to cure, either complete or partial, and such late sequelae as adhesions and hernia, the number of such instances is small. In 580 operations upon the gallbladder and bile passages, we had but 17 cases, or 3 per cent., which required a secondary operation. During this period, however, we have on a number of occasions operated a second time for symptoms arising after an operation performed elsewhere. It is fair, therefore, to presume that some of our cases have, unknown to us, been operated upon at a later period by other surgeons, and that failures to establish a complete cure have been more numerous than this percentage would seem to indicate. It must be taken into consideration also that many patients have symptoms referable to uncured lesions, which are not sufficiently serious to demand operation, and these may be accounted as partial or temporary failure; but looked at even in this light, gallstone surgery is wonderfully successful and practically all of the pa-

*Read at the 35th annual meeting of the Minnesota State Medical Society.
tients are benefited and few would exchange their post-operative for their previous condition.

Poor results usually occurred in our earlier work and meeting with such cases has gradually enabled us to overcome the causes which lead to the subsequent troubles. Of course, in rare instances, the condition of the patient may not warrant a complete procedure at one sitting, and a second operation is deliberately elected. With a single exception, to be referred to later, all of the cases in which results were less perfect than were desirable, occurred in complicated cases, and it can be laid down as an axiom that delay in seeking surgical relief is the direct cause of the complications. It is the general experience that complicated cases have usually had symptoms during a period sufficiently prolonged to have made a diagnosis possible before the development of serious lesions, and that an operation at that time would have been safer and cure more certain.

I would here refer to the clinical fact that a small number of patients who have had a cholecystostomy performed will have a colic or two following operation, and sometimes accompanied by transient jaundice. We have seen this most often during the first month or two after discharge from the hospital. In the large majority of instances the colics do not recur and the patient remains well. The temporary trouble is probably due to a crippled gallbladder becoming filled, and by reason of recent adhesions, not emptying properly, so that based on a single spell of pain shortly after closure of the fistula, a second operation may not be necessary unless there are other evidences of trouble.

The most common cause of future symptoms is incomplete removal of stones. In the original work of Tait, he advocated cholecystostomy and drainage based upon the frequency of overlooking stones, as it enabled spontaneous discharge. In our early experience, we had in one case 55 calculi work out of the fistula during the first two weeks. There is, however, little excuse for leaving stones in the gallbladder as by using the finger as a guide, it will be rare that even a small calculus will be overlooked.

Stones in the cystic duct frequently escape attention, and it was only after several such misfortunes that we began to exercise greater care in exploring the cystic duct. The parts are deeply situated and as these patients are often obese, it is not easy to locate such a calculus previous to the development of the Robson technique, that is, the sand bag under the back, the high incision and dislocation of the liver downward and outward, which exposes the cystic and common ducts perfectly. In most of these cases, cholecystectomy is indicated. If the stone completely obstructs the cystic duct, the duct and cystic vessels are caught with curved forceps just beneath the impacted stone. The duct is then cut across and the gallbladder and duct with the stone quickly removed from below upward, almost by traction alone, with an occasional division of some more firm adhesion to the liver. Twice we have re-operated upon cases in which the gallbladder had been removed distal to the stone, leaving it in the duct to cause future trouble. This is more apt to be the case when the gallbladder is dissected out.
from above downward. The deep field is obscured by the blood running downward and the same vessels are cut over and over again. Stones are often overlooked in the common duct as they may lie quiescent for years. The jaundice may be very slight and in some cases not noticeable. The gallbladder, in the meantime, may become obstructed at the cystic duct so that this organ may be enlarged and cystic with calculus at the neck and nothing to call attention to the common duct stone. This is so contrary to the usual condition of contracted gallbladder and open cystic duct in common duct stone as to lead to error. The ducts should be explored with the fingers before opening the gallbladder in every case. After opening the gallbladder, the relief of tension prevents moving the stone in the dilated duct and escape of the cystic contents is apt to soil the field. If the gallbladder is distended, it is well to explore a second time after tapping; but before opening the gallbladder with the attendant possibility of infecting the deep parts. If stones are found in the common duct it will usually be sufficiently dilated to introduce the finger into the duct for exploration. In many cases in no other way can we be sure the common and hepatic ducts are clear.

One source of failure of cholecystostomy to cure is from secondary obstruction of the cystic duct, preventing free drainage of the gallbladder down through the passages. This may eventuate in a mucous fistula or repeated attacks of colics as the gallbladder secretions are periodically forced through the strictured duct. In some cases the gallbladder will distend and finally rupture through the scar, discharging bile and mucus. In practically all of these cases, the cystic duct has been obstructed by stone, causing ulceration, the healing of which induces a stricture, or kinking of the channel may occur. Other things being equal, it is better to excise the gallbladder in all cases in which the cystic duct is involved. In this way we have of late eliminated this, the most common cause of secondary trouble.

In septic cases, drainage is necessary for a long period of time, and if the fistula be allowed to close too quickly, severe symptoms may ensue. We have twice had to reopen and re-establish drainage in septic cholecystitis; both cases were colon infections. This is less liable to happen in ordinary empyema of the gallbladder in which a fistula will usually remain until sterilization has been accomplished by natural processes. In colon infections tubage should be continued until the bile becomes sterile.

Cancer can also be said to be secondary to stone formation and may take place after cholecystostomy or, being present, may be mistaken for inflammatory disease. All thick walled gallbladders should be looked upon as suspicious and as they are functionally useless, cholecystectomy should be done rather than cholecystostomy, and in this way many early cancers will be cured.

Chronic pancreatitis may exist at the time of operation and to obtain a good result, drainage must be long continued. We have twice allowed the fistula after cholecystostomy, to heal too quickly. The secondary symptoms were marked by attacks of slight jaundice and occasionally fever and chills, and rather persistent stomach trouble.
At the second operation the only cause for the condition found lay in a chronic pancreatitis and both cases were cured by cholecys-enterostomy. We must, in every case, examine as to the condition of the pancreas at the same time we explore the ducts, and if this disease is present, either drain the gallbladder for a long time or do a cholecyst-enterostomy with the Murphy button, in addition to removing the stones. Early in this paper I spoke of having seen only one uncomplicated case which required a secondary operation. This was a cholecystostomy with a very large gallbladder, the stones were easily removed and the ducts were free. For weeks after operation, there was occasional escape of bile from the fistula, not much, but troublesome. On dissecting out the gallbladder, it was found that by a low attachment to the abdominal incision, this viscus had formed a channel along which in certain positions of the body bile would gravitate outward. After cholecystostomy, the gallbladder should be attached as high up in the incision as is convenient. Persistent biliary fistula usually means obstruction of the common duct. I take it that every one understands the importance of not attaching the gallbladder to the skin. In the early days persistent bile fistula was usually due to a mucocutaneous suture, the evils of which obsolete practice I do not need to point out.

The turning in of the margins of the incision in the gallbladder and drawing a purse string suture closely about the drainage tube in a similar manner to a Kader gastrostomy, enables healing of the fistula to take place most promptly. There are two rather common causes of failure to effect a perfect cure that may not always be avoided. Postoperative adhesions are liable to cripple the movements of the viscer a in this neighborhood. Adhesions to the stomach and duodenum are the most annoying. Secondary separation may be necessary with the use of Cargiles membrane. As a rule, like the pain of old, pleuritic adhesions, in time relief comes as bands stretch out. We make a rule not to allow gauze drains to come in contact with the stomach and duodenum on account of the development of adhesions. We always interpose a piece of rubber tissue and leave it from 6 to 8 days, until the adhesive film surrounding the drains becomes organized. Hernia following operations for gall stone disease is not usually troublesome, but long incisions in obese people may give rise to serious hernial protrusion, requiring secondary operation. We now, if practicable, in such cases make a second opening outside the working incision, close to the ribs. Through this the drainage material may be brought out and enable us to carefully close the full length of the original incision. The necessity for this is increased if the opening has been extended downward for the purpose of removing the appendix.

In conclusion let me say, that careful work in surgery of gallstone disease gives results which are not excelled in any other branch of surgery.
EDITORIAL.

ORGANIZATION OF ASSISTANT PHYSICIANS.

Dr. A. P. Ohlmacher, superintendent of the Ohio Hospital for Epileptics, strongly advocates the organization of the assistant physicians in the State hospitals of each commonwealth into a compact body. In an address before the Ohio assistants, after speaking on the benefits of organization, he said: This brings me to speak about a scheme that has claimed my attention ever since coming in contact with our State hospitals, namely, that of founding a central institute for teaching and investigation. I wish to emphasize my conviction that a State Pathologic Institute along the lines contemplated would be a most desirable agent for improving the medical work of our State hospitals. It would constitute the nucleus through whose educational influence each assistant physician in our hospitals who chose to enlarge his scientific horizon could do so, thus reviving in the separate hospitals the scientific spirit now so completely dormant. It would go far toward
realizing the ideal of a postgraduate school for assistant physicians. With the training obtained in the institute, each of the hospitals could be provided with at least one assistant physician competent to fill the position of resident pathologist. The methods of clinical and pathologic research could be acquired, and under the guidance of the institute, assistant physicians of the various hospitals could prosecute original investigation upon the material within their own doors.

TEACHING OF DENTAL PATHOLOGY IN MEDICAL SCHOOLS.

At the recent meeting of the National Dental Association, held at Asheville, N. C., a resolution was adopted stating "That it is the sense of the National Dental Association that each medical college in the United States should include in its curriculum a lectureship on Oral Hygiene, Prophylaxis, and Dental Pathology." In support of this resolution it is urged that, with the introduction of the teaching of oral hygiene in the public schools, which the Dental Association is striving to accomplish, and the co-operation of medical men who have been specially instructed on this subject, a great stride will have been made toward the prevention of caries of the teeth, not to mention the betterment of the general health which would surely follow an intelligent care of the oral cavity.

A NEW USE FOR GRAPES.

An association of California vineyardists has been formed, to be known as the American Grape Acid Association, for the purpose of solving the problem of the production of cream of tartar from California grapes. Any person who can find out this secret will be paid $25,000, says Andrea Sbarboro.

Mr. Sbarboro says that if any one should be successful in discovering the process for the utilization of California grapes to produce tartaric acid on a commercial basis such a process would be of inestimable value to California and to the United States. The United States is a very large importer of grape acids which are material for cream of tartar despite the fact that California is a very large producer of grapes. The present value of tartaric acid, wholesale, is 31 cents a pound.
ABSTRACTS FROM THE BEST JOURNALS.

MEDICINE AND THERAPEUTICS.

The Dietary Treatment of Constipation.

Henry F. Hewes, in Bost. Med. and Surg. Jour., says he has made a careful study of this subject. He first aims to learn the source or underlying cause of the trouble; next the method or methods of treatment of the condition in its various manifestations which will tend to establish the natural physiological function as far as possible as a permanent and self-supporting condition. Either the patient has some definite pathological lesion or condition, or he is living under a faulty condition of hygiene. Those hygienic factors which bear most directly upon the physiological function of the intestine are: (1) The habit of a regular period of defecation; (2) a proper amount of physical exercise; (3) a proper diet. In regard to the diet, it is necessary first to ascertain the exact nature of the patient’s accustomed diet, and to supplement this until it corresponds to the normal diet.

Foods, from the point of view of their influence upon intestinal action, may be divided into three classes: First, all food substances possessing a large or unab sorbed residue. These are chiefly vegetable substances having much cellulose, as the grains in coarse form, green vegetables, fruit, etc. Second, the foods containing considerable quantities of organic acids or other substances which increase intestinal activity, such as the tamarind, prune, plum, manna, and certain green vegetables. Third, the substances which undergo fermentation in the intestine, with formation of organic acids. These are carbohydrates generally, including the cellulose of the vegetables already mentioned. In the treatment of constipation, then, having established the normal physiological diet for the patient, there is included in it a fair proportion of the above special forms of food. Besides general directions as to hygiene and health instructions are given to give up drugs and to depend entirely upon the diet. The writer then gives several tables illustrating diets helpful in this condition, and discusses their use. The results of his researches show that in a very large majority of the cases of constipation, the chief, if not the only cause or underlying condition, is a failure of the patient to follow a normal physiological manner of life; also in a large majority a complete cure can be obtained by a proper direction of general régime and diet.

Syphilitic Nephritis in an Infant Aged Fifteen Months.

George Carpenter reports this case, in the Brit. Med. Jour. He believes that catarrhal nephritis can arise from the action of syphilitic poison. This patient was the child of syphilitic parents. He presented all of the symptoms of nephritis. Necropsy revealed the kidney in a condition of catarrhal nephritis. Casts were visible here and there in the tubules. There were no intestinal changes. The small arteries in the neighborhood of the glomeruli were thickened and their lumens greatly diminished. The structural alterations in the blood vessels were probably responsible for the anuria which was a prominent feature in the case. The writer reports still another case of a child five weeks in which there was evidence of catarrhal nephritis in an incontestable syphilitic kidney. The writer believes that congenital syphilis is capable of producing catarrhal nephritis, as well as interstitial nephritis, and that there is no valid reason why one form should not occur independently of the other. This nephritis is indistinguishable clinically from acute catarrhal nephritis by reason of its symptoms, and its urinary deposits and interstitial kidney changes may or may not be present in such cases.

Edema of the Glottis.

John H. Jopson, in N. Y. Med. Jour., reports a case in a child of five years, reviews the literature of the subject and draws the following conclusions: (1) Simple edema of the larynx usually occurs in cachectic diseases, especially of the heart and kidneys. In these there may be no apparent exciting cause, and the inflammatory symptoms are conspicuous by their absence. (2) Inflammatory edema of the larynx results from contiguity to other inflamed structures; as a local complication of the acute infections of erysipelas, variola, measles, scarlatina, influenza, etc.; or as a result of severe grades of inflammation in simple acute laryngitis. Bacteriological investigation will probably find that a streptococcus is the most frequent exciting cause. (3) Traumatism to the laryngeal structures may result in edema, depending on the degree of “insult” to the tissues or to a possible pre-
disposition. (4) Among rare causes of edema of the larynx are angioneurotic disorders and the blood dyscrasias, such as scurvy, purpura, etc. (5) The diagnosis rests on the evidence of palpation and, if possible, visual examination, as well as on the signs of laryngeal obstruction. Membranous laryngitis cannot always be at once excluded. (6) Prognosis is unfavorable in all cases occurring in the course of chronic cachectic diseases and in severe types of the acute infectious diseases. In no case can it be other than guardedly favorable. (7) Treatment by intubation rarely affords relief unless the obstruction is infraglottic. Tracheotomy is absolutely demanded in extreme cases. The continuous inhalation of medicated steam is always to be employed; scarification and external depletion by leeches may be tried; cold and heat should be used externally and internally—cold as a prophylactic and heat as a stimulant and absorbent. General stimulating and supportive measures are necessary in all cases. With the occurrence of edema of the larynx the time of election for the use of antistreptococic serum has probably passed. As the infection is usually a mixed one, serum therapy does not at the present time offer much prospect of relief; and its use must be empirical unless there is opportunity for bacteriological diagnosis from cover glass preparations.

Paroxysmal Hematuria.

Dr. Wm. Gilman Thompson, of New York city, in a paper before the American Association of Physicians, reported two cases of this variety, one which had been known to have existed sixteen years and the other for fourteen years. The attacks were brought on in both cases by slight exposure to cold and fatigue. These attacks would start with a chill, rise in temperature to 103°, marked urticaria, disturbances of sensation, and with numbness. One hour after the onset the patient would pass dark-colored, smoky urine, which became progressively darker at each voiding. On one occasion the second patient developed hydrops articulorum. In neither case was there jaundice. In the second case, a boy, it was found that the exposure of one of his hands to a temperature of 60° would induce an attack. Two hundred and six cases were to be found in literature. The important points in the disease were the presence of hereditary syphilis, urticaria, etc. The condition was rare in the United States. It was a disease of the nervous system, and the presence of a neurotic temperament and alcoholism in the parents were important points in the predisposing causes of the disease. Males were more often affected. Few cases were reported after the sixtieth year. It was commonest in the fourth decade. It was never fatal or associated with hemophilia. Temperature not easy to explain and it might go on to 105°. It was not due to malaria. Pain was constant and radiated into the bladder, and the spleen and liver were enlarged. There was almost always an albuminuria preceding an attack. Many cases were induced by muscular fatigue, especially walking, as was seen in soldiers. Information gained from autopsy was of little value. Hereditary syphilis was the most important etiological factor in the disease. In closing, the doctor defined the disease as a vasomotor neurosis, called into play by exposure to cold, fatigue, or mental emotion.

The Mental Symptoms of Heart Disease.

Dr. Greenlee, in Caledonian Medical Journal, reports a number of cases in which mental symptoms were attributable to and consecutive to heart trouble. The writer quotes Mickle, who attributes certain mental phenomena to special forms of heart disease. Such a division is not justified, either by a study of Mickle's cases or his own. In Mickle's cases there was repetition of symptoms in different cardiac lesions; while this shows that no special symptom grouping can be attributed to aortic as distinguished from mitral disease, yet there is sufficient constancy in the mental picture to justify the term cardiac psychosis. The lesions affecting the right side of the heart commonly give rise to symptoms of restlessness and excitement, and those referred to the left side to suspicion followed by depression and dementia. These mental phenomena are merely exaggerations of the frequently observed mental symptoms of sane persons suffering from heart disease. It is interesting to study the psychoses in these cases, noting the gradual transformation of what may be termed the mental phenomena into delusions and insanity. The psychoses depend upon heart involvement and are sometimes benefited by digitals. Heart disease should be recognized as an important and direct cause of insanity, and in any classification of mental diseases it should be put in the same group with pulmonary tuberculosis, ovarian disease, and other somatic causes.
**Surgery and Pathology.**

**Uterine Myomata.**

Thomas S. Cullen, in *Can. Pract.*, finds that the endometrium is usually normal and in most instances we can open the uterine cavity with little or no danger of infection. A subperitoneal myoma frequently becomes attached to a neighboring structure and finally obtains its blood supply entirely from this source, its original pedicle becoming very small. The simple degeneration in myomata is hyaline in character and this hyaline material in turn gradually melts away leaving the spaces filled with serum, which is generally sterile. Subperitoneal and intraligamentous myomata occasionally become infected, probably as the result of some degeneration. The dependent portion of submucous myomata usually undergoes necrosis and sloughing. In adenomyomata we have myomatous tissue, with islands and rivers of normal uterine mucosa scattered through it. These islands of mucosa retain their natural menstrual function and hence at each period pour out their quota of menstrual blood. It thus accumulates and eventually causes cysts filled with changed menstrual fluid. Sarcomatous degeneration of myomata occasionally occurs and it should be borne in mind when outlining the treatment, as should the possibility of coexisting carcinoma of the uterus.

In treating myomata the surgeon's first duty is to remove the growth. The second is to sacrifice the reproductive organs as little as possible. Prior to opening the abdomen a catheter should be passed into the bladder to determine its confines. If the tubes are the seat of inflammation hysterectomy should be done. When the tubes are normal and there is no offensive vaginal discharge and the nodules are few in number and accessible myomectomy should be performed. It is not advisable to do myomectomy where the nodule is situated in the broad ligament or deep down laterally in the pelvis. It must be remembered that myomectomy is a much more dangerous operation than hysterectomy, and if the patient is weak the complete operation should be chosen. In those cases where it is deemed advisable to do hysterectomy in patients before the menopause it is advisable to leave the ovaries. Where pregnancy occurs in a uterus studded with large and small myomata perform hysterectomy; if the myoma is cervical and would interfere with labor do either hysterectomy at once or Cesarean section later. A submucous myoma, if small and situated high up, with no discharge, is often best removed by splitting the uterus from above. In some cases the myoma can be pulled down and the pedicle ligated from below. Where a sloughing myoma exists it is advisable to give frequent douches of a 1- to 2-per-cent. formaldehyde solution for a few days before operating. After a careful study of many cases, and finding that the operative mortality is as low as, or even lower than, that which follows where patients are not subjected to operation, the writer feels that the only patients that should be advised against operation are those who exhibit no symptoms, or where the myomata are very small, and give rise to little or no trouble.

**Surgery in Dropsy.**

Dr. Lejars, in *Semaine Medicale*, advocates laparotomy in all cases of extensive ascites of doubtful origin. He describes a number of instructive cases. The abdomen in one measured ninety-four centimeters at the umbilicus, but nothing abnormal was discovered at the laparotomy except adhesions between stomach and liver, possibly the result of an old, healed ulcer. The ascites has not recurred since the adhesions were detached, and the patient has been in good health since. He urges, in particular, early intervention in case of the ascites of cirrhosis, while it is yet time to accomplish good results. After the liver has become seriously compromised little can be expected from omentotomy as a last resort. In many cases supposed to be of a tuberculous or carcinomatous nature, the laparotomy will reveal the welcome surprise of some comparatively insignificant lesion. He affirms that the well-established fact of the benefit derived from a laparotomy in tuberculous peritonitis is by no means confined to the tuberculous form. Every chronic peritonitis, whatever its nature, is susceptible of improvement from it. In one case of diffuse carcinoma with extensive ascites of the abdomen the patient was remarkably improved by a laparotomy and drainage, and survived six months in comparative comfort. The surgeon in such cases should not attempt to disturb the conditions, but merely drain with strict asepsis, and general anesthesia is not necessary. The writer has collected 78 cases in which Tahna's operation was performed, but, as it was done as a last resort, the propor-
tion of 28 cured and 14 much improved does not represent the actual value of the intervention. He has done it three times himself.

Intussusception of the Vermiform Appendix.

Patrick S. Haldane, in Scottish Med. and Surg. Jour., reports a case under the care of W. Bron. The child was three years of age, and the symptoms given were those of intussusception. As there were evident signs of peritonitis operation was performed and the appendix was found to be invaginated from root to tip, the root of the appendix forming the apex of the "intussusception," and the coats of the cecum the "intussuscepiens," with great difficulty, owing to the friability of the walls of the cecum, the intussuscepted appendix was reduced. The appendix appeared very much swollen, and measured three inches from root to tip. The part which was invaginated was greatly swollen and deeply congested on its surface; the part at the edges of the thickened cecum was constricted and showed a tendency to gangrene. The appendix was finally amputated, and the stump treated in the usual way. It may be concluded from the above: (1) That the intussusception was chronic, having existed for fourteen days at least; (2) that it was in all probability ileo-cecal in origin, and that the invaginated appendix was merely a secondary thing, or that intussusception of the ileum and appendix had occurred at one and the same time; the adherence of the appendix to the cecal walls would justify this conclusion; (3) that the ileo-cecal part of the intussusception had become reduced before the operation, probably after administration of an enema; (4) that the peritonitis was produced by the reduction of the ileo-cecal intussusception, the peritoneal surface of ileum being coated with the bacillus coli communis, which had migrated from the mucous surface, while the bowel was intussuscepted. The case is of interest not only from its rarity, but as exemplifying the great mobility of the cecum and appendix, the history pointing to the three different positions which the organs took up, viz., first of all at the hepatic flexure of the colon, then at the splenic flexure, and thirdly, round the umbilicus.

Complete Nephroureterectomy.

J. Wesley Bovable, in American Gynecology, defines this term as the complete removal of kidney and ureter at one attempt. It may be called an American operation, since the first four were performed by American surgeons, Kelly probably doing the first in December, 1895. Of the 17 cases on record, only 2 were done outside the United States. But 4 of these were males and only 2 ended fatally. Tuberculosis of kidney and ureter was the indication in 1 of these cases. Complete nephroureterectomy may be done by the extraperitoneal and the trans-peritoneal routes. Bovable seems to prefer the loin extraperitoneal with a vaginal incision to remove the lower part of the ureter, and thinks it best to begin with the vaginal incision. He gives a full history of his second case, with the technic of the operation and its results. In tuberculosis of the kidney and ureter the strictest care to prevent contamination of normal structures is necessary. That virulent organisms other than the bacillus of tuberculosis may be in the pus should be remembered. It is well to remove the kidney and ureter en masse when possible, liberating the kidney first, care being taken that leakage from the cut end of the ureter does not occur. In favorable cases, if thought advisable, the ureter may be divided between clamps at any point where distention is not marked. Whether pus be present or not drainage should be employed, as not to do so is to invite at least the accumulation of a large amount of serum in the extraperitoneal space made in the operation.

Prevention of Mammary Abscess.

Dr. Alfred C. King, in the New York Medical Journal, states that the treatment in the prevention of mammary abscess should really begin during the latter months of pregnancy by manipulating and drawing out the nipples and bathing them in alcohol or borax water to harden the epithelium. Absolute cleanliness is requisite; frequent washing of the nipples with soap and water, followed by a saturated solution of boric acid, keeping gauze pads saturated with this solution wrapped around the nipples during the day and sterilized vaselin applied during the night. As an application also, the author recommends the following combination:

R Tannici (glycerite), 1ij.
Alcoholis, 5j.
Aqua rose, q. s. ad 5iiij.

M. Sig.: To be applied constantly on sterile gauze.

For the pain give opium or codeine or morphine hypodermically if the pain is unbearable, and apply lead-and-opium wash locally. Saline cathartics lessen the
hyperemia of the breasts. Belladonna ointment applied locally often affords comfort. Ice bags are of great importance, and should be employed in order to prevent pus-formation. Support by bandages is necessary, employing the figure-of-eight in combination with the "straightaround" bandage, making gentle compression as well as support. Bacon's method of massage may be employed by beginning in the axilla and rubbing under the clavicle, gently at first and gradually increasing the pressure. The stroking is all directed away from the breast, and not toward it. The purpose is to facilitate the flow of blood and lymph back from the breast and to accelerate the flow in the efferent vessels.

OBSTETRICS AND GYNECOLOGY.

Puerperal Eclampsia.

W. E. Fothergill, in Med. Chronicle, states that in attempting to forecast the end of a case of actual eclampsia it is not wise to attach too much importance to the number of fits, as they not only vary with the quantity and nature of the poison, but also with the nervous equilibrium of the patient. The occurrence of convulsions after labor points to the persistence of a grave state of affairs, and should never be treated lightly. The most favorable cases are doubtless those in which convulsions occur actually during labor and initiated by some definite external stimulus such as obstetric manipulation. The quantity of albumin in the urine is a false guide, as in certain cases there is no albumin; the quantity of urea affords a much more reliable criterion. When there are symptoms and physical signs of toxemia during pregnancy, active treatment should never be omitted. Rest in bed, copious drinks of water, milk diet, purgatives, rectal lavage, hot baths and hot wet packs are all useful. Thyroid substance is of use in some cases to excite diuresis. The urine should be examined periodically and if the output of urea is low simple measures should be taken to increase it, and if these fail, more active ones. If the patient fails to respond to treatment, pregnancy should be terminated. In the presence of convulsions and coma, saline transfusion and bleeding are indicated in addition to more ordinary aids to elimination. Morphin may be given to reduce irritability of the nervous system or to aid elimination. Rectal lavage and hot wet packs may be used during coma, as well as before and after. The slow induction of labor before an attack has occurred, or after one attack has been tided over is the best method of terminating the pregnancy. Accouchement forc is objectionable.

John T. Wheeler is of the belief that all pregnant women should be taught to examine their urine for albumin at set intervals, and upon the finding of albumin notify the physician at once. This is of especial value in patients who reside at a distance, are poor, or have had eclampsia before.

Robert Jardin reports five cases of eclampsia treated by saline infusion. In all of the cases relief was obtained and all recovered except one, which died of pneumonia. Two pints of saline solution were used, and 4 ounces of magnesium sulphate given by stomach tube, also a hot pack applied.

Treatment of Diffuse Peritonitis.

Joseph A. Blake, in Ann. of Surg., in treating this condition carries out two principles: Firstly, the removal or segregation as quickly as possible of the cause or nidus in order to prevent further peritoneal and systemic infection; secondly, the placing the peritoneum under the best possible conditions to withstand and eliminate the generalized infection. He advises early operation with lavage of the peritoneum with large quantities of dechloro-normal salt solution. This may be partially removed with gauze or sponges, or considerable quantities of the fluid may left in the cavity. The wound should be closed without drainage unless the latter is absolutely indicated by the presence of non-absorbable amounts of necrotic material.

Influence of Sexual Intercourse Upon Women.

E. Toff, in Zent. f. Gyn., No. 14, believes that the changes in the physical condition and appearance of women which frequently follows marriage is due to absorption of seminal fluid, which acts like an internal secretion. A weak, anemic girl often becomes robust and full-blooded. A similar action of pregnancy is explained as due to the influence of the male element in the fetus upon the mother.

Cervical Incisions in Labor.

Holmes, in Am. Jour. Obstet., draws the following conclusions: 1. Dührsen was not the first to recommend the incisions which are usually accredited to him. 2.
Effacement of the cervix is a pre-requisite to such incisions. They are especially applicable to primiparae, and are often contraindicated in multiparae. They are often of value and may be essential; the judgment of the operator must be applied to each case individually. Preliminary manual dilatation does not give the best cervical condition for incisions. Incisions offer as potential dangers, infection hemorrhage and extensive laceration beyond the vaginal vault. An operation of this character calls for suitable instruments, assistants and experience in obstetric procedures. The details of the technics may be modified as the operator may think proper. As few incisions as possible should always be the rule. The after effect of oblique incisions is sometimes preferable to that of the customary quadrant incisions. If there is no hemorrhage nor accessory laceration, it may not be necessary to close the incisions by suture. Immediate delivery should follow the incisions.

The Determination of Sex.

This evasive problem has found a rather simple solution at the hands of A. Litkens, according to Obse. Psych. He transfers the entire question to the lowest forms of life, where the conditions are much less complex. If we study the propagation of bacteria, for instance, we find that it is of two kinds: In a warm, moist and nutritious medium they propagate by division or budding, while in unfavorable conditions they multiply by means of spores, which do not require any nutrition for a long time, and are generally able to resist cold, heat, dryness, etc. It would therefore seem, according to the author, that when the parental organism is stimulated by privations to a struggle for life, a better adapted offspring is produced than at other times. The same principle he applies to the higher animals and to man, asserting that whenever the parents are in condition of high nervous tension, conception will result in male issue as a better adapted form; on the other hand, in times of ease, relaxation and comfort, conception will yield female issue. A series of observations is adduced to confirm these statements.

Ovarian Transplantation.

F. H. Martin, in Am. Med. Rec., in a preliminary report, gives the technic employed by him in 2 cases of ovarian transplantation. In both cases the ovaries had been removed for sufficient length of time to establish an artificial menopause. In each instance about a third of each ovary from a supposedly normal subject was attached to the stump of the tube, the lumen of which was made patent. Both cases were operated on in 1902, and some signs of menstruation have occurred in each. Martin says it is too early to estimate the value of these operations, but he believes that menstruation will eventually be established. He believes that the operation described will make it possible to relieve in a large number of cases the nervous symptoms arising as a result of a premature menopause following the sacrifice of the ovaries. This was accomplished in the two cases reported.

Does the Injury to the Round Ligaments in Hermolomy Cause Retrodeviation of the Uterus?

S. Goldner, in Zent. fur Gyn., in discussing this question states that out of 50 women who underwent Bassini's radical operation he examined 28 in from 3 to 6 years after the operation. Of these, in 13 cases the operation was bilateral, in 15 unilateral. These patients belonged to the class of working women, and went back to their labors undisturbed and completely free from pain. Of especial interest was the condition of 12, in whom the round ligament, on account of adhesions, was cut through and the stump of the hernial sac ligated with the round ligament; in 6 cases this was done on one side, and in three cases on both sides, and in none of them did there appear any change in the position of the uterus. This condition led him to conclude that the severing of the round ligaments in the inguinal canal caused no disadvantageous result, and that the fact that even in those cases in which both ligaments were severed no retroflexion occurred, justified the use of the radical operation of Bassini.

Placenta Previa.

In 10,263 labor cases occurring from 1892 to 1901 in the obstetric clinic in Prague, E. Nohel finds only 55 cases of placenta previa. This gives a percentage of 0.53, which is smaller than that of previous reported records. Placenta previa occurred oftener in women between 35 and 40 years of age than in any other period of 5 years.
The trustees of the Newark Eye and Ear Infirmary, now at 60 Stirling street, have just purchased a large plot of ground on the north side of Central avenue, between Washington and Plane streets, and one of the members of the association who is deeply interested in its welfare, but who does not wish his name to be known at present, has agreed to put up a new building for the infirmary at a cost of $50,000.

The building now occupied by the infirmary is entirely too small to accommodate the patients applying for treatment and is also very old and in constant need of repairs.

The new building, according to one of the trustees, will be fireproof and will be provided with the most modern hospital appliances. It will accommodate thirty patients and is so planned that it can be enlarged in the future.

The great usefulness of this institution to this community is shown by the fact that up to the beginning of this year and since its establishment twenty-three years ago, more than 105,000 persons have been treated in it. It has a post graduate school where physicians are taught to diagnose and treat diseases of the eye, ear and throat.

Its board of trustees is made up of Robert F. Ballantine, president; William Rangkin, Jr., secretary; Frederick Frelinghuysen, treasurer, and J. Herbert Ballantine, Charles Bradley, John R. Emery, William S. Gummere, John F. Dryden, Charles J. Kipp, E. Fayette Smith, Franklin Murphy and A. Pennington Whitehead. About twenty physicians are connected with the institution.
MEDICAL HAPPENINGS IN NEW JERSEY.

Dr. Frank D. Gray, of Jersey City, consulting surgeon of the North Hudson Hospital, has informed the governors of the institution that an interne is needed and says the medical staff will pay half the salary. His liberal offer has been accepted and an interne will be installed shortly. The hospital is crowded with patients.

Dr. Winthrop D. Mitchell, of East Orange, was the host at the meeting of the Orange Mountain Medical Society in the rooms of the William Pierson Medical Society, Orange Free Library building, September 18, when a paper was read by Dr. A. W. Bingham, of East Orange, on "Some Abnormal Obstetrical Presentations and their Management." A discussion followed.

Announcement is made of the engagement of Rev. John Jay Bridges, of the Fewsmith Memorial Church, Newark, and Dr. Isabel M. Geddes, of the same city. The marriage is to take place next spring and will be one of the largest society events of the season.

In view of her approaching marriage Dr. Geddes has resigned as one of the medical inspectors of local schools, her resignation to take effect as soon as her successor is appointed. Her work among the 2,000 school children in her district has been very successful.

Dr. Geddes was graduated from the Woman’s Medical College of the New York Infirmary five years ago. She acted as house physician at the Worcester Memorial Hospital, in Worcester, Mass., for one year, and since that time has had an associate office with Dr. Sarah R. Mead, in Newark.

The Bridgeton Hospital Association cleared $1,600 at its recent carnival.

The Medical Library, at Trenton, N. J., is reported as being in a flourishing condition. The librarian has recently received a gift of books from the Orange library, which has added very materially to the equipment.

Mrs. William D. Harper, of Norwood Park, who is the superintendent at the Monmouth Memorial Hospital, is the recipient of a check for $1,000, half of the proceeds for the amateur circus held at Deal on Labor Day.

An auxiliary society for the benefit of the Long Branch Memorial Hospital has been started in Belmar.

The medical fraternity of Mercer county on the evening of September 15 paid honor to Dr. R. R. Rogers, one of the oldest practitioners of New Jersey, and the oldest in that county, who held a reception at his residence, in Trenton, in celebration of his eighty-fifth birthday. The reception was attended by about 300 of the physician’s friends, and the members of the city Board of Health, of which he is an active and earnest member, presented him with a fine reclining chair. Dr. Rogers was born on a farm in Mercer county in 1823, and spent his youth at hard farm work. He was surrogate of the county for two terms, and while conducting the affairs of that office attended the University of Pennsylvania, traveling between Philadelphia and Trenton each day. He graduated in 1862, and was immediately appointed examining surgeon for the Government in the Second Congressional District.

Dr. McClellan, who has been assistant pathologist at the Reed & Carrick laboratories, during the summer, has returned to his duties at Harvard Medical School.
Dr. Frank D. Gray is occupying the residence of the late Major Pond, 604 Bergen avenue, Jersey City.

Dr. J. Walter Styles, of Jersey City, who was graduated from Bellevue, has been appointed third assistant physician in the Essex Hospital for the Insane, at Newark. Dr. Styles spent a year after graduation in a hospital at Erie, Pa.

St. Francis Hospital, at Trenton, is being considerably enlarged and improved.

The Bayonne Hospital has a valuable addition to its operating room in the form of an X-ray apparatus. It is a present to the Bayonne Hospital from Mrs. Donahue, wife of Dr. Lucius F. Donahue, of Bayonne. The apparatus cost $500. Electric lights have been installed in the operating room.

A free public Orthopaedic Dispensary has been started in the Orange Valley section of Orange by a number of charitably inclined residents of the city, and rooms have been fitted up in the Visiting Nurses' Settlement on Valley street. The work will be under the direction of Dr. Russell A. Hibbs, of New York, assisted by Dr. Henry A. Pulsford, of South Orange.

Dr. John J. Ritter, of Paterson, and Miss Clara A. Buschman, of Haledon, were married September 23. They went to Baltimore on a wedding trip, and are now comfortably located at 51 Ward street, Paterson, where the doctor has his office.

Dr. John Nevin, of Jersey City, is out after having been severely injured in a runaway accident. Dr. Buffet took a number of stitches in Dr. Nevin's scalp. He was badly bruised.

The Gloucester County Medical Society held its quarterly meeting and annual feast at Wenonah September 10.

While stepping from his carriage, Dr. C. J. Craythorn, of Trenton, was struck by a passing automobile. He was hurled against a trolley car, which also threw him several feet. He sustained no serious injury.

Dr. Edgar V. Moffat and family, of 436 Main street, Orange, have returned from their summer home at Southport, Me. The doctor has recovered from his recent illness.

Dr. Charles H. Althans, head of the pathological department of Reed & Carnrick, Jersey City, has returned from a four months' European tour. He spent most of the time in study in Germany.

Dr. Fred W. Mayer has left the German Hospital in Newark, where he spent about six months, and has located in Greenville.

Dr. Frank Doyle has been chosen as assistant house physician at the Passaic General Hospital. Dr. Doyle is a graduate of the Long Island Medical College.

Miss Bessie L. Dickson has assumed the duties of head nurse at the Princeton University Infirmary. Miss Dickson is a graduate of the New York Hospital, and was formerly assistant director of nurses at the Roosevelt Hospital in New York.

Dr. Edwin Leonard, Jr., of Jersey City, president of Reed & Carnrick, manufacturing chemists, passed his vacation in Savannah and Atlanta, Ga., going to the former place by steamer.
THE PROPER PERINEAL PROSTATECTOMY INCISION.

By NICHOLAS SENN, M.D., LL.D., of Chicago,
Professor of Surgery in Rush Medical College; Surgeon-in-Chief, St. Joseph's Hospital; Attending Surgeon to Presbyterian Hospital.

Prostatectomy is the operation which is now attracting much attention among surgeons here and abroad. The more general adoption of this operation is comparatively of recent date. The necessity of the removal of the enlarged prostate gland, the most frequent cause of urinary obstruction in men advanced in years, has been recognized for a long time, but it was not until recently that the technic of the operation has been perfected to a degree that rendered it sufficiently safe to bring it within the scope of feasible and advisable surgical procedures. The literature on this subject is growing with astonishing rapidity. Individual and collective experiences are being published in the medical press at short intervals in bringing to the notice of the profession the different operative procedures which are being devised and practiced. The question as to the most feasible route by which to attach the diseased prostate has not been definitively settled. The suprapubic method has many weighty advocates, and for a time was deemed the easiest, most efficient and safest. The perineal route has, however, been given a more extended trial, and a very large experience appears to have decided in its favor. From an anatomic standpoint the perineal operation is certainly the most rational of the two and will undoubtedly survive the test of time. The removal of the enlarged prostate does not always meet all the indications in the case operated on. Few cases come to the surgeon in which the bladder is intact in consequence of the mechanical obstruction or infection, hence in the majority of cases it becomes necessary to establish free drainage after the removal of the prostate for the purpose of initiating a successful treatment for the coexisting complications.

In making the external incision the surgeon must therefore have in view the exposure of the prostate to sight and touch as freely as can be done with safety, and to provide for free drainage of the bladder.
and the perineal wound. The semilunar incision of Zuckerkanul and
the triangular incision of Kocher accomplish neither of these objects
to the fullest extent. I have given both of them a fair test and have
become familiar with their shortcomings in securing the necessary
room and the difficulty encountered in establishing free and efficient
drainage for the bladder and perineal wound. The triangular incision
of Kocher circumscribes a long wedge-shaped flap, the apex of which
is liable to slough, and the curved incision of Zuckerkanul does not
procure the necessary amount of room through which the prostate,
in difficult cases, can be removed with the requisite degree of pre-
cision and safety, and both incisions leave a wound difficult to drain
efficiently. The median incision so much praised by some surgeons
is altogether inadequate in difficult cases. Every surgeon who has
had an extensive experience in perineal prostatectomy has learned that
not all enlarged prostates can be removed by enucleation. There are
cases in which the diseased organ must be removed by morcellement.
It is a rule in surgery which it is always well to bear in mind, and that
is to operate as little as possible in the dark in important anatomic
localities, and this rule applies with special force to perineal prostatec-
tomy. In obese subjects and in cases of very large prostates it is
often exceedingly difficult to bring the parts to be removed within
reach of the index finger. It is under these trying circumstances that
the operator will appreciate the advantages of an incision that will
expose the prostate freely and bring it within easy reach of the finger
or the instruments required for its removal. Very little is gained by
attempts to render the prostate more accessible by intravesical in-
strumental pressure, and such efforts are by no means always harm-
less. The danger from hemorrhage and accidental wounding of the
peritoneum is reduced to a minimum by resorting to an incision that
will expose the prostate in the freest possible manner to sight and
touch. I have attempted to do this by combining the median incision
with two lateral incisions representing in outline an inverted capital Y.
The median incision is made in the usual way, laying bare the mem-
branous portion of the urethra. The lateral incisions are carried from
the lower angle of the median to a point half way between the anal
margin and the tuberosity of the ischium, cutting through about the
same structures as are involved in the lateral operation for stone in
the bladder. The wound is next deepened largely by the use of blunt
instruments and all hemorrhage arrested as it occurs, maintaining
throughout the entire operation practically a bloodless field. This will
give the operator an opportunity to recognize and identify the tissues
as he proceeds with the dissection.

In this comparatively bloodless way the rectum is detached until
the membranous portion of the urethra and the lower segment of the
prostate can be distinctly seen and felt in the apex of the deep trian-
gular wound. By using narrow flat deep retractors the rectum is
pushed backward and the wound margins are retracted laterally, thus
exposing freely the parts concerned in the next step of the operation.
I then proceed as follows: On a grooved staff which is now inserted
into the bladder the membranous portion of the urethra is incised and
the grooved director of Wheelhouse inserted into the bladder. Withdrawing the staff and using the director as a guide the prostatic part of the urethra is dilated with the left index finger which, after it enters the bladder, serves as a blunt hook with which the prostate is drawn gently downward and forward into the wound. The capsule of the gland is next incised transversely and with the opposite index finger enucleation of the left lobe is commenced. This part of the operation is usually easy, sometimes difficult and not infrequently impossible. Recklessness and undue violence are to be carefully avoided. Enucleation is often facilitated by grasping the lower part of the prostate with my bullet forceps or some other grasping instrument on which traction is made during the process of enucleation.

I seldom attempt to remove the prostate in its entirety. Occasionally this can be done, but usually it will be found much easier to remove only one lobe at a time. After the removal of the left lobe the right index finger is inserted into the bladder and the right lobe enucleated with the left. If it is found impracticable to remove the prostate by enucleation morcellement must be resorted to. The finger in the bladder is almost indispensable in operating by this method. With it the parts are brought within easier reach and it serves at the same time as a valuable guide for the use of the cutting and traction instruments. With grasping forceps portions of the gland are seized, when the necessary traction is made by an assistant while the surgeon does the cutting with blunt-pointed scissors well curved on the flat.

Complete prostatectomy in such cases is not necessary, but enough tissue must be removed to insure a free outlet for the urine and to guard against a recurrence of obstruction from the same cause. I am decidedly in favor of a preliminary cystotomy in performing perineal prostatectomy, as it greatly facilitates the removal of the gland by enucleation or morcellement, and in the majority of cases it becomes a necessity for the treatment of complicating affections of the bladder. It is preferable to incise the urethra and take advantage of such an opening into the bladder during the operation than to tear it accidentally, as is so often done when operators undertake a perineal prostatectomy without a preliminary cystotomy. I invariably drain the bladder by inserting a soft rubber drain with two oval fenestra near the vesical end. The drain is fastened in the lower angle of one of the lateral incisions with a suture which includes the outer margin of the wound. The perineal wound is drained with a strip of iodoform gauze which is brought out on the side of the rubber drain. The balance of the incision is sutured. The bladder is kept practically empty by siphonage by connecting the perineal drain with another piece of rubber tubing, making the connection with a glass tube. Through this rubber drain the bladder can be washed out daily with appropriate antisepctic solutions. The iodoform gauze drain should remain for at least five or six days, as its presence in the wound is of the greatest value in preventing infection by leakage of septic urine. The bladder drainage must be continued until the condition of the urine is such as to warrant suspension of intravesical medication.

In regard to the indications for prostatectomy history will repeat
itself. Every new surgical procedure has had its enthusiastic advocates who championed extreme views and who would recognize no exceptions, and who followed a routine practice. I will refer only to a few operations of recent date that have had such a history. It is not long since thousands of ovaries were sacrificed under the belief that the anticipated climacteric period would correct all kinds of obscure nervous affections until sad experience proved the contrary. Cranieotomy for microcephalus had a short but exciting career. It is impossible to estimate the number of healthy appendixes that have been removed by surgeons who rely on pain in the right iliac fossa as a conclusive evidence of a diseased vermiform appendix, and resort to the knife as the only remedy. Castration for enlarged prostate has unsexed hundreds of men without yielding them an equivalent in relief for the loss sustained. Gall-bladder surgery has now a few extremists who affirm that it should be dealt with in the same medical manner as the appendix when it is the seat of disease. Instances could be multiplied, but the early history of the operations mentioned will suffice that new operations are very likely to be abused when first placed on trial, and prostatectomy cannot escape a similar fate. It is impossible at the present time, so early in the history of this operation, to formulate the exact indications. The size of the prostate is no criterion to go by in deciding on the propriety or necessity of an operation as a large prostate may cause less disturbance of function of the bladder than one only moderately enlarged. The degree of obstruction depends more on the location of the enlargement and the effect of pressure on the urethra than the size of the swelling.

Every prudent surgeon would hesitate to recommend a prostatectomy in men 70 to 80 years of age, the subjects of extensive atheromatous degeneration of the arteries or of organic disease of any of the important viscera. Systematic aseptic catheterization will not be displaced entirely by prostatectomy, and it will continue to be a most valuable resource in the future, as it has been in the past, in the treatment of hypertrophy of the prostate, more particularly in men advanced in years the subjects of degenerative diseases which in themselves would contraindicate the performance of any operation of importance except as an immediate life-saving procedure. It will be with this as with any other operative procedure that the best results will be obtained by surgeons who search as carefully for the negative as for the positive indications for the operation. The present technic of prostatectomy will be greatly improved, and its legitimate range of usefulness will be widened with increasing clinical experience and with a more definite knowledge of the etiology and pathology of senile hypertrophy of this gland.—J. A. M. A.
A BRIEF SUMMARY OF THE SURGERY OF THE ESOPHAGUS.*

By SAMUEL J. MIXTER, M.D., of Boston,
Lecturer on Surgery in Harvard University, Surgeon to the Massachusetts General Hospital.

Throughout a considerable part of its course, the esophagus is more difficult of access than any other part of the alimentary canal, and hence the surgical procedures resorted to in other situations for the relief and cure of malignant and other growths, are not available here. In the neck, however, its upper part is easily reached, and through the stomach something may be done to its lower part.

The chief causes calling for surgical interference are:

1. Congenital malformations, such as double esophagus or pouches.
2. Impacted foreign bodies.
3. Malignant disease.
4. Syphilis.
5. Cicatricial stricture.

In the above list is not included spasm of the esophagus, really a medical rather than a surgical condition, although it is almost always cured by mechanical means, the passage of a full sized probang. It should be mentioned, however, that Mickulicz, in a paper read before the American Surgical Association at its recent meeting in Washington, describes an exaggerated form which he calls "Cardio-spasm," causing a very considerable fusiform dilatation of the lower part of the esophagus, for which he has performed gastrotomy, and through the opening forcibly dilated the cardiac orifice. He also suggests that this might be done by means of a suitable dilator, introduced from above.

1. Congenital malformations are perhaps the most interesting and puzzling conditions met with. They may exist for years, and only suddenly be called to the attention of the patient by an inability to swallow, caused by some irritation produced by a rough, ingested body, or they may be the cause of difficulty for years, and simply give the patient great discomfort and annoyance without endangering his life.

The case of a boy of ten years of age in my service at the Massachusetts General Hospital well illustrates an exaggerated form of this condition. He was brought in in the last stages of starvation, having had difficulty in swallowing for some years, the trouble being thought due to a small metal disk that he had swallowed when about four years old. He died soon after a gastrostomy had been performed under cocaine anesthesia, and on autopsy it was found that there were two tubes, one reaching from the pharynx nearly to the stomach, the other from the stomach nearly to the pharynx, with only a very small opening between them about three inches from the stomach.

Such a case might, I am sure, have been relieved, if not cured, in

*Read at the last meeting of the Massachusetts Medical Society.
the manner to be spoken of later in connection with cicatricial contraction.

Congenital pouches are much more common, I have found, than is generally supposed. I have seen a considerable number of them, having seen three of them in my office in a month. They are usually small at first, and it is often late in life when they cause serious inconvenience. In these cases there is usually a history of a "small throat" since childhood, and finally regurgitation of food. These pouches are found in all parts of the esophagus, but fortunately are most often situated in the neck or behind the clavicles.

When the pouch becomes dilated it is almost impossible for the patient to swallow enough food of any kind to keep himself alive, though there is really no true stricture of the canal, the whole trouble being caused by the "spur" that acts as a valve.

When the pouch can be reached it may be excised and the esophagus sutured, the result being a perfect restoration of function. This is the ideal method of treatment and should always be advised if the patient's age is suitable.

Much to my surprise, I have found that in many cases, when, for one reason or another, it was not thought best to resort to what must always be a difficult and fairly dangerous operation, I could by the passage of suitable bougies relieve the difficulty to a considerable degree, and the pouch would contract to a remarkable extent, so that the most distressing symptoms would disappear. The patient is given a large bougie which he learns to pass himself, and, though not cured, is made comfortable. This method of palliative treatment is worthy of trial in certain cases.

The passage of a bougie past such a pouch is not the easiest thing in the world, even to the practiced hand, as the opening of the esophagus is always on one side, and though large enough to admit an instrument of the largest size, may not be found by the tip of the bougie until after repeated trials.

And just here let me speak of esophageal bougies and their passage. Unfortunately in this country I have been unable to find a good quality or suitable sizes. The most perfect ones that I have seen come from Paris, are woven like urethral bougies with olive tip, beautifully polished, and some of them are loaded with fine shot. The largest sizes should be at least three-fourths of an inch in diameter.

As has been said before, the lower opening is almost always on one side of the canal, and this is true not only of the congenital pouch, but also of the acquired pouch that usually forms above malignant and cicatricial strictures. Hence, in order to find this opening it is well to have a bougie bent at a slight angle or even of a bayonet shape, so that the point will hug the side of the canal. This may be best done by a whalebone stilet, bent at the proper angle by heat, and forced down into the hollow bougie. It should always be remembered that even with these flexible instruments, fatal injury may be inflicted, not only by passing them through a malignant growth into the mediastinum or elsewhere, or through the bottom of a congenital or acquired pouch, but also through the normal wall of the pharynx or esophagus.
I have had one such accident, perforating the wall just at the beginning of the esophagus, when every attempt to swallow, forced air and the contents of the pharynx into the cellular tissue, causing emphysema, inflammation and death.

The bulb probang is a useful instrument for exploration and diagnosis, but is not to be recommended for dilatation.

2. Of impacted foreign bodies so much has been written that one need only speak of the great advantages of esophagotomy or gastroscopy in their removal, over prolonged or violent attempts with forceps, coin catchers and similar instruments.

In the hands of the expert laryngologist, the removal of foreign bodies from the esophagus by means of suitably constructed esophageal tubes or specula and forceps, is often most successful, and should always be tried if the right man and instruments are at hand.

3. Malignant disease of the esophagus is the most frequent cause for seeking surgical aid, and the one most hopeless of cure, though much may be done to avert starvation and to relieve the patient. It may occur in any part of the canal and is seldom of such character that excision is of benefit. Sometimes, however, when the growth is very high up, it may be possible to remove it and bring the lower end of the esophagus into the lower angle of the wound. As a rule we must be satisfied with relieving the dysphagia.

Dilating the stricture is the most common method of treatment and is the most satisfactory in many cases, especially if food is introduced into the stomach at the same time. In many cases there is hemorrhage or irritation caused by every introduction of the bougie, and it is in these cases that Symond's method of permanent tubage is of great help. The tube is introduced over a small bougie as a guide and is left in for a week or two, the patient swallowing liquids easily until the tube becomes foul and stopped. Remember that a pouch almost always forms above a malignant stricture and hence the passage of a straight instrument may not be possible. For impassable or very irritable strictures of this sort, esophagostomy or gastrostomy is demanded. I have had most satisfactory results with esophagostomy in disease high up, and much prefer it to gastrostomy when it is possible.

4. Of syphilitic strictures there is little to be said except that they are far from common and should be treated with appropriate medication and dilatation.

5. Cicatricial strictures of the esophagus, generally the result of swallowing strong acids or more generally alkalies, are among the most common and obstinate lesions of this canal that the surgeon is called upon to treat. Generally multiple and difficult to dilate, often with several acquired pouches, the resources of the surgeon are taxed to the utmost. Constant dilatation will serve to keep the canal patent, but often the canal is tortuous and even impassable to the smallest bougie. Sometimes an instrument may be passed upward from the stomach through a gastrostomy opening, but it is by no means easy.

It is in these cases that the method of Abbe—sawing through the stricture with a string—is of the greatest benefit.

Two years ago, before this Society, Dunham, of New York, read
a paper on this subject and demonstrated his beautiful method of getting a guide through a seemingly impassable stricture. His recent paper in the Annals of Surgery gives the whole story, so it need not be repeated here; enough to say that anyone who has ever tried this method, as I have in a number of cases, cannot fail to be impressed with its ingenuity, simplicity and splendid efficiency. It is the greatest improvement in the technique of esophageal surgery in recent years. By the method of thread swallowing I have been able to relieve most desperate and apparently hopeless cases of multiple stricture both in children and adults, and keep them from living the rest of their lives dependent on a tube and tunnel in connection with a gastrostomy opening.

In conclusion let me strongly insist upon care and delicacy of manipulation in all esophageal work. Do not even examine too long at the first sitting if the instrument does not pass readily. Too prolonged probing may send the patient home with a stricture that is tightly closed by swelling and the result may be serious. The esophagus is more intolerant of violence than even the urethra.

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**HOMEOPATHY.**

*By NORTON L. WILSON, M.D., of Elizabeth, N. J.,
Ophthalmologist, Otologist and Laryngologist to Elizabeth General Hospital.*

History informs us that in the sixteenth century the Church was at such a low ebb that it became necessary to purge it of certain ills which came nigh throttling it; and so it was in medicine during the time of Hahnemann. When we remember that the lancet was the indispensable adjunct of the physician, and that calomel, ipecac, squills, tartar-emetic, castor oil and senna were given for almost every ill, we cannot help feeling that there must of necessity have arisen a new school in medicine. At the time of Hahnemann the Practice and Art of Medicine was more practice and less art and was not reduced to a science. One can get some idea of the learning of our professional brethren one hundred years ago, when one reads of the diet prescribed by Professor Burserius for a convalescent patient who had been suffering from a fever. It consisted of soup made from frogs, reptiles, snails and other loathsome creatures.

I have two volumes in my library called "Armstrong's Practice of Physic," printed in 1837, in which I find in the introduction the following:

"The improvement of the medical art is one of the most important

*Read before the Union Co. Medical Society, Oct. 14, 1903.*
circumstances of the present times." Turn over the pages of this book and one finds, "Treatment for gout, blood letting; treatment for retinitis, moderate bleeding with regulated diet; treatment for erysipelas, blisters applied at a distance from the part affected; often bleeding and purging certainly do good." In speaking of yellow fever, he says: "In New York, where malaria abounds when the drains are bad and the surface of the earth filthy Yellow Fever is still very common. The treatment for this disease is the same as that for Typhoid Fever; do not bleed, but apply leeches to the temples and pit of the stomach, give mild purges of calomel followed up by cold drawn castor oil." It is needless to multiply these instances of bleeding and purging for almost every disease.

I do not say that bleeding has no place in our therapeutics of to-day, for I am of the opinion that some diseases, at least, are benefited by blood letting, but I do want to say that during Hahnemann's time the lancet was too freely used, and large and nauseous doses were prescribed, so that we can readily understand how a thinking man must have become disgusted with the state of medical practice at that time.

Let us look for a moment at this man Hahnemann, to discover whether or not he had any right to our recognition as a brother practitioner of the medical art?

Samuel Christian Frederick Hahnemann was born at Meissen, Saxony, April 10, 1755, and died in Paris, July 2, 1843. His father was a painter on porcelain, but was a man of thought and inculcated this idea of thought into his boy.

In 1775 Hahnemann went to Leipsic and Vienna to get his medical education. He supported himself in Leipsic by giving German and French lessons and translating books. He attended lectures during the greater part of the day, gave his language lessons in the evening, did his translating at night, sitting up all night every alternate night. In this way he translated Steadman's Physiological Essays, Megent's Essays on Hydrophobia, Falconer on the Waters of Bath, and Ball's Modern Practice, in two volumes. It is evident that he was an earnest, hard working, well read young man. In 1801 Hufeland pronounced him to be one of the most distinguished of German physicians. He has therefore some claim to our consideration.

Hahnemann saw how often the medical profession was utterly unable to relieve suffering humanity. He was not blind to the fact that too often patients were bled to death, and in many cases would have survived had it not been for the meddling practitioner. Is it any wonder he began to look about for something more definite? Hahnemann was not the originator of the law Similia Similibus Curantur, for this principle had been frequently referred to by medical men since the time of Hippocrates. Stahl, the Dane, had written about it, and Albrecht von Haller had forty years previous to Hahnemann's work, hinted at the law of similars. It was Hahnemann, however, who had the courage of his convictions, who spent his entire thought and life in working out what he supposed was the true principle in the practice of medicine.

Dr. Samuel A. Jones, Professor of Materia Medica in the Homeopathic Medical College of the University of Michigan, says: "What
chiefly distinguishes the homeopathic physician of to-day from his older brother in the science and art of medicine, is not the law of cure, not the infinitesimal dose, not the Hahnemannian hypothesis of chronic disease; none of them, but simply this: His fixed faith in the efficacy of drugs."

I cannot help feeling there is more in this statement than at first thought appears on the surface. How many of us have a fixed faith in the efficacy of every drug we use? And yet we continue to use a host of remedies that we are satisfied have little or no efficacy, simply because they have been recommended by some one for the particular disease under treatment. Are we the broad minded, liberal, generous seekers after truth we profess to be? I think you will agree with me that it is apparent there was a reason for the establishment of a new school during the time of Hahnemann. I am therefore grateful to the man who has pointed out the errors of our way. It cannot be denied that homeopathy has done away with the polypharmacy existing up to the last decade nor that it has not influenced the pharmacist in the elegance of his preparations or opened our eyes to the fact that much smaller doses suffice.

Professor Ringer asserts, with positiveness, that 1-100 of a grain of mercuric chloride given every hour or two is a specific in dysentery and we all have faith in mercury in such cases given in small doses. A recent writer on homeopathic therapeutics says: "Similia Similibus is the basis of our therapeutics. The seeming simplicity and completeness of the principle are admirable. If true, it contains within itself a complete system of therapeutics to find a remedy for any given case of disease, it is only necessary to discover a drug that can produce in the healthy individual symptoms similar to those of the disease to be cured." I am in perfect accord with the above statement. You will notice he says "if true." That is the stumbling block, I cannot accept it as truth.

I ask your further indulgence while I point out to you the way in which Hahnemann stumbled upon the theory of similars and which seems to me the weakest part of his theory, because the symptoms described by him are not the characteristic symptoms of intermittent fever, but those of cinchona poisoning.

He was engaged in translating Cullen's work on Materia Medica when his attention was arrested by Cullen's attempt to explain the action of cinchona bark. Cullen's explanation appeared unsatisfactory to him and he determined to try what effect the drug would produce upon himself. After using a large dose of cinchona for several days he had on two successive days an attack very similar to that of intermittent fever, which he thus describes: "The feet and points of fingers became cold; the heart began to throb; the pulse was small and quick; insupportable anxiety, trembling, but no chilliness; general prostration; heating in the head; flushing of the cheeks, in short all the usual symptoms of intermittent fever appeared, one after the other, but without real febrile chilliness. I likewise remarked the usual particularly characteristic symptom of intermittent fever: dulness of the senses; a sort of stiffness in all the joints, particularly the disagreeable benumbed
feeling that seemed to have its seat in the periosteum of all the bones. The paroxysm lasted two or three hours and was renewed only when I renewed the dose, otherwise not."

It was upon this experiment that he founded the law of similars. Has he accurately described a case of intermittent fever? Certainly not. The three cardinal points in malarial fever are chill, fever and sweat, none of which he had. But supposing he had a typical attack, how would that prove that cinchona in small doses would cure malaria? We know that cinchona, and especially its derivative, quinine, has a bactericidal action. It will prevent fermentation and kill infusoria. But we also know that 1-100 or 1-1000 of a grain will not kill the plasmodium malariae in the blood and cut short an attack of intermittent fever, and the homeopath of to-day knows it, too, for he uses quinine in full doses.

In the preface of the fifth edition of his Organon, written in 1833, Hahnemann says homeopathy sheds not a drop of blood, prescribes no emetics, purgatives, laxatives nor sudorifics. It removes no external disease by local application, it orders no medicated baths, nor enemas, and makes no use of blisters, simapisms, searons, nor fontanelles; it objects to salivation, and does not sear the flesh to the bone by heated iron. The homeopathist dispenses only self-made, simple medicines, whose effects he has actually and carefully studied. He avoids all mixtures and needs no opium to soothe the pain.

The foregoing remarks are conclusive evidence to my mind that Hahnemann sought to put himself in direct opposition to what then existed. In other words, he was not content to sift out what might be good, but he must renounce everything and start a new school which would be in direct opposition to that already existing. I believe if he had not made that fatal mistake it would have been more difficult to prove his false doctrine. The fact is, I know of no homeopathic physician who adheres to the laws as laid down by Hahnemann, and I cannot understand how they expect to make converts if they are themselves lukewarm as to their theories.

There appeared in the Hahnemannian Monthly for November, 1901, an article by a prominent homeopathic physician entitled, "The Limitations of Homeopathy." He shows that the law of similia is so modified by other physical laws that it stands only as one factor in the healing of the sick. He says it is anything but progressive to accept, teach and practice the precepts entire of a man who lived a hundred years ago. He further says there are times when homeopathy is not indicated, but its use is a loss of time and a resultant danger to the patient. "The law of similia is universal, but limited in its application." Germany will not permit the practice of homeopathy in hospitals used for medical education. The sanitary council of Japan has prohibited the practice of homeopathy in that country. Compare the number of graduates in their school to-day with a decade or two ago and you will find a material falling off. The homeopathic physician sends his son to a medical college of repute in order that he may be better educated than his father.
What has homeopathy done for the world? It has made large and nauseous doses small and palatable, but has it added knowledge to the scientific world? Compare the works of Jenner in the time of Hahnemann (1796) who practically eradicated smallpox by his discovery of vaccination, or the discovery of anesthesia by Morton, or Pasteur's work, which made possible Lister's antisepsis. The discovery of the bacillus of tuberculosis by Koch, and the antitoxin for diphtheria by Behring. Ehrlich, of Berlin, was the first to study immunity by toxins and antitoxins. Metschikoff has shown us the phagocitic function of the white blood corpuscle. Ross and Reed have shown us that malaria and yellow fever are transmitted only through the mosquito, and a host of others have added their knowledge to make the world better able to combat disease.

I fail to recall a single homeopath who has added one iota to our knowledge, and why? He is so engrossed in watching his similia similibus, trying to prove what Hahnemann said a century ago was true, that he has no time for actual scientific experiment.

If a patient is poisoned he must receive the antidote to counteract the poison. Would the homeopath administer small doses of mercury if his patient had swallowed corrosive sublimate?

If Hahnemann's theories were true we would indeed have a rational therapeutics, for if the disease producing power of medicine and the disease curing power of medicine are one and the same force, therapeutics are simple, and we have wasted much valuable time in the study of chemistry and diagnosis, as neither are needed in the practice of homeopathy. In seeking light upon this subject I have written and talked with some of the foremost exponents of homeopathy and they all agree that they do not believe everything as laid down by Hahnemann. They say they have advanced just as we have advanced in histology and pathology and for that reason they cannot accept the theory of disease as laid down by Hahnemann.

In conclusion permit me to say that I know some bright, intelligent, progressive homeopathic physicians who adopt every means of diagnosis and who are a credit to any society. The American Medical Association recognized that it was not a question of therapeutics when it changed its code of ethics and recommends to us that we accept for membership any practitioner in good standing who does not claim to practice any pathy or school. Let us extend to our progressive brother the right hand of fellowship and become one common school of progressive, scientific medicine.

410 Westminster avenue.
THE ACETANILID HABIT.*

By THOMAS W. LUCE, M.D., of Portsmouth, N. H.

The purpose of this paper is to briefly report the cases of two patients addicted to the use of acetanilid, who came under my observation a few years ago. These cases interested me a great deal at the time, and have enough since to influence me to keep myself informed in regard to their whereabouts and condition, so that I am able to not only give the details of their illnesses, but their progress since recovery as well.

Case 1.—R. L. Female, married, age 26. I saw this case in consultation with Dr. E. L. Burnham, of Sanford, Me., in August, 1897. The salient points in the history were that four years before both ovaries had been removed; after this she became extremely nervous; the usual symptoms accompanying the artificial menopause were accentuated, and she had marked hysterical manifestations. The reason for the operation was persistent dysmenorrhea.

A year before I saw her she had allied herself with a traveling religious organization known as "The Crusaders." Frequently at their meetings she had convulsive seizures which were attributed by the company to some spiritual source, as the patient claimed to have visions, etc., during the attack. While this organization was in Sanford she had such an extremely serious seizure that she was carried to her room and Dr. Burnham was called by one of the members of the household. I saw her with him the next day. The patient was considerably emaciated, legs and feet very edematous, heart action weak and irregular, mucous membrane of mouth and vagina blue, skin and conjunctivae very white. Chemical examination of the urine showed a low sp. gr. and a large quantity of albumen. Even under treatment she was having convulsions, and had one while I was there.

I could only agree with Dr. Burnham in his diagnosis of uremia with an unfavorable prognosis. In a few days after this the nurse went to the patient's trunk for something, and there found package after package of a white, crystalline substance. Calling Dr. Burnham's attention to them he at once saw they contained acetanilid. The large amount in the trunk aroused his suspicions, which were soon verified on the part of the patient, for she soon began to exhibit all the traits peculiar to the confirmed morphomaniac, moral depravity and all. She used every possible means to obtain the drug; tried to bribe the nurse and members of the family, all to no avail.

With watching, rest and tonics she soon began to improve, and in six months was perfectly well. I have seen her several times since then, and she is certainly the picture of health. Se began by taking antikamnia for ovarian pain, and soon drifted to acetanilid because it was cheap. Since recovery there has been no inclination to return to the habit.

*Read before the N. H. Medical Society.
The clinical picture in this case was almost typical of the advanced stages of pyrenchymatous nephritis.

Case 2.—I. M. K. Female, married, age 32. Teacher of elocution and public reader. In July, 1897, I was called to Farmington, N. H., by Dr. J. C. Parker to do a hysterectomy on this patient. This operation had been advised by Dr. Conant, of Boston, for what he had diagnosed as a sub-serous fibroid of the left side of the uterus. I had never seen or examined the patient previous to this time. There had been a good deal of pelvic pain for two years, more especially while standing, a marked menorrhagia and metrorrhagia. Currettage had been twice done in this time with no relief. She was a frail, delicate looking woman, very nervous and poorly nourished. Had been in bed for several weeks at this time. Pulse was a hundred in the recumbent position. Some swelling of the legs and feet, also under eyes. Varicose veins on both legs. Mucous membranes bluish, especially that of the vagina. Considerable leucorrheal discharge. On the left of the uterine body was a small mass which seemed to move with the uterus, and which could be palpated only with considerable effort. Dr. Parker said there was a small percentage of albumin in the urine.

On opening the abdomen the supposed fibroid was found to be a varicose condition of the veins of the left broad ligament. They were simply enormous, and it became easy to see why her pain had been so much increased by standing. This mass with the body of the uterus was removed. She reacted well, and as far as the operation was concerned made an uneventful recovery. Her general condition, however, failed to improve, and to all appearances she seemed doomed to become a chronic invalid.

I saw her at intervals of two or three weeks all that fall, and having the first case in mind, which I saw about a month after I operated on the patient, I mentioned the possibility of drug habit to the doctor, who felt uninclined to take such a theory seriously. In November she was sitting up about half the time, was emaciated, some edema, blue mucous membranes, and albumen in the urine.

Quite as much to be rid of a trying case as anything, the doctor asked me to take her home with me and try what I could do with her. She was brought to East Rochester in November, and occupied a double room at the hotel with a school teacher. After she had been there a few days the teacher came to my office with some acetanilid, which she said she had taken from the patient’s powder box. She knew it wasn’t powder, and thought I should know about the matter. The outcome of this was that I had a repetition of the first case. The acetanilid was supplied by her husband and she had taken it for a long time. All the symptoms of the drug habitue were in evidence, but a good nurse, constant watchfulness, with rest and tonics, brought about complete recovery. She was carried up stairs in November, and in February she could run up. The next summer she ran three elocution classes, and a year ago she was taking a part in Keith’s Theater. So you may judge as to her general condition since.

These, of course, are extreme cases, where there was a strong hysterical tendency. That they are unique is certain, as I’ve never
seen any similar cases reported. I report them because it seems to me there is a growing tendency among the laity to make use of acetanilid or preparations of its group, in headache and other varieties of pain. Their efficacy for this symptom is common knowledge. I think it well to bear in mind that there may be a hidden cause due to such a habit in any erratic case which fails to respond to treatment. Unlike the opium, cocaine, and chloral cases these were soon over the craving and, of course, no depression followed the sudden withdrawal of the drug; also there seems to have been no strong inclination to return to the habit after recovery.

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BOOK REVIEWS.

INTERNATIONAL CLINICS. A quarterly of illustrated clinical lectures and specially prepared original articles on all branches of medicine and surgery of interest to students and practitioners, by leading members of the profession throughout the world. Edited by A. O. J. Kelly, M.D., of Philadelphia. Volume III, Thirteenth Series. J. B. Lippincott Company, Philadelphia. The latest volume of this admirable series is the best which Dr. Kelly has edited. The feature of the work, which takes up over a third of its pages, is a symposium on Diseases of the Gall Bladder and Gall Ducts. The six articles, all of the intensest interest, are written by Musser, Rudolph, Stockton, Weber, Lejars and Deaver. The authors go to the very bottom of gall stone disease, and present several entirely original ideas.

The remainder of the volume includes fifteen articles on Treatment, Medicine and Surgery. Malarial Infections, by Dr. Charles F. Craig, U. S. A., is especially helpful, while each of the other articles are timely and to the point.

The International Clinics should be in the library of every progressive physician.

THE NEUROLOGICAL PRACTICE OF MEDICINE; A CURSORY COURSE OF SELECTED LECTURES IN NEUROLOGY, NEUROPATHY, PSYCHOLOGY AND PSYCHIATRY; APPLICABLE TO GENERAL AND SPECIAL PRACTICE. By Charles H. Hughes, M.D., President of the Faculty and Professor of Neurology, Psychiatry and Electrotherapy, Barnes Medical College; formerly Superintendent Missouri State Insane Hospital, etc., etc. Hughes & Co., 418 N. 3d street, St. Louis, Publishers.

The Neurological Practice of Medicine is a cursory course of selected lectures on the essential features of Neurology, Neuropathy, Psychology and
Psychiatry applicable to the general and special practice of Medicine. The book is plainly and forcefully written. The results of thirty years of extensive clinical experience over a portion of the fields of neurology and psychiatry are presented in this book.

Two chapters are devoted to the elucidation of head heat in brain disease, clinical cerebral thermometry and cephalic galvanization and practice, and to the alterations of the temperature sense in diagnosis and practice.

The discussion and description of extra-neural or adneural nervous disease, and systematic states, leading to, proceeding from or blending with nervous disease, malaria, erythrocytes, thermasia, thermesthesia and their effects on the neurones, etc., are included in two chapters. The anatomy of the spinal cord with reference to its morbid states; the nerve centers, the psycho-motor centers, visual apparatus centers and other motor-reflex centers, with an interesting and highly instructive chapter on the reflexes generally considered and the sensori-motor system in diagnosis, the cerebro-spinal axis or neuraxis and its nerve centers, ganglia, plexuses and neurones, importance of the pupil and other nerve centers in diagnosis, the basal and other ganglia come under other chapters.

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A PECULIAR DECISION.

It is difficult, or rather impossible, to understand the report that a grand jury at Vineland, N. J., has refused to indict for the illegal practice of medicine an "osteopath" who was arrested there at the instance of eight reputable physicians. The difficulty or impossibility arises from the reason given for the refusal—that "the jurors thought a free American citizen should be allowed to call in any doctor he wished." What, in the name of all quacks that ever were, has to do with the indictment or non-indictment of an "osteopath?" Of course an American citizen can choose his own doctor, but the American citizen, as collectively represented by the State, has a right equally beyond question of deciding who is and who is not a doctor, and of punishing as severely as he sees fit the swindler or ignoramus who poses as a doctor without being one, and thus endangers the lives of many besides those who are sufficiently foolish to employ him. Without knowing the details of this Vineland case, we think it sufficiently safe to assume that the question before the jurors was whether this "osteopath" had or had not complied with the New Jersey laws with respect to the practice of medicine. Why, then, did they wander—or maund—off into an affirmation of every man's right to choose his own doctor?
A REMOVABLE SPLINT.

Dr. C. O. Bechtol has, by a novel arrangement in the application of a splint, been enabled to obtain the very best results. In using it upon the leg the limb is first covered with a stocking or a layer of absorbent cotton; then along the anterior surface of the leg a Gigli wire saw is held in place by the first few turns of a plaster bandage. Another saw is placed along the sole of the foot, and a third along the posterior surface of the leg from the knee to the heel. The plaster-of-paris bandage is then applied in the usual way, and after the plaster is set—it need not be perfectly dry
—the Gigli saws are made to cut their way from within outward. This divides the splint into two lateral halves. They are molded perfectly to the limb and can be quickly removed and replaced.

By applying the splint in this manner it is very easy to remove it without trouble for daily massage.

OCHSNER TREATMENT OF APPENDICITIS.

It would seem that Dr. Ochsner has found the ideal method of treatment of appendicitis. In 416 cases of acute appendicitis, he has a mortality of less than four per cent.

The Ochsner treatment is simple and, if figures prove anything, effective.

Earlier in his career Ochsner operated on every case of appendicitis as soon as he saw it, and he found his mortality was too large. A great number of deaths occurred after the first thirty-six hours from the commencement of the attack. From that time until ninety-six hours, the death rate steadily increased, after which period a decrease was noted. These conclusions led Ochsner to devise a method of treatment which would limit the peristaltic action of the intestines, so that the patient would be carried beyond the fourth day, when operative measures might safely be taken.

The alimentary canal is relieved, the stomach washed, if there is vomiting, and the colon emptied by a high injection of normal salt solution. The only nourishment given is nutrient enemata. The patient is allowed no food and is kept in a condition of absolute quiet.

If these ideas are carried out to the letter, Ochsner says the results will be of the best. It is necessary, however, that no slight detail should be omitted. After the period named the operation, if necessary, can be performed.
SOME TIMELY FORMULAE.

Cystitis:
Liq. potassa
Olei santali flavi
Aquæ cinnamomi
M. S.: Two tablespoonfuls three times a day.

Potassii bromidi
Sodii bicarbonatis
Ext. belladonnae
Ext. buchu
Syr. sarsaparillæ comp.
M. S.: § ss t. i. d.

In Chronic Pyelitis When Pain is Present:
Venice turpentine
Powdered camphor
Extract of opium
Extract of aconite root
Mix and make into twenty pills. S.: One pill to be taken every eight hours and at the same time a small glassful of infusion of uva ursi, slightly sweetened

Seasickness. Three days before sailing begin to take and continue for first three days out:
Ext. taraxaci
Ext. colocynthis comp.
Ext. hyoscyami
Ext. nucis vomicae
Massæ hydrargyri
M. et fiant pil. No. xx. S.: One or two each night. During this time let the diet be simple, avoid fluids and keep the recumbent posture on deck.

To Arrest Vomiting in Seasickness:
Cocaine hydrochlorate
Ext. of opium
Powd. marshmallow root
Mix and divide into pills No. x. S.: One pill every second hour.

Neuralgia.
Tinct. aconiti
Tinct. colchici seminis
Tinct. cimicifugae
Tinct. belladonnae
M. Six drops every hour until relieved.

Or,
Ext. hyoscyami
Ext. conii
Ext. ignatiae
Ext. opii
Ext. aconiti
Ext. cannabis ind.
Ext. stramonii
Ext. belladonnae
M. Divide into sixty pills.
Ulcers of the Leg.—Schulze (Medical Record) recommends the following for ulcers of the leg:

Pulv. camphorae 2
Zinc oxid 15
Lard q. s. 100

Or,

Pulv. camphorae 2
Solve in ol. oliv. 50
Add zinc oxid. 40-50

M. Apply twice daily.

Epistaxis.—One of the most powerful vasomotor stimulants, says Cox, (Medical News), is the dried extract of suprarenal capsule. This property of vascular contraction makes the remedy a very useful one for the control of nasal hemorrhage. It may be applied to the bleeding surface in the form of powdered extract; or, better still, as a spray. The solution should be freshly prepared, as it readily decomposes. It can be made in the following manner:

Ext. suprarenal capsule 20 gr.
Glycerine 1 dr.
Aqua 3 dr.

M. Macerate for one half hour. Filter and then boil the solution for a few minutes to sterilize it. The glycerine is added for the purpose of prolonging the period of preservation only and then may be omitted.

Anemia.—Yeo (Manual of Medical Treatment) says that if in this condition there are signs of dyspepsia, loss of appetite, flatulent distension and other signs of anorexia, such a formula as the following should be ordered:

Liquoris bismuthi citratis 4 dr.
Sodii bicarbonatis 2 dr.
Spiritus ammoniæ aromatici 3 dr.
Tincturae nucis vomicae 2 dr.
Infusi calumbæ ad. 8 oz.

M. fiat mistura. Two tablespoonfuls an hour before food twice a day.

If there is constipation the following pill should be given daily, immediately before or after dinner:

Aloes extracti 1½ gr.
Ipecacuanhae pulveris ½ gr.
Quininae sulphatis 1 gr.
Saponis ½ gr.

M. fiat pilula.

He also recommends the use of the following:

Ferri sulphatis excisicætæ 72 gr.
Potassii carbonatis 12 gr.
Pulveris nucis vomicae 24 gr.
Saponis 6 gr.

M. et divide in pilulae 24. To be coated with a suitable coating. One to 3 after each meal. In ordinary cases in which, as a rule, constipation is a prominent symptom, the following modification of a very old formula is one of the most efficacious and rapid blood restorers we are acquainted with:

Ferri sulphatis 16 gr.
Acidi sulphurici diluti 40 m
Liquoris strychninæ 48 m
Magnesii sulphatis 1 oz.
Aquae chloroformi ad. 8 oz.

M. fiat mistura. Two tablespoonfuls twice or 3 times a day, an hour before meals.
FORMULÆ.

Mixture for Asthma.—Green employs the following mixture in asthma:

- Tincturae lobelias 6 dr.
- Potassii iodidi 2 dr.
- Tincturae camphorae compositae 6 dr.
- Decocti senegae ad. 6 oz.

M. f. mist. A tablespoonful for a dose.

For the Nonparoxysmal Dyspnea of Asthmatics.—N. S. Davis recommends the following to be used in the treatment of this condition:

- Chloral hydrate 2 dr.
- Ammonii chloridi 75 gr.
- Morphinae hydrochl. 1 1/2 gr.
- Antimonii tartartii 1 gr.
- Grindeliae robustae fluidi extracti 6 dr.
- Syrupi glycyrrhizae 1 oz.
- Aquæ 3 oz.

M. f. mist. A teaspoonful in water every 3 to 6 hours; or:
- Chloral 5 dr.
- Sodii nitriti 45 gr.
- Tincturae stramonii 2 1/2 dr.
- Syrupi simplicis ad. 3 oz.

M. f. mist. A teaspoonful in water every 4 hours.

Anti-asthmatic Mixture.—Whitla recommends the following:

- Potassii iodidi 2 dr.
- Liquoris Fowleri 1 oz.
- Vini ipecacuanhae 4 dr.
- Tincturae hyoscyami 4 dr.
- Aquæ chloroformi ad. 8 oz.

M. f. mist. A tablespoonful 3 times a day in water after food.

Lobelia Mixture for the Asthmatic Paroxysm.—The following mixture is recommended by Bartholow in asthmatic paroxysm:

- Tincturae lobelias 1 oz.
- Ammonii iodidi 2 dr.
- Ammonii bromidi 3 dr.
- Syrupi tolitanae 2 oz.

M. f. mist. A teaspoonful every one, two, three or four hours.

Powder for Fumigation.—Plant uses the following fumigating powder:

- Stramonium leaves 4 dr.
- Green tea 4 dr.
- Lobeliae 1 1/2 dr.

Mix and pour on the mixture enough solution of nitre to wet it. Dry and preserve in a closely stopped bottle.

Digitalis and Ipecacuana Mixture for Pneumonia.—The following combination is used by Bamberger in pneumonia:

- Digitalis pulversis
- Ipecacuanae pulversis a a 12 gr.
- Aquæ 6 oz.

Make an infusion and add:

- Aquæ laurocerasi 1 1/2 dr.
- Syrupi mori 1 oz.

M. f. mist. A tablespoonful every hour.

To Lower Pulse and Temperature in Pneumonia.—Bamberger employs the following combination for lowering pulse and temperature in pneumonia:

- Sodii salicylatis 1 1/2 dr.
- Syrupi simplicis 5 dr.
- Aquæ q. s. ad. 8 oz.

M. f. mist. A tablespoonful every hour.
ABSTRACTS FROM THE BEST JOURNALS.

MEDICINE AND THERAPEUTICS.

Antitoxic Power of Sodium Chloride.

Among its infinite uses, NaCl shows itself antagonistic to some of our commonest and most used drugs, seeming in some way to subvert their action, to modify them—to even antidote them, says a writer in the St. Louis Courier of Medicine. The discovery of this fact is important and should be made use of in the treatment of those diseases requiring the prolonged exhibition of the following drugs: Iodide of potassium, bromide of sodium, chloride of ammonium and cocaine. Put a patient thoroughly under the influence of one of these drugs for a number of days and then suddenly remove all sodium chloride from his diet, and he will show symptoms of over-saturation. Eliminate strictly sodium chloride from the diet of a patient, and we will obtain remarkably satisfactory results from even minute doses of the above drugs. Some time back, Picket and Toulouse demonstrated the singular efficacy of minute doses of sodium bromide when given to patients deprived entirely of salt. For their observations, they used a series of patients suffering from epilepsy. In these cases fractional doses rapidly produced bromism. As to the iodide of potassium, it was recently shown by Lesné and Richet that the administration of NaCl to dogs receiving KI, reduced the toxicity of the latter more than 200 per cent. As to cocaine, if NaCl is administered coincidentally, the fatal dose must be doubled, and even then the convulsive stage is markedly diminished. An identical effect is noted with chloride of ammonium.

The Electric Treatment of Facial Neuralgia.

Zimmern, before the French Electro-Therapeutic Society, called attention to the importance of persistence in the use of electricity in the treatment of neuralgia of the face. The surgical treatment of these cases is not devoid of danger, and the results are by no means certain. If one is content with the application of five or six milliamperes of current, continued for about five minutes, and regards this as an efficient electric treatment, comparatively little progress will be made. Bergomie for a number of years has employed electricity in quite large doses in the treatment of neuralgia, and with excellent results. He uses from 50 to 80 milliamperes—in fact, as large a quantity as the patient will support. A large electrode is employed, and each application is continued for an hour. The treatment is persisted in for at least three months. This persistent treatment usually results in a cure. Of seven patients presenting a type of severe neuralgia, accompanied by a tic, only one failed to improve. Of four cases having a-grave type, without tic, three were cured and one was improved.

Ichthyl in Pulmonary Disease.

Burnett, in Lancet, has used ammonium ichthyolate in a number of pulmonary cases, including chronic bronchitis and bronchiectasis. He has found it serviceable in pulmonary fibrosis. In chronic pulmonary tuberculosis he has employed it as the sole remedy in cases in which the hygienic surroundings of the patient could not be improved. Of thirteen cases, eleven were distinctly improved, and only two failed after prolonged treatment to show beneficial results. At the end of the first month of treatment the cough was found to be less severe in the majority of the cases, and all of the cases showed improvement at the end of the second month. In eight of the cases the expectoration became less in amount, but at the end of two months night sweats were complained of to a greater or less extent. At the end of six months all of the cases had gained in weight.

The drug is given in capsule form, each containing four grains of ichthyl. As a rule, a case may be given two capsules four times a day, the amount being gradually increased until five capsules are taken four times daily, this being the limit.

Pharyngeal Group Relieved by Nasal Intubation.

Northrup, in Archives of Pediatrics, details this case: A baby of five months, breast fed, well nourished, well until present illness (December 16, 1902). The child had then been sick two days when it was brought to the Foundling Hospital. There was much difficulty in breathing and some cyanosis. Tonsils were much congested and enlarged, meeting in the median line. The child could not nurse on account of
the complete obstruction of the nose. Astringent solutions and steam gave only temporary relief. The obstruction being pharyngeal it occurred to the author to try to conduct air past the obstruction by means of small rubber tubes. These tubes were cut from rather firm walled drainage tubes and were about two inches in length. These were passed through the nose back to the post nasal space. This gave such prompt relief that the child was able to nurse and afterwards slept for several hours. The tubes were gradually dispensed with, removing them for a short time and replacing them when cyanosis began to appear.

**Thiocol**

Hatch, in *Med. News*, claims to have found the ideal cresote preparation in thiocol. Both guaiacol and cresote are irritants and have an unpleasant odor and taste. This has led to the employment of various acid esters of guaiacol, which in most instances are tasteless, yet they are all insoluble, not being decomposed until they reach the alkaline intestinal secretions. Thiocol is a better derivative of guaiacol, soluble in water, and free from the taste and obnoxious odor of cresote, non-toxic and assimilable. It occurs as a white, crystalline, odorless, permanent powder of a faintly bitter, saline, but not disagreeable taste. It is readily soluble in water and dissolves in dilute alcohol. After the administration of thiocol the total amount of sulphur from the medicament is found in the urine as sulphate. The value of cresote preparations is generally admitted, though the exact method in which they act has not yet been determined. It is certain that in this new derivative of phenol we have the best means of exhibiting cresote. The writer's experience with it has been extensive, having used it in chronic bronchitis, tuberculosis, and consumption. He has not found that it interferes with digestion, nor does it irritate the stomach. The dose employed was five grains three times a day, with a gradual increase, especially in phthisical cases, until 30 to 45 grains was reached.

**Lavage of the Blood in Diphtheritic Paralyses**

R. Romme, in *Presse méd.*, reports an observation of M. Schoull, to the following effect: A man of thirty years contracted diphtheria, and on the fifth day had paralysis of the soft palate. A month later, not only was there paralysis of the soft palate and of the esophagus, but also complete paraplegia, paresis of the upper extremities, ptosis, absolute gastric intolerance and cardialgia. The condition became aggravated within the following day or two, the bladder and rectum finally becoming involved. The heart beats became irregular and rapid, the respiration so embarrassed that death seemed imminent from asphyxia. In spite of injections of strychnine and caffeine, inhalations of oxygen and ether sprays, the patient appeared to be doomed, when M. Schoull tried the application of leeches to the arms, and the injection of a liter of Haym's serum as lavage of the blood. The patient rallied immediately, and in ten days was able to begin the usual treatment for diphtheritic paralyses.

**Congenital Heart Disease with Interesting Eye Findings**

Samuel McC. Hamill, in *Pediatrics*, describes the case of a boy of nine years who has been more or less "blue" since he was a few months old, and has always been dyspneic on exertion. For the past six months the dyspnea has been increasing. On physical examination he was found to be of normal size and well nourished. The skin of his face and body had a dusky blue color; his lips conjunctive, and all of his visible mucous membranes had a deep purplish color. His hands and feet were especially congested and he showed extreme clubbing of the fingers and toes. His eyeballs were prominent, his anterior nares bloody from recent hemorrhage. The skin of his body was covered with small punctate bluish follicles and was rough and dry. Auscultation of the heart showed at the apex a rather soft, short, blowing, early systolic murmur, which accompanied the first part of a divided first sound. The second pulmonic sound was much accentuated, the heart's action fairly regular; and rapid (120 per minute). The condition of cyanosis and dyspnea increased, accompanied by heart pains, and the patient finally died. No autopsy was permitted. The result of an eye examination made ten days before death was as follows: "Eyeballs prominent. Conjunctival vessels, both of the globe and of the lids, swollen, especially the veins, giving the eye a dark purplish appearance. Pupils larger and media clear." The findings of the opthalmoscope were very striking, and consisted in a neuro-retinitis of marked degree. The retinal arteries and veins were greatly
swollen and tortuous. The head of the optic nerve was obscured by the swollen retina, and there were a few small hemorrhages into the nerve fiber layer of the retina close to the disk. The light reflex from the vessels was greatly broadened, that of the veins the more so. The retinal veins appeared to be increased to three times their normal size. The author holds that this remarkable condition was due to the extreme degree of cyanosis from which the patient suffered. As to the diagnosis of the specific lesion in the case, he has been unable to reach any satisfactory conclusion, the data being insufficient.

Cases of Pneumonia in Infancy Treated with Antipneumococcic Serum.

Morse in Archives of Pediatrics gives in detail the history of eight cases with accompanying temperature charts. The serum was injected every four hours and the temperature, by rectum, taken every two hours. No antipyratic treatment was given except in one case, which received a few baths. The other treatment was limited to regulation of the diet and stimulation when necessary. A careful physical examination was made before the serum was begun, daily during its use, and for some time after it was omitted.

The author’s conclusions, drawn from very careful observations, are, that the antipneumococcic serum had no effect upon the duration of the disease, the course of the temperature, the rate of the pulse and respiration, or the progress of the local condition. Complications occurred at least as frequently as is usual. Death occurred in an unusually large percentage. The serum while it did no good, apparently did no harm.

Value of Vesication.

G. P. Andrews, in Med. Rec., details ten cases in which vesication was done with prompt relief in all but one. They were in the order given: Eclampsia in a young primipara; catarhal pneumonia in an old man of 70, with regenerated blood vessels and heart; eclampsia in a woman of 32: asthma in a frail man of 60; epileptiform seizures in a plethoric man of 62, repeatedly relieved by this means; dyspneic attacks occurring every three or four weeks in an old man of 70, who had sought and found relief in this way periodically since 25 years of age; pulmonary hemorrhage in a robust seaman of 32; severe migraine at menstrual period at each menstrual epoch; eclampsia in a primipara of 23 (fatal); eclampsia in a woman of 23 at second labor. In all the above cases except one relief followed the flow of blood promptly; in several of them when other means had failed. In each case bleeding was curative, in the sense that it tided over an emergency. Its action is first upon the volume of the circulation; second, upon the nerve centers, and is in the nature of shock; third, in certain instances, when the patient is conscious, the effect of expectancy upon the imagination is marked and benign. No notable ill effect or depression dependent on the loss of blood was noticed at any time.

The Baby’s Cold.

Park L. Myers, in Am. Med. Compend., holds that the cause of temperature disturbance or a “cold” is most often a matter of overheating the infant. In a modern home, where summer temperature reigns the year round, winter flannels, or equally warm cottons or silks are kept on night and day. What can we do to provide for quick readjustment? Favor the spontaneity, the elasticity of the autonomic functions. It is remarkable what degrees of temperature the surface of the newborn babe can withstand under favorable surroundings. Who has not seen a baby given its first bath in a room of 50° temperature, with water at 40°, rubbed red with a coarse crash towel, dressed in rough seconds, and yet grow and wax strong without sign of infant coryza? How often we use water alternately at 50° and 150° to resuscitate the newborn without an after cold. Clearly it is not the temporary heat or cold that makes abnormal products. And the nearer to nature the body, the longer period of exposure to unusual temperatures can it stand without abnormal products. The cool water or air bath, the friction with bare hand or cloth, the molecular rub of alcohol, all act to the thermostatic functions, like gymnastics to the muscles. Probably the wetting of the baby’s skin, with the hand, with cold water, with body bared to the air of the common room temperature, night and morning, rubbed dry with the naked hand—probably this routine alone would prevent enough respiratory trouble to seriously cripple many doctors’ incomes. And now, given a cold, what may be done to prevent the growth of bacteria and the resultant specific inflammations? Never neglect nature’s alarm: the sneeze. Put the baby through a thermostatic gymnastics immediately. The skin with its dense
What Ought We to Expect from Cardiac Drugs in Heart Weakness?

O. T. Osborne describes, in Med. News, a cardiac tonic as a drug that will more or less permanently strengthen the heart and pulse, and leave the heart in better condition after its action has ceased than it was in before. A cardiac stimulant, on the other hand, is a drug which will stimulate, and perhaps for a short time strengthen a weak heart, but when its action has ceased the heart is left really in poorer condition than before unless the cause of the weakness for which it was given has ceased to act. The principal cardiac tonic is digitalis, while the drugs which resemble digitalis in their action are strophanthus, sparteine, cactus, convallaria, adonidine, and last but not least, suprarenal preparations. Stimulating car-
diac tonics are strychnine and caffeine, while the cardiac stimulants are alcohol, ammonia, camphor, nitrite of amyl, nitroglycerin, and ether. Digitalis should be used in broken compensation in valvular disease, in simple dilatation, in the irrita-
tive or weak heart of nicotine poisoning, in strained heart from overwork, over-
athletic exercise, etc., also in cases of poor vasomotor tone, and when there is edema or exudations with no serious kidney lesions. The action of digitalis in slowing the heart by its action on the pneu-
ogastic nerve gives the heart a much

Typhoid Fever in a Seven Months' Old Infant.

A. W. Clouse, in Penn. Med. Journ., based his diagnosis upon the appearance of the stools, which were of the typical "pea soup" variety, the raw spot eruption, enlarged spleen, and continuous fever, combined with the history of the case. The mother had succumbed to typhoid fever two months previously, and had nursed the child until her delirium made it impossible. Widal's test could not be made because of lack of facilities. The treatment was largely symptomatic. Tepid sponge baths when needed for fever and restlessness.
Colonic flushings, castor oil and calomel as indicated; salol continuously; whiskey and strychnine during later stages. The child recovered. Typhoid is extremely rare under one year of age, or the disease is not recognized. The case is the more interesting because the source of infection was probably the mother's milk. Typhoid fever was not epidemic in the community at the time, the mother having contracted the disease directly from nursing a sister who had acquired it in a distant city.

SURGERY AND PATHOLOGY.

Actinomycosis of the Finger.

Scard, in La Presse Medicale, reports a case of actinomycosis of the index-finger. This location of the disease is rare. The part involved in 67 cases was: face and neck, 54; thorax and lungs, 8; intestines and abdomen, 3; extremities, 2. Illich out 421 cases found the skin affected in only 17. The patient, a woman of 35, while binding wheat received a slight cut on the index-finger. No attention was paid to the injury, which quickly healed. Eight days later there was pain and swelling, which later invaded the palm of the hand. Microscopic examination showed the presence of the mycelium characteristic of actinomycosis. Under warm applications of iodiform and the internal use of iodide of potassium the ulceration rapidly healed, and at the end of two weeks there was no further sign of the disease. A radiograph of the infected finger shows that the growth involved the periosteum and bone of the first and second phalanges.

Scarlatinal Arthritis.

Palier, in American Medicine, says that many authors in the past have considered this a rheumatic affection, complicating scarlatina. Recent investigators have devoted their attention to this matter and the rheumatic theory finds little credence. Scarlatina is now looked upon by many as a microbic disease due to some form of streptococcus not yet definitely settled and the joint affections occurring in scarlatina are considered of the same origin; streptococci have been found in the affected joints. The severe forms of joint trouble in scarlet fever form about 2 per cent., the slight forms occur more often. It occurs in the second or third week, that is about the end of the second week and before the period of desquamation sets in.

It has been stated that where only one joint is affected it is more apt to terminate in suppuration, than when several joints are attacked. The smaller joints are most frequently affected. In the treatment the author deprecates the use of salicylates, because of their positive harm due to their pernicious effect on the heart. As the patient has great pain on moving the joints, immobilizing relieves the pain and irritation; ichthyol with lanolin, one dram of the former to an ounce of the latter is applied to the joint and the joint wrapped in absorbent cotton. The internal medications consist of benzoate of soda, 4 grains with sweet spirits of niter every three or four hours, and of strophanthus when the heart's action indicates its use.

The Diagnosis of Carcinoma of the Stomach.

In seeking for some means of early diagnosis of cancer of the stomach, H. Salomon, in British Medical Journal, found that not much could be gained by estimating the number of microorganisms in the stomach, nor did he have any success with serum diagnosis. He attempted to obtain a serum which would act specifically with the serum of cancer patients, but without success. The supposition that wherever there is an ulcerating surface a certain amount of serum will be exuded, led him to see if the amount of albumen gained from the stomach would lead to better results. He proceeded as follows: The patient received milk and like fluid diet in the morning, and at about 2 o'clock a fluid meal, which was free from albumen, such as bouillon, tea, coffee, or wine. The stomach was washed out at 9 P. M. with a large quantity of water, and was kept without any intake over night. In the morning the stomach was washed out several times with 400 cubic centimeters of physiological saline fluid. The returned fluid was tested for albumen by Esbach's test, and the quantity of nitrogen was estimated by Kjeldahl's method. In the majority of cases of nervous dyspepsia, chronic catarrh of the stomach, gastrophtosis, etc., there was either no albumen at all, or at most a slight clouding of the fluid. The nitrogen varied between 0 milligrammes and 16 milligrammes in 100 cubic centimeters of fluid. The same results were obtained in cases of chronic ulceration of the stomach, but for obvious reasons he did not test cases of painful gastric ulcer. In all cases of cancer of the stomach which he examined the amount of albumen varied between one-sixteenth and one-half per cent. The
nitrogen value was corresponding, and lay between 10 and 70 milligrammes per 100 cubic centimeters of fluid. He states that according to his present experience, when there is a doubt as to the nature of a chronic disease of the stomach, carcinoma is possible if the washing-out fluid shows a flocculent precipitate with Esbach, or when the nitrogen value exceeds 20 milligrammes per 100 cubic centimeters of fluid. It is, however, he says, probable that an intense catarrh of the stomach may give the same results as carcinoma, but he has not yet come across such a case. He gives some details of cases in which his method was capable of correcting a wrong diagnosis.

The Treatment of Congenital Phimosis.

Woodiyett, in Lancet, claims for his simplified operation better results than those obtained from circumcision. In congenital phimosis the constriction is due to a ring of mucous membrane just inside the prepuce. The constriction is invariably in the mucous membrane and not in the skin.

In operating the prepuce is retracted as far as it will go, and with a pair of sharp-pointed scissors the constructing mucous membrane is cut upon each side. It is not necessary to slit the mucous membrane far back, but it should be equally divided on both sides. When the stricture is relieved and the prepuce fully retracted, sutures are introduced so as to join the commencement of the incision to its termination, converting what was a longitudinal incision into a transverse one. Fine chromic gut is used, and an ordinary sewing needle. No after-treatment is necessary. If the sutures do not come away themselves, they may be removed in a week or ten days, when it will be found that the prepuce is easily retracted and replaced.

Surgical Treatment of Exophthalmic Goiter.

Deaver, in Annals of Surgery, believes that the theory upon which the operation is based presupposes the nervous origin of the disease with alteration of the sympathetic nerve. Each of the three cardinal and also the subsidiary symptoms are believed to be dependent upon stimulation of this nerve. Exophthalmos is caused by a stimulation of the cervical sympathetic leading to an energetic contraction of Muller’s smooth muscle at the posterior pole of the bulb; the dilatation of the pupil is due to the same irritation of the cervical sympathetic which communicates with the lenticular ganglion and its ciliary branches of the iris.

The goiter depends either upon an enormous dilatation of the vessels of the thyroid from stimulation of the vasodilator fibers of the neck, or, as Joffesco believes, it is due to an increased activity of the thyroid epithelium with hypersecretions which are dependent upon the permanent stimulation of the secretory nerve-fibers of the thyroid. Resection of the sympathetic and consequently of the vasodilator, vasoconstrictor, and secretory nerve-fibers, results in atrophy of the thyroid.

Tachycardia is likewise to be attributed to the irritation of the sympathetic which communicates with the cardiac plexuses by several branches, the accelerator nerves of the heart muscle.

Deaver concludes from his observations and study as follows: 1st. Complete bilateral cervical sympathectomy is the operation of choice for goiter.

2d. The operation should not be performed during the height of psychical irritation or tachycardia, nor by an operator who has not an absolute knowledge of the anatomy of the neck and a large experience in dealing with difficult operative preceudces, or the means at hand to cope with any emergency.

3d. The results of the operation are far better than the other procedures, the mortality is much lower, and in cured cases the improvement is permanent.

4th. In chronic glaucoma, this operation may restore vision completely, unless the disease is too far advanced with absence of light perception.

5th. In recurring attacks of epilepsy the results warrant the operation.

Successful Removal of a Chondro-sarcoma of the Sixth Dorsal Vertebra.

Israel records in Berl. klin. Wochenschr., a case of successful removal of a tumor of the sixth dorsal vertebra, and the cure of the paraplegia caused by the tumor. The patient was a healthy multipara, at. 39. The first symptom was pain in the right upper quadrant of the abdomen. After this had continued for thirteen months, weakness of the right leg appeared, followed, some weeks later, by similar weakness in the left leg. Three months after the first signs of paresis, there was com-
complete paralysis of both legs and of the muscles of the buttocks; also complete loss of sensation below the costal margins. The knee jerks were exaggerated, ankle clonus and Babinski's sign were present. There was no deformity in the spine, and no pain on percussion or pressure. The sequence of symptoms and the absence of degenerative muscle atrophy excluded a myelitis. Tumor of the cord itself was excluded, because the symptoms had been those of sensory root irritation for many months, followed by a hemiparesis on the side of the root irritation, and later by an extension of the paresis to the other side. The symptoms were therefore attributed to an extra-medullary process. Syphilis and tubercle were considered as extremely unlikely, and a diagnosis of extra-medullary tumor was made. The sensory symptoms showed that the upper limit of the compression was at the level of the seventh dorsal segment. At the operation, the arches of the fifth, sixth, seventh and eighth dorsal vertebrae were removed, and a tumor 3 cms. long was found growing from the body of the sixth vertebra.

The tumor had flattened the cord and pushed it over to the left. Being very friable, it had to be removed piecemeal by the sharp spoon, and was found to have invaded the vertebrae extensively. After its removal the dura expanded and regained its normal appearance. Eight months after the operation the patient had almost completely recovered from all her symptoms. On examination, the tumor was found to be a chondro-sarcoma, and the ultimate prognosis was therefore not favorable.

**Growth of the Male Urethra.**

Joseph E. Morrow reports, in *N. Y. Med. Jour.*, three cases of growths of the male urethra which are of interest in so far as they represent mistaken diagnoses, and which are valuable additions to the literature on the subject. In all three of the cases the growths were fibrous polyps, similar in structure to the mucous polyps of the nose. In one of the cases reported, the tumors were exceedingly numerous, more than 20 were removed by means of the snare, others spontaneously or by the application of caustic and astringent substances. While it has generally been supposed that gonorrhea is a frequent cause of urethral polyps, the author does not believe that it is necessarily a factor in all cases, and claims moreover that in two of his cases it could positively be excluded. The symptoms caused by the presence of these growths were, urethral discharge, frequency of micturition, retention, dribbling or incontinence, hematuria, urethral hemorrhage, and sexual hyperesthesia. Their presence also produced dilatation of the urethra and prostatic enlargement. The treatment was entirely local, and consisted of resection with knife or scissors, removal with urethral forceps or snare or destruction by the application of astringent or caustic solutions.

**Traumatic Hernia.**

Guermonprez says, in *Gazette des Hôpitaux*, that industrial insurance in Germany and Belgium has brought the question of the traumatic origin of hernia to the front. Claims are made for disability when the hernia is not due to injury. This question has been discussed by various authors, but there is no substantial agreement excepting that when hernia occurs at the usual sites it is probably not traumatic. A direct hernia in a portion of the abdominal wall due to a tear is admitted by most writers, though the evidence on which it is based is doubtful.

A case described by the writer is that of a man 43 years of age, who was squeezed between a column and a wagon while the latter was descending an incline. After one day in bed at home, in which we was said to have some fever, he was examined. An interstitial hernia was found on the right side. When lying down it reduced spontaneously, but when the patient rose it descended. Above the hernia there was an ecchymosis with a diameter of about five centimeters. On exploring the inguinal canal a hernial ring was not noted. Direct pressure over the protrusion admitted the finger as readily as in cases of umbilical hernia. The opening in the abdomen was oval, with its long diameter from above downward. It presented the character of a ventral breach. These signs were sufficient to confirm the opinion that it was a traumatic hernia.

The case observed by Guermonprez is one which presents the characteristics of traumatic hernia. In the description there is a significant absence of the ordinary signs of hernia traversing the inguinal canal. In this case there was also a spontaneous cure; the patient remaining in bed for some days, the hernia disappeared.
ABSTRACTS.

OBSTETRICS AND GYNECOLOGY.

Insane Women and Gall-Stones.

Manton in Am. Jour. of Obst. states that while it is proved that the insane are peculiarly liable to cholelithiasis, symptoms of that disorder are rarely manifested during life, so that the frequency of the condition amongst this class of patients can only be determined after death. Between January, 1897, and January, 1903, 133 female patients died at the Eastern Michigan Asylum. Of this number necropsies in which the abdomen was opened were made in twenty-three instances. Gall-stones were found six times in these twenty-three subjects, or in a little over 26 per cent. of those examined. The ages of the patients varied between twenty-two and sixty-five years, five of the number being over thirty. Only two of the women had been pregnant. The cause of death was in one of the six cases infective cholangitis, in one ulcer of the duodenum, in one carcinoma of the liver. In the remaining three the disease was more general (tuberculosis, syphilis, nephritis). Beadles (1892) found gall-stones in from 10 to 12 per cent. of cases examined at the Higgitage Infirmary. Simpson (1896) placed the percentage of gall-stone disease in the West Riding Asylum at 20 per cent., whilst at necropsies on female patients in the Jena Asylum, Reidel found biliary calculi in 18 per cent. Stagnation of the bile current from bodily inactivity, more or less inevitable in asylum patients, seems to account for the frequency of cholelithiasis in the insane.

Mycosis Vaginae.

This affection has met with scanty recognition in American text-books. For this reason a case is reported by Smith and Radkey in Med. News. The patient was twenty-six years old. Her first pregnancy terminated in a miscarriage. Menstruation returned next month, unusually profuse. After curettage it became normal, but during the intervals there was leukorrhoea, which was treated with douches of boracic and lysol solutions. Nine months after the curettage she again became pregnant and the leukorrhoea became profuse and with intense vulvar burning and pruritus. Examination showed follicular vulvitis; relieved by treatment. A few days later the symptoms returned, with pain, burning and itching in the vagina, and the discharge became thick, viscid and dirty brownish. One week later she noticed many small, dark, granular and mucoid particles in the discharge. A mass of bloodstained material was found hanging from the vulva; there was a follicular vaginitis and also many grayish-brown, slightly elevated masses, separated by normal vaginal mucosa. The mucous membrane from which they were removed was raw and swollen. The patches were picked off with forceps and a vaginal douche of boric acid given and later one of bichloride. An abortion took place. Within two weeks all vaginal symptoms had disappeared and had not recurred five weeks later. The urine contained no sugar. Microscopic examination of the masses on the vaginal wall showed them to contain mycelial threads and conidia of Oidium albicans.

Changes in the Urine in Pregnancy and Puerperal Eclampsia.

Whitney & Clapp, in Am. Gyn., offer no new theory as to the urine changes in puerperal eclampsia, but they give an interesting study of the relation of nitrogen output in the development of this disease in pregnancy and eclampsia. They have differentiated between the firmly combined and loosely combined nitrogen as found in the urine of these cases. In eclamptic women there is a decrease in the percentage of nitrogen eliminated as urea, together with an increase in the amount which is loosely combined. In some cases the loosely combined nitrogen is derived from ammonia while in others it is to be attributed to an as yet undetermined antecedent of urea. The variability in the increase of ammonia in different cases is due to the imperfect oxidation of protein material by which the process does not pass as far as the ammonia stage. In other cases the ammonia is retained within the organism either in the body fluids or stored up in excessive quantities in the tissues, particularly in the nervous system. The cause of these alterations in metabolism is uncertain; they may be due to relative insufficiency of the hepatic function, it being conceivable that a liver which may care for metabolism under ordinary conditions may not meet the requirements during the pregnant stage. The urinary changes persist some time after delivery, often not clearing up for two weeks. The only exception to this latter statement was found in one case which had edema, in which it was thought that the urea was
retained in the edematous fluid. In this case soon after delivery the urea output was above normal within a day or two.

A further study is necessary to determine how constant these changes in eclampsia are, and how far they are of value in predicting its occurrence. If they prove to be constant and to occur some time before the eclamptic attack, their diagnostic and prognostic value will be great.

Operative Treatment of Rupture of the Uterus.

Kolomenkin, in Monatschr. f. Geb. u. Gyn., reports five cases of rupture of the uterus successfully treated, three by total abdominal hysterectomy, one by total vaginal hysterectomy, and one by the Porro operation. The dangers in these cases are sepsis and more especially hemorrhage. The latter may occur from an imperfectly contracted placental site, particularly with incomplete separation of the placenta, but most often is from the tear in the uterus and adjacent structures. In four of the cases reported the hemorrhage occurred chiefly from the broad ligament. Even without peritoneal injury, these tears of the parametrium may give rise to enormous hematoma. When this takes place the danger from loss of blood is as great in incomplete rupture of the uterus as in complete. Primary bleeding is not usually fatal. The great danger is that of a secondary hemorrhage, especially from the broad ligament. This is often brought on by delivery by the natural route. Infection of the ruptured uterus is the rule rather than the exception. Treatment must stop the primary and prevent the secondary hemorrhage, and also deal with actual and latent infection. All bleeding vessels must be ligated; and the infected wound, or better, the infected organ, must be removed and the region drained. These indications are best fulfilled by total abdominal hysterectomy with vaginal drainage. In cases of decided intrauterine sepsis total abdomino-vaginal extirpation of that organ possesses the additional advantage of avoiding general infection, while permitting hemostasis as well as the former operation. The Porro operation is sufficient to deal with the hemorrhage only in certain cases and is unsatisfactory in relation to asepsis. Subtotal abdominal hysterectomy also possesses this disadvantage in regard to sepsis, though controlling hemorrhage. Total vaginal hysterectomy, while efficient in dealing with infection, does not assure hemostasis, particularly in the parametrium. Laparotomy and suture of the wound are better bleeding, but is more dangerous than other operations in regard to infection. All these procedures have, however, occasional indications.

Complete Nephro-Ureterectomy.

J. W. Boevé, in Wash. Med. Annals, puts on record his second operation for removal of the kidney and ureter at the same sitting. An incision was made through the anterior vaginal wall to the ureter, which was loosened to its entrance into the broad ligament and was ligated next to the bladder and severed. Then through a loin incision about five inches long, running from the end of the false ribs toward the right anterior superior spinous process, the kidney and the ureter were separated to the brim of the pelvis, where the latter broke on slight traction and pus escaped from the upper end. Vessels clamped, severed and tied, removing kidney and upper portion of ureter; then the remainder of the ureter dissected from above. In seventeen cases tabulated by the writer, the indication for the operation was tuberculosis of the kidney and ureter in 82 per cent. Complete nephro-ureterectomy has been done by the extraperitoneal and transperitoneal routes. The preponderance of cases of tuberculosis of the organs involved makes it desirable to avoid contaminating the peritoneum, though the latter route is the less difficult. Bovée recommends beginning the operation by the transperitoneal incision. The incision for nephrectomy will then usually suffice for its completion. The kidney and ureter should be removed en masse when possible, liberating the former first and avoiding contamination of normal structures by leakage from the cut end of the ureter. Drainage, including vaginal, should be employed whether pus is present or not. Of the seventeen cases compiled but two ended fatally.

Interstitial Gestation Complicating Uterine Pregnancy.

A woman seen by J. B. Morrison, in N. Y. Med. Jour., had just expelled from the uterus a fetus of eight weeks. Examination showed an ovoid mass on the right of and continuous with an enlarged uterus. The patient disappeared for two weeks, then returned with a foul vaginal discharge and history of a chill. After removal by
the curette of shreds of decidua, there were two severe chills, an irregular temperature, and intense pain in the region of the right appendages. The symptoms resembled those of septic peritonitis. On the fourth day there was profuse uterine hemorrhage, the mass on the right of the uterus was half its previous size. During this examination, a fetus of ten or twelve weeks was expelled into the vagina. The retained placenta was found adherent in a cavity communicating with the right side of the uterine cavity. The placenta was removed digitally, and in fragments by douches later. This was apparently an interstitial pregnancy, the internal wall weakened by the curettage, and ruptured by internal pressure as the fetus developed, and by uterine contractions following the curettage and hot douches.

**Bilateral Extra-Uterine Pregnancy.**

The case is reported by A. Psaltoff, in *Ann. de Gyn. et d'Obst.* The woman, thirty-five years of age, had been married eighteen years and had had seven children at term, the last seven years before the present time. Always well, menstruation regular. Three years ago menstruation was delayed a few days and she then had abdominal pain and vomiting for twenty-four hours. These then diminished and returned fifteen days later, less severe, but with slight metrorrhagia. The pain continued for five or six months, with amenorrhea. Since then all symptoms disappeared and menstruation and general health had been normal until four months ago, when the pain, vomiting and amenorrhea returned. Through an abdominal incision he removed a fetus of five months from the right tube, which had not ruptured into the peritoneal cavity at least, although no statement is made as to whether this had occurred in any direction. With the left tube he removed a mumified fetus of nearly five months' development, which had remained in the tube for over three years.

**Connection Between the Female Breasts and Genitalia.**

Ralph Femesváry, in *Jour. Obst. and Gyn.* Br. Emp., believes that the stimuli going from the genitals toward the breasts are produced by a certain substance, which is the product of the internal secretion of the ovaries, and that the blood circulation, the quantity of the blood flowing to the breasts being influenced by the nervous system, plays only a secondary rôle. In the reverse direction the stimulus is chiefly produced by the nervous system. He accounts for the changes in the breasts in phantom pregnancy by the simultaneous amenorrhea causing an accumulation in the blood of the ovarian secretion in the same manner as that accompanying the amenorrhea of pregnancy.

**Rupture of the Uterus.**

The statistics upon which a paper on the etiology, prophylaxis and treatment of rupture of the uterus during labor, by Nicolas Ivanoff, in *Ann. de Gyn. et d'Obst.*, is based are those of the maternity of Moskow from 1877 to 1901. In 118,581 labors there were 124 cases of rupture of the uterus. The treatment employed was in every case the same. It consisted in the application of a compressing bandage and an ice-bag, and usually packing at the site of rupture with iodoform gauze. Of the 124 cases, 98 died, a percentage of recoveries of only 21. The rupture was complete in 58 cases, and of these only 7 or 12 per cent. lived. Among 43 incomplete ruptures there were 16 cures, or 38 per cent. The mortality of the children reached 87 per cent. Kolomenkin's collection of selected cases showed 39 per cent. of recoveries from uterine rupture after conservative treatment, and 53 per cent. of cures by operative measures (laparatomy and suture, Porro operation, abdominal or vaginal hysterectomy). Combining these statistics with those of the writer, gives a percentage of successes reduced to 29 per cent. as opposed to the 53 per cent. of recoveries after operative treatment. Excluding, in Kolomenkin's series, those cases in which the uterus was sutured, the cases treated by operation would show 64 per cent. of cures. This method, which involves suture of a wound which is frequently ragged and often infected, gave only 20 per cent. of successful issues in the series referred to. It is suitable only in cases in which the rupture occurs from violence and in a position where sutures can be satisfactorily inserted, and in which the uterine wall has not been subjected to rubbing and crushing against the pelvic bones. The figures given speak strongly in favor of active operative treatment of rupture of the uterus during labor:
MEDICAL HAPPENINGS IN NEW JERSEY.

Dr. Joseph Billings Morton died November 1 from heart disease at his home at Elizabeth. He was born at Hunting- ton, L. I., on September 9, 1826. In 1848 he was graduated from the College of Physicians and Surgeons, in New York, and at his death was one of its oldest alumni. He removed to Elizabeth in 1852, and was engaged in the active practice of his profession until a few months ago. He was noted for his historical researches. He is survived by a widow and four sons.

Assistant Surgeon J. W. Richards, U. S. A., who has been stationed at Fort Mott, near Salem, for several years, has resigned from the army and taken up the practice of medicine at Slattington, Pa.

A woman of Camden has been awarded $4,000 damages by a jury in the United States Circuit Court room as the result of her suit against the Alba Dentists Company to recover for a broken jaw inflicted by a dental student. She went to the Alba Dentists to have a tooth extracted, and a student employed by the company extracted a portion of her jaw, mistaking it for the root of a tooth. The woman caused the arrest of George C. Courtright, president of the company, and Dr. William M. Powell, manager, and they were convicted of conspiracy and false pretenses. Judge Beitler sentenced Courtright to a year and Powell to three months' imprisonment.

The engagement has been announced of Miss Katharine B. Franklin, daughter of William M. Franklin, of 74 Prospect street, East Orange, to Dr. D. Webb Granberry, of 401 Main street, Orange.

Arrangements are being completed for the annual series of dramatic performances this coming winter in Music Hall, Orange, for the benefit of the Orange Record Ambulance Fund. These performances have been given for many years, the ambulance service for all the Oranges being entirely maintained thereby. Four subscription performances are usually given.

At a recent meeting of the Erie Railroad Surgeons' Association Dr. J. A. Allis, of Montclair, was elected secretary and treasurer.

Dr. Fewsmith, of Newark, is building an artificial lake on his farm near Madison.

Dr. Bailee Brown, of 104 Hancock avenue, Jersey City, has just declined an urgent call to do medical missionary work in the United Presbyterian Hospital at Asyut, Egypt. The call came as a recognition of Dr. Brown's abilities as a physician, as the hospital is a large one, having 80 beds and an out patient department with a daily attendance of over 100. Although Dr. Brown and his young wife have been residents of Jersey City for the last eight months, their removal was a home coming for Dr. Brown, who was a Jersey City boy.
Dr. Charles A. Groves, of East Orange, one of the most prominent physicians in the city, had a narrow escape from serious injury October 26, when an automobile smashed into his runabout. The wheels of the rig were smashed by the force of the collision, but Dr. Groves, who luckily was not thrown out, kept his wits and prevented the horse from running away.

Dr. E. T. Taylor has leased a new house in Cottage street, South Orange.

Dr. Sarah F. Mackintosh, who died at Asbury Park, October 20, at the age of 67, is said to have been the first woman physician in this country admitted to membership in a medical society. In 1871 she joined the Passaic Medical Society.

Dr. Pliny W. Barber, of 117 Midland avenue, Kearney, recently saved a man from serious injury, if not death, at Orange and Broad streets, Newark.

A trolley car hit a grocer's wagon driven by Henry W. Lyne, and the force of the shock was such that the wagon was demolished and Lyne was hurled head first in the direction of the curb.

Dr. Barber, with two or three others, was standing at the curb waiting for a car at the moment the collision occurred. The physician sprang forward, grasped the flying form and turned the body so that Lyne landed on his hips, instead of on his head.

The impact was of such force that Dr. Barber fell. Then before either man could arise, the horse, which had also been thrown by the collision, fell on top of both.

Neither man was injured, save for the shock resulting from the fall.

The wedding of Dr. Edgar Holden, Jr., son of Dr. and Mrs. Edgar Holden, of Newark, and Miss Clara Florence Moore, took place October 20, at Stonebrook, the home of the bride's mother, in Plainfield. The Rev. Dr. William R. Richards, pastor of the Brick Church, of New York, performed the ceremony.

The bridegroom is the son of Dr. Edgar Holden, the head of the medical department of the Mutual Benefit Insurance Company of Newark, and like his father is a well-known physician. He is a Princeton man, a graduate of the College of Physicians and Surgeons, of New York city, and the surgeon of the Essex Troop. Dr. and Mrs. Edgar Holden, Jr., will reside at 70 Broad street, Newark. Dr. Holden will continue the practice of his profession at his present office, at 13 Central avenue, Newark.

Dr. Bernard A. Daly, of 126 South Eighth street, Newark, N. J., died November 2 of blood-poisoning, which was contracted by him in the discharge of his duties as a physician. He had been ill for several weeks.

It is believed that while he was performing an operation about two months ago some poisonous substance entered a cut on his right arm.

Dr. Daly was 27 ears old and a graduate of a Richmond medical school.

Dr. M. Herbert Simmons entertained the Practitioners' Society in the rooms of the Dr. William Pierson Medical Library Association in Orange, October 16.

Dr. Hoenig, of Hudson street, Hoboken, is back after an extended European trip.

Cornelius Sheperd, M.D., of Trenton, died on October 7. He was born in Bucks county, Pa., and was a graduate of the Medical Department of the University of Pennsylvania. Dr. Sheperd took much interest in public affairs, and was active in
establishing the present school system of New Jersey.

Dr. A. H. Tuck and Bentley Rheinhart, expert chemists, of Camden, narrowly escaped death October 17, by an explosion in their laboratory. Both were taken to Cooper Hospital, burned from head to foot. Their injuries were serious, but not fatal.

By the will of Mrs. Mary Lewis, widow of Col. Edwin P. C. Lewis, and daughter of the late Edwin A. Stevens, of Hoboken, N. J., are left, among other charitable bequests, $3,000 to Christ Hospital and $2,000 to St. Katherine's Home, both in Jersey City.

Christ Hospital, Jersey City, is to have a new ambulance. A number of citizens have contributed the amount necessary for its purchase.

The sentiment in favor of making the Bayonne Hospital a real city institution continues as strong as ever. The board of directors is a unit in supporting the widespread sentiment in Bayonne that the hospital should be supported by the city by special appropriation. Nothing can be done until the next session of the Legislature.

Dr. B. S. Keator was defeated for Mayor of Asbury Park in the recent election.

The Essex County Homeopathic Hospital has been in existence six months, during which time it has treated 250 patients, with no deaths. People interested in its welfare have agreed to guarantee the running expenses of the institution, and a fair was given in East Orange November 3-10, for the benefit of its building fund. Among the eighteen members of the staff are some of the leading physicians of New Jersey. The surgical division of attendant physicians, besides Drs. Sleight and Wintsch, consists of Dr. Frank C. Bunn, of East Orange; Dr. W. H. H. Bull, of Glen Ridge; Dr. Edward H. Baldwin and Dr. William F. Beggs, of Newark. The medical staff is composed of Drs. Charles A. Grove, of East Orange; George W. Harman, of Newark; Edward Conkling, of Newark; C. H. Shelton, of Montclair; G. H. Richards, of Orange, and H. K. Burnett, of East Orange. Drs. F. E. Doty and Charles Helfrich, of New York, are consulting surgeons, and Drs. S. B. Mandeville, of Newark; J. F. Seward, of Orange, and C. W. Butler, of Montclair, are consulting physicians.

At the recent election Dr. Jacob Cole Price, of Branchville, was elected to the New Jersey Senate. Dr. Price is a graduate of the University of Michigan and the College of Physicians and Surgeons. He has served as mayor and postmaster of Branchville, and was for fifteen years county physician of Sussex county. During the McKinley administration he was the Democratic member of the Board of Examining Surgeons.
THE RATIONAL TREATMENT OF POSTPARTUM INFECTIONS OF THE UTERUS.*

By D. TOD GILLIAM, M.D., of Columbus, O.

Some years ago the master obstetrician placed in the hands of the general practitioner the douche tube and curette with instructions to use them freely in all cases of anticipated or suspected infection of the uterine cavity. Of late he has been making strenuous efforts to reclaim them, having recognized his mistake; but the general practitioner having learned their use is loth to part with them, feeling that in so doing he is showing a craven spirit by disarming in the presence of the enemy. The rational treatment of postpartum infection of the uterus presupposes a knowledge of the infecting agencies, their nature and tendencies and of the conditions which favor or retard their entrance into the general system.

The Bacteria of Puerperal Infection.—The bacteria of puerperal infection are essentially the same as those that take part in other pathological processes of the genital tract. Chief among these are the streptococcus, gonococcus, colon bacillus and the saprophyte. The saprophyte is a carrion maker, and subsists entirely on dead tissue. It never attacks the living cell, almost never invades the deeper structures of the healthy organism, nor quits its place until its pabulum is exhausted, when it dies of starvation. It is, however, capable of exerting a baneful influence on the economy through its absorbed secretions—the toxins. When the blood is charged with these products, it constitutes that form of puerperal infection known as sapremia. Saprophytic or putrid infection occurs when fetal debris (fragments of placenta or membranes) have been left in the uterine cavity, or when, as the result of trauma or other cause, the uterine mucosa has become necrotic. It follows, then, that the saprophyte is pernicious only through its products, and that it will cease to do harm so soon as its pabulum—the fetal debris—is exhausted or expelled from the uterine cavity. Both the gonococcus and colon bacillus are surface germs, showing little tend-

*Read at the annual meeting of the American Association of Obstetricians and Gynecologists.
ency to penetrate into the depth of tissues or disseminate broadcast through the general system. The streptococcus is the most deadly of germs connected with puerperal infection. In contradistinction to the other germs it may and does proliferate in living tissues. It is aggressive and migratory and seeks the lymph and blood streams for transportation to remote parts. While all of these germs are capable of producing invalidism, there is only one—the streptococcus—that jeopardizes life. This assertion is to be taken in a general sense, as other bacteria have on occasion been the causative factors of serious or even fatal infection.

Differentiation.—It becomes then a matter of much importance to distinguish between streptococcus infection and that of other germs. This can only be done positively by microscopic examination of the lochia. Unfortunately, even this is at times misleading or utterly unavailing. Furthermore, it is not always practicable, especially in the less densely populated districts, hence it becomes necessary to depend on the clinical evidences. It may be stated, as a rule, that putrid infection—and this constitutes the bulk of the cases met with—is characterized by high temperature, slow pulse and foul odor; whereas in streptococcus infection there is no odor in the earlier stages, and the pulse is markedly accelerated, according to the virulence of the infection. At a later stage, there may be foul odor from necrosis of the endometrium. Suppression of the lochia is a fairly constant and early symptom in streptococcus infection. Digital examination of the uterine cavity will also give valuable evidence. In putrid infection the uterine cavity contains debris, whereas in streptococcus infection the mucosa may be perfectly smooth. Putrid infection, or any other form of germ infection may be complicated with streptococcus infection.

Prognosis.—The character of the germ being determined, the prognosis will follow. Taking the cases in general, statistics gathered on rather a large scale give a normal death rate for puerperal infection of about one in a hundred. In epidemics, which are usually the result of streptococcus infection, this rate is materially and sometimes greatly increased. In streptococcus infection alone, the death rate is about one in twenty or twenty-five; the average of streptococcus cases as compared with others is about one in five (Pryor), so it will be seen that the chances for life of the puerperally infected woman, if left alone, are about ninety-nine out of a hundred.

Conditions Favoring Infection.—The increased vulnerability of the puerperal uterus is due to the enormous increase of its blood-vessels and lymphatics which afford unparalleled facilities for the distribution of germs. When the pregnant uterus has expelled its contents, it becomes an effete organ and begins to disintegrate. The detritus fills the interstices of its walls, freightes the lymphatics and oozes into the uterine cavity. This together with the clotted plugs of the exposed vessels and sinuses and the residual blood of the cavity afford an excellent culture medium for germs. These germs gain access to the deeper structures through the vessels and lymphatics at the placental site, or other lesion in the uterine mucosa.
Safeguards Against Infection.—With the conditions portrayed above, the wonder is, not that puerperal infection is so frequent, but rather that it is not an unerring sequence to every childbirth. Happily for womankind and the human race there are countering influences which, if properly fostered, will safeguard the mother and render infection even less frequent than at present. The safeguards of which we shall take account are:

1. Auto-sterilization of the genital tract.
2. The epithelial-clad surface of the uterine mucosa.
3. The massing of germicidal leucocytes beneath the epithelium.

With the advent of pregnancy sterilization begins and continues until the genital tract is germ-free and proof against infection, unless germs are introduced from without. The second safeguard is the epithelial-clad surface of the uterine cavity, which covers and protects the lymph spaces and under ordinary conditions offers an effectual barrier to germ invasion. There must also be some condition to oppose germ invasion at the placental site, as in the absence of lesion of other portions of the mucosa systemic infection is comparatively infrequent and less severe. It is not improbable that the open-mouthed vessels are protected by the outflowing tide of blood charged with phagocytes. Possibly the placental site may be clothed with a layer of embryonic epithelium.

The third safeguard against infection is found in the massing of leucocytes immediately beneath the epithelium and in front of the lymph spaces, which are there to give battle to any germs which may have passed the protective epithelium or have gained access through a breach in the same.

Auto-sterilization of the Genital Tract.—One of the principal agents in effecting the expurgation of the genital tract is the germ of Doederlein, which, through its acid secretion, destroys all harmful organisms, with the possible exception of the gonococcus and the gas-secreting bacillus. The habitat of the germ is in the vagina, especially in its lower portion, where it keeps watch and ward over the introitus. The impropriety of washing out the vagina as a preliminary to labor is made evident when we consider that in so doing we wash away the germ which guards against infection. Exception may be made where there is obvious gonorrheal infection. It follows, then, that the best prophylaxis is absolute non-interference. During labor there should be no more intravaginal manipulation than is absolutely necessary, and this in most cases is almost none. The habit of rummaging in the vagina of the parturient woman as indulged in by the old-time obstetrician is unnecessary and pernicious.

The Protective Epithelium and Leucocytes.—The colon bacillus never quits the intestinal canal except through the floor of an ulcer. The vaginal epithelium is germ-proof, unless there be an abrasion of the surface or other pathologic change. The gonococcus is never found occupying the living cell or intercellular substance of the tubal epithelium. Hence it is highly probable that the streptococcus will not traverse the intact epithelium of the uterine mucosa. But granting that it
may, it cannot pass it in droves, and may then usually be met and beaten in detail by the protective leucocytes which are massed behind the epithelium. The toxines may and do pass the epithelium, but so long as the germs themselves are confined within the uterine cavity the toxines almost never, if ever, acquire such concentration in the circulating fluids as to become lethal. If, however, the germs themselves enter the vascular channels and are distributed broadcast throughout the system, the opportunities for surcharging the fluids and tissues with their noxious products are multiplied in proportion to their number and virulence. It must be remembered, however, that the living tissues are germicidal, and, if not overwhelmed, will take care of themselves even in the presence of germs. The presence of streptococci in the blood, therefore, does not necessarily signalize a fatal infection. I would call attention to another fact pertinent to our inquiry, and that is, that germ invasion through an open surface usually takes place within the first few days after the lesion occurs. It is well known that fresh wounds are those from which blood poisoning ensues.

After surgical operations, if the patient passes the fourth day without septic manifestations, the surgeon feels quite easy. A granulating sore is proof against infection, if undisturbed. Granulation is usually established by the fifth day. It is more than probable that a similar conservative change takes place in the uterine cavity. Hence it is quite fair to assume that bacterial invasion will not proceed from the uterine cavity after the first few days succeeding confinement. Any systemic disturbance after that period, provided there be no fresh lesion, is caused by the germs already in the blood or by the toxines. If this view be correct, cleansing the uterine cavity many days after confinement can be of little or no avail as a life-saving measure. This does not apply to the minor degrees of intoxication from the toxines, however, for the absorption of toxines goes on uninterruptedly so long as germs inhabit the uterine cavity. But the toxines do not kill, and any measures adopted to get rid of them must be devoid of danger to justify their use. A newly formed lesion of the mucosa produced by the indelicate use of an instrument may open the way for a fresh invasion of deadly germs with a fatal result. That such a result is often brought about by the injudicious use of the douche and curette, admits of no doubt. As has been seen the normal death rate from puerperal infection is about 1 per cent. It has been found that after curettage this death rate is greatly increased, averaging in a series of cases more than 20 per cent. To the puerperal woman the man with a curette is more to be feared than shot and shell on the most sanguinary field of battle.

Impracticability of Disinfecting the Uterus.—If it were practicable to clear the uterine cavity of germs by curettage or flushing, there would be no question of their utility, but such is not the case. Even under the most expert manipulation of the curette the germs will drop off or be washed off and adhere to the raw surface of the uterus. But the chief difficulty lies in the bacteria which lie ensconced in the depressions of the uterine mucosa—the utricular glands and the crypts of the cervix. Here they are absolutely inaccessible and beyond the reach of
any known agency. The curette, therefore, is clearly inadequate as a means of ridding the uterine cavity of germs. The sharp curette is especially dangerous, as it not only fails to remove the germs, but destroys the protective barriers—the epithelium and leucocytes—and leaves an open way into the mouths of the lymphatics. No more effectual way for furthering systemic infection could be devised than by sharp curetage of the uterine cavity in the presence of the streptococcus.

When Curettage Is Permissible.—There yet remains the question of invalidism. Putrid infection entails a greater or less degree of invalidism, and as it ceases immediately on the removal of the fetal debris, it were better to do so, provided it can be done with comparative safety. With every precaution against carrying infection, the uterine cavity should be explored by the finger and, if practicable, emptied by it. If curettage is required, the dull curette should be selected that the decidua may be removed without breach of the epithelial-clad surface.

Flushing.—The objection to flushing lies not so much in the act as in the manner in which it is done. Some years ago the New York Academy of Medicine promulgated the doctrine that in cases of puerperal infection the uterus should receive one good flushing after which there should be no repetition. For the skilful and careful manipulator, I think the rule is too stringent, for the careless and untutored it is too lax; that one flushing, if improperly executed, may prove the undoing of the patient. It is an easy matter to carry germs into the uterine cavity on a douche tube in the hands of a careless operator, and just as easy to inflict injury upon the uterine wall by a clumsy one. While inveighing against the use of the douche as a routine practice, I am not averse to its use in competent hands at any stage of postpartum infection of the uterus.

How Flushing Should Be Conducted.—I quote from Wetherell:

"The patient should be gently lifted out of bed on a table in good light. The vulva and vagina are gently, but thoroughly, cleansed with soap, water, alcohol and a 2-per-cent. carbolic solution (I prefer a solution of 5 per cent. creoline in liquid green soap for the vagina). The vagina is mopped and dried and a retractor introduced. The cervix is grasped with a volsellum forceps and gently drawn down and steadied. The cervical canal is wiped out with gauze and any bits of membrane or fetal residue picked out with forceps. The uterine cavity may be gently irrigated with salt solution, or even wiped out with pure carbolic acid, if the surface be covered with diphtheritic or streptococcal membrane, and then gently dried with a strip of gauze." I would add that the douche tube—preferably a large size, soft rubber catheter—should be introduced under the eye and with the greatest gentleness. The irrigating fluid may be of plain water, the normal salt solution, or any of the nontoxic, antiseptic solutions. Of the latter the salt solution, collargolum or other allotropic silver solution and hydrogen dioxide are prime favorites. The douche may be repeated daily, or at shorter intervals, according to the effort on the patient. If the pulse and temperature drop, the douche is doing good, and should be repeated on the first indication of recurrence, or the recrudescence may be anticipated after a
little experience with the case. If no abatement of symptoms follows, the flushing were better discontinued.

Instillation of Alcohol Into the Uterine Cavity.—In the year 1897 Dr. Edward J. III, of Newark, N. J., called the attention of this association to the intrauterine instillation of alcohol in puerperal infection. His modification of Carossa's method is as follows: "Introduce a small size, soft rubber stomach tube, with funnel attachment of length used for lavage of the stomach. Near funnel end there should be a clamp screw. The uterus and vagina are loosely, but completely, filled with iodoform gauze. Now, pour into the funnel about \( \frac{3}{12} \) of 25-per cent. solution of 95 per cent. alcohol in water, and by gradually opening the clamp allow the fluid to enter tube. When last of the solution reaches the clamp, it should be closed. This keeps the tube full and prevents entrance of air at subsequent fillings. This should be repeated every two hours. The gauze is changed at intervals of from three to six days. The treatment lasts from four to twelve days. The tube and packing should be introduced under the eye and with the same care and precautions as in flushing. Again and again, I would repeat, and vehemently insist, that manual or instrumental interference with the uterine cavity of any kind, if not properly done, were far better left undone."

70 Winner Avenue.

THE SURGICAL TREATMENT OF PUERPERAL INFECTION.*

By H. J. BOLDT, M.D., of New York.

If some form of surgical intervention be indicated at all for a patient ill with puerperal infection, if a satisfactory result is to be hoped for from such intervention, it is necessary first, to have a correct appreciation of the pathological process present. That this is not always easy we all must acknowledge; it is, in fact, sometimes impossible. This is especially likely to be the case in instances seen but once, in consultation, without the opportunity of retaining the patient under observation. It is desirable, therefore, to transfer all patients with an apparently serious infection to an institution where they can be kept under constant observation, if conditions at their homes make this impossible. The uncertainty of appreciating correctly from a single examination is best realized by those of us who see many patients with puerperal infection in consultation, perhaps hazarding either a favorable or unfavorable prognosis, only to learn subsequently of a different termination of the case from that of our prophesy.

In parametritic abscess, and all other suppurative conditions, the abscess or abscesses should be opened as soon as their presence has been determined, but not as is so frequently done, with a mere scalpel puncture, but by means of an extensive incision. The wound should be

*Abstract of paper read at a meeting of the New York Academy of Medicine.
made as large as conditions will permit, then after thorough cleansing with such solution as the operator may consider most satisfactory, it should be loosely packed with gauze, preferably with such gauze as may be relied upon to cause no toxic symptoms, as nosophen, or plain sterilized gauze. The dressings should be changed as frequently as the condition may require, this being usually every second day.

If it be determined that the uterus contains decomposing animal matter, it should be cleansed, preferably manually; a curette need rarely be employed for this purpose. It should be avoided if at all possible, because in the hands of a novice it is a very dangerous instrument in such cases. Even in the hands of an expert it cannot be used without risk.

Indiscriminate curetting cannot be too severely condemned. I have seen a number of deaths which in my opinion were indirectly due to that procedure. Another, although a minor intervention, compared to curettage, resorted to much oftener than necessary, is repeated intruterine irrigation. The chills which the patients often have after such intervention may usually be ascribed to it.

I shall now consider the major surgical interventions, and more especially the one about which much has been said during the last two years—extirpation of the uterus. In reviewing the cases of puerperal infection reported in literature as cured by means of hysterectomy, I was forcibly impressed that comparatively few stand careful analysis by any one having had large experience with such patients as absolutely favoring the justification of the operation. We should bear in mind that sometimes seemingly hopeless patients recover. We have not yet reached such degree of proficiency that we can say from the result of an examination of the secretions or of the blood, that the patient is suffering from a definitely limited form of sepsis, but even if the patient be ill with bacteremia, and the local examination reveals that the uterus alone seems to be the source of infection, the parametria, pelvic peritoneum, tubes and ovaries free from induration, yet this would not invariably indicate that the uterus must be removed to save the patient’s life. I say this most emphatically because I have seen patients whose blood showed pure culture of micro-organisms, but because their general condition did not, in my opinion, justify such grave surgical intervention, I relied entirely on other methods of treatment, and they recovered. On the other hand patients were observed from whose blood repeated cultures were made with negative result, and yet a number of them died under the clinical picture of blood-poisoning. On post-mortem examination, blood from the large vessels, and the scrapings from the peritoneal surfaces usually showed a streptococcc infection. This teaches an important lesson.

Having come to the conclusion that neither an examination of the blood nor an examination of the secretions from the uterus can, with our present knowledge, give us satisfactory information whether or not an operation is indicated, it behooves us to ask if any symptom will give such information. Let me refer briefly to the more important ones. In text books the occurrence of a chill in the puerperium is taught to be the initial symptom of puerperal fever. In my own experience chills
have been absent in about one-third of the cases. Therefore, while a chill is of importance, it is not an absolutely reliable symptom of a serious septic infection, even if followed by a high temperature and an accelerated pulse-rate. All three symptoms may be caused by other factors and may soon disappear. It is the continuance of such symptoms upon which we base our diagnosis of puerperal infection. In referring to the symptoms I do not wish to convey the idea that it is difficult to make the diagnosis that a puerperal infection exists, but I do emphasize the fact that it is very difficult to make a correct indication for a surgical intervention, especially the one now under consideration. I know of no other disease in the domain of surgery in which the physician is placed in an equally responsible position in forming the indication for a major surgical intervention. It is a matter of personal judgment. There are instances of puerperal infection in which hysterectomy is indicated. Namely, such patients who have decomposing placental structure in the uterus that cannot be removed through the natural channel. Such instances are extremely rare. The operation is also indicated by the presence of suppurating and sloughing myosfibromata. It is further indicated in instances of septic metrophlebitis, if it be possible for one to make the diagnosis of this condition, and with the proviso that the general condition still justifies the operation.

Whether the hysterectomy should be done by the abdominal or by the vaginal route must be determined by the local conditions, and with the consideration of the general condition of the patient. If it be possible to remove the organ without serious mutilation per vaginam, that method should be the one of choice. If, however, such be not feasible, when the organ is too large and the vaginal canal too narrow, so that it is evident that the softened uterus would be subjected to so much traumatism as to contaminate the pelvic peritoneum and the flesh wound with the septic interior, the abdominal route should be chosen. Furthermore, if the process be such that it is intended to probably remove the broad ligaments and some infected blood-vessels, the abdominal route must necessarily be that of choice. That it is possible to remove infected veins with a successful result in puerperal pyemia has been proved by Trendelenburg.

A puerperal uterus with a sloughing myoma should always be removed from above.

It is an accepted fact that an old gonorrheal infection is prone to be relit in the puerperium, and that such pyosalpinges are likely to threaten life. In such instances, however, we are not combatting an acute septicemia. Such patients, if subjected to timely surgical intervention, are likely to recover. The pus sacs should be opened from below and drained. Whether a more radical operation in the future will be necessary must be determined by the progress of the illness.

In instances of diffuse peritonitis, provided that they are not of the foudroyant type, it is advisable to open the abdomen, to thoroughly evacuate all pus pockets and flush the abdominal cavity with saline solution and to drain the abdominal cavity through a large incision in the cul de sac. The head of the bed should be elevated to permit a better
PUERPERAL SEPSIS—VINEBERG.

Gravity to and through the opening made, as recommended by George R. Fowler, of Brooklyn, in the treatment of peritonitis.

It should be borne in mind that the women who have had a criminal abortion performed most frequently are attacked with the acute forms of infection.

There are instances of what I term a chronic puerperal infection. The acuteness of the illness has at no time been so marked as it was in those patients ill with the foudroyant type of puerperal infection, patients who have passed a week or more without showing any improvement in their condition, the uterus being relaxed in consistence, a pelvic peritonitis being present, the adnexa being the seat of pus sacs. Such instances offer the most favorable prognosis among the severe puerperal infections; and it is in such conditions that I as well as other operators have had good results by resorting to radical operations. If after a lapse of longer than two weeks after confinement or abortion, and the general condition of the patient is fair, I prefer to operate by means of laparotomy; if earlier, then per vaginam. Exceptions of course occur.

Conclusion. In the acute forms of puerperal septicemia and pyemia in which it is probable that the general circulation has been invaded by micro-organisms, whether a bacteriological examination of the blood at the time of making the examination proves this or not, no method of surgical intervention is of benefit; on the contrary, it is likely to shorten life.

In all puerperal infections the form of surgical intervention, if one be indicated, must be left to the judgment and conscientiousness of the physician, and the prognosis will vary according to the condition to be combatted.

With our present knowledge no strict rule by which one should be governed can be laid down.

39 East 61st street.

THE TREATMENT OF Puerperal SEPSIS.*

By HIRAM N. VINEBERG, M.D., of New York.

In discussing the treatment of puerperal sepsis, a few words must be said in reference to the etiology.

It is no longer held by any one that the streptococcus pyogenes is the only micro-organism that can cause severe puerperal sepsis. Fatal cases of puerperal sepsis have been reported in which either the staphylococcus pyogenes aurens, the bacterium coli commune, the bacillus acrogenes capsulatus, the gonococcus, or an undescribed bacillus has been the sole micro-organism found. In others, again, more than one species were met with, showing a mixed infection.

*Abstract of a paper read at the 28th annual meeting of The American Gynecological Society.
The species of micro-organism found, therefore, in the uterine or vaginal discharges in a given case of puerperal sepsis is no criterion of its severity, and forms no safe guide as to prognosis or as to the treatment to be adopted. In this connection I cannot do better than to quote verbatim what Feihling stated in opening the discussion on the treatment of puerperal sepsis at the Fourth International Congress of Obstetrics and Gynecology, in Rome, September, 1902.

"The attempt to divide the various forms of puerperal infection bacteriologically cannot be considered thus far as successful. This much is certain, that in numerous cases which have run a normal course streptococci and staphylococci have been found in the uterine cavity, and further, in the severe forms of infection sometimes streptococci, sometimes staphylococci, at other times bacilli coli communis and other bacteria, or mixtures of these, are found, thus demonstrating that the attempt to make a ready and positive diagnosis from a bacteriological examination has thus far been a failure."

It was thought at one time that the bacteriologic examination of the blood would be of value in estimating the severity of an attack of puerperal sepsis and be a guide to operative intervention. Boldt stated, in a paper on "Indications for Hysterectomy, etc., in Puerperal Infection," that he would consider hysterectomy indicated when "the blood showed the presence of pathogenic germs." Further investigations have shown the utter unreliability of the bacteriologic examination of the blood, either from a prognostic or therapeutic standpoint. Streptococci have been found in the blood of patients apparently not very ill, and who recovered without any operative intervention. On the other hand, the bacteriologic examination of the blood has been negative in cases of most profound sepsis and in those who succumbed to the disease. We are forced to conclude, therefore, from the foregoing that as yet the treatment of puerperal sepsis must be based chiefly upon the clinical history and physical signs of each individual case. Before taking up the subject of treatment in detail I desire to touch upon another phase of etiology. It must be conceded at the present time that conditions exist during the pregnant and puerperal states which may lead to auto-infection. This assumption is borne out by bacteriologic investigations and by the clinical results recorded in most of the large maternities in Europe. Although some discrepancy exists in the bacteriologic examinations of the vaginal and cervical discharges in the pregnant state by different observers, still the weight of evidence is in favor of the presence of pathogenic micro-organisms in the genital tract of the pregnant women under certain conditions. In Küstner's maternity 529 women in labor were examined with the bare disinfected hand and the morbidity in them was 19.6 per cent. Six hundred and twenty-eight were examined with disinfected hands covered with aseptic rubber gloves and the morbidity in them was 17.3 per cent. Neither was there any noticeable decrease in the percentage of the cases of severe sepsis. In the former case the percentage was 5.5 per cent. and in the latter it was 4.4 per cent.

The results in the operative cases were similar.
In Rosthorn's maternity, at Graz, in 899 women in labor examined with the bare disinfected hand the morbidity was 39.3 per cent.; in 747 women examined with gloved disinfected hands the morbidity was 28.9 per cent. Notwithstanding that the morbidity in these lying-in hospitals is high, the mortality is exceedingly low. In the Graz maternity it was 0.11 per cent, and 0.26 per cent., respectively, for the periods above mentioned. We have no reliable data of the morbidity in puerperal cases in private practice, but we do have knowledge of the comparatively high mortality from puerperal sepsis in that class of practice.

In public practice the patients are carefully observed, and as soon as there is the slightest elevation of temperature, the patient is assumed to be septic unless some other cause is found to account for the fever. The proper treatment is instituted at once, be it merely an irrigation of a perineal or vaginal wound, an intrauterine douche, the removal of any retained secundines, etc.

In private practice just the opposite, as a rule, obtains. It is only when the patient becomes seriously ill and concealment is no longer possible that a consultant is called. It is in this way that a slight infection has been allowed to develop into a dangerous one through fear on the part of the medical attendant—a feeling which is quite natural in the present attitude of mind of the lay public in reference to the etiology of puerperal sepsis. I am strongly convinced that if we could remove the element of fear on the part of the attendant by creating a normal and healthy view in the mind of the lay public, we would not meet in consulting practice so many instances of neglected cases of puerperal sepsis. There is no room for any difference of opinion, nor is there any as far as I know, as to the necessity of cauterizing with some antiseptic and the maintenance of free drainage of infected wounds of the perineum, vulva or vaginal tract in the puerperal woman. It is only in the selection of the method that any difference of opinion exists. Some would never use anything but the fingers for this purpose, and they condemn in the strongest language the employment of a curette, be it dull or sharp. They argue that in using the curette the so-called "protective zone" is disturbed with the result of the spread of the infection. As far as I am concerned I know I can do this to the best advantage and with the least traumatism by the combined use of the finger and the sharp curette. It must not be forgotten that in many instances of retained placental and decidual tissues the cervix may be fairly tight and will not readily admit even one finger. In these cases involution progresses normally at the lower uterine segment, with a consequent early closure of the cervix. Nothing short of the curette can accomplish the desired result in those cases.

In those exceptional cases of adherent and sloughing placental residue that cannot be removed either with the finger or sharp curette hysterectomy is indicated, providing the patient is not already moribund. There is not now any dissension of opinion as to the indication of extirpation of the uterus in such cases.

The same uniformity of opinion exists regarding the indication of hysterectomy for puerperal sepsis due to a submucous sloughing fibroid.
There is a third group of cases in which the uterus, as a result of infection, is studded with small abscesses. Every one is agreed as to the advisability of extirpating the organ in such instances. But the difficulty that is encountered here is in making the diagnosis. In the successful case that I have reported I drew my conclusion that the uterus was the chief source of trouble from the absence of any perineal or vaginal wounds, from the absence of any exudate or enlargement of the adnexa, and from the fact that the uterus was large, doughy and flabby and lay like an inert mass in Douglas' cul-de-sac. In a fourth group of cases the infection of the uterus may result in one or more purulent foci of moderate or considerable size in the uterine wall. When the purulent focus is situated below the reflection of the bladder peritoneum in front or below the peritoneal fold behind, or at the sides of the uterus between the folds of the broad ligament, an expectant plan of treatment is advisable, for such collections usually either break into an adjacent hollow viscus, or, as a rule, grow in a direction in which they are easily approached and evacuated. If the purulent focus be situated in the upper part of one of the broad ligaments, it is well to wait with surgical intervention until the mass has probably formed adhesions with the abdominal parietes. When this has occurred the evacuation of the abscess is practically always unattended with any danger. In a fifth group there may be a solitary abscess in the uterine wall not situated in any of the sites above stated. The proper treatment in these cases is excision of the abscess sac and drainage, without sacrificing the uterus. But I am now to take up a class of cases, the treatment of which has excited the keenest discussion, especially in reference to the question of hysterectomy.

I have reference to septic endometritis or infection of the placental site when the symptoms steadily grow worse in spite of appropriate general treatment and the infection is still limited to the uterus.

If the proper treatment—emptying the uterus—be instituted early in these cases, the question of hysterectomy would never need to come up in them. But if these cases are neglected at the outset, treatment may fail and the patient finally succumb to her infection. The majority of them die within a variable period of from 10 to 40 days or longer. The point at issue is whether some of these cases cannot be saved by a timely hysterectomy. When hysterectomy is deemed indicated, the abdominal route, in my opinion, is to be preferred to the vaginal route for the following reasons:

1. In uterine sepsis the broad ligaments are frequently infiltrated, and a larger portion of the ligaments can be cut away when operating from above than when operating from below.

2. Patients with severe sepsis can withstand a major operation remarkably well, providing there is no great loss of blood, and, as a rule, in these cases there is likely to be less hemorrhage when the operation is done through an abdominal incision than when it is done by the vaginal route.

Statistics thus far are decidedly in favor of the abdominal operation. Jewett (American Gynecology, Feb., 1903) collected 62 cases in which it was stated that the route was through the abdomen with a mortality of
38.7 per cent., and 25 cases in which the route was through the vagina with a mortality of 52 per cent.

It must be admitted, however, that a collection of cases is not very decisive. The number of cases is too small and the operations were performed by too great a number of men. In my opinion, if hysterectomy be indicated, the whole uterus should be extirpated, both for the purpose of removing all of the infected area and for drainage of the stumps of the broad ligaments, which, as already stated, are usually infiltrated and in consequence must ultimately break down.

The infection may extend from the uterus to one or other tube, setting up a violent grade of salpingitis, which in turn may cause a general peritonitis. In some cases the micro-organisms rapidly penetrate the uterine wall and set up a peritonitis, which usually becomes general in the course of a very short time. As a rule, these cases run a rapidly fatal course; still, a case may occasionally be saved by an early abdominal section, with copious irrigations of the peritoneal cavity and free drainage. Some cases of puerperal sepsis are very obscure. Repeated vaginal and bimanual examinations fail to find any pelvic or abdominal lesions. Now, when such a case is gradually growing worse in spite of the most approved treatment for general sepsis, the temptation is very strong to open the abdomen for exploratory purposes with the view of finding some hidden purulent focus or a circumscribed slough of the uterus. Acting on the assumption that sepsis during the puerperal period has very much in common with sepsis occurring at other times, and should, like the latter, be treated on the general principles of surgery—a contention for which I have often waged battle—a distinguished German surgeon (Trendelenburg) conceived the brilliant idea (and executed it with success in a case) of ligating the uterine and saphatic veins when they became the seat of thrombotic infection in puerperal sepsis, or in other words, puerperal pyemia.

Trendelenburg was led to devise this procedure by noting the findings in autopsies on cases of puerperal sepsis at the Leipzig Pathological Institute. In 43 fatal cases in the course of two years the cause of death in 21 cases was found to be pyemic thrombosis of the uterine and saphatic veins. In only 4 cases out of these 21 cases was there a lymphatic infection combined with the venous infection. In a case that I had under observation a couple of years ago that was ill for a long time I made the diagnosis of septic thrombosis of the pelvic veins on the right side. The patient was very seriously ill, had repeated severe rigors, followed by high temperature. The uterus behaved normally and involution progressed as it should. There was no pelvic exudate, but I could feel a round, hard cord along the infundibulo-pelvic ligament; the adnexa were apparently normal; there were no signs of peritonitis. At one time during the illness a prominent internist who saw the patient in consultation concurred in my diagnosis of pelvic phlebitis and thought he found evidences of septic endocarditis. The patient was in a precarious condition for weeks, but finally made a good recovery, the treatment consisting of the usual stimulating and nourishing agents employed to combat sepsis, together with free injunctions of ung. Credé. There were
no external metastatic abscesses. There was no bacteriological exam-
ination made of the uterine discharge for the reason that when the
sepsis became manifest, which was rather late in the puerperium, there
was practically no discharge from the uterus. I had reason to suspect
a gonorrheal infection, as the husband had suffered from an acute attack
of gonorrheal urethritis a short time before the wife conceived, and dur-
ing the early stages of the pregnancy there was a marked erosion of
the cervix, with a copious mucopurulent discharge.

It may be appropriate here to say a few words in reference to the
use of collargol or ung. Credé. I am in the habit of using the ung.
Credé in cases of sepsis when I can find no lesion which demands surgi-
cal intervention, or in those cases in which the gross source of infection
has been removed by surgical means and the manifestations of sepsis
still persist. Before closing there is one point in my paper upon which
I desire to lay especial emphasis, and that is the importance of watching
very carefully every puerperal woman who shows the slightest elevation
of temperature.

751 Madison Avenue.

POSSIBILITIES OF LIQUID AIR TO THE PHYSICIAN.

By A. CAMPBELL WHITE, M.D., of New York.

Liquid air kills from 50 to 98 per cent. of all germs. It kills 75 per
cent. of typhoid germs in two hours' exposure; the staphylococcus,
about 50 per cent., and the diphtheria typhoid, about 65 per cent. This
exposure does not completely destroy the virulence of any pure culture,
but, of course, the activity or virulence of all these germs is suspended
for a long time after exposure to the liquid air, and they are only
brought back to activity by the most careful handling and under the
most suitable conditions.

Knowing these facts, what is the effect of liquid air upon germs ex-
isting in the living tissues of the body. We know that the human organ-
ism is the natural enemy of the bacillus. We have reason to believe
that the human system develops an antitoxin when invaded by the
ptomain-producing bacteria, which under most conditions is successful
in withstanding this invasion. Is it not possible that the temporary sus-
pension of the vitality of these germs, due to the application of liquid
air, gives nature the opportunity to completely destroy them, particu-
larly when we remember that the local circulation is much increased
shortly after the application?

Buchner,* in an article on the natural defenses of bacteria, speaks
of the results obtained by us in the use of liquid air, and attributes all
our success to the subsequent local hyperemia produced.

Liquid air, applied to the healthy living tissues, causes a temporary
local anemia accompanied by anesthesia, or a slough, depending upon
the amount used.

The results obtained by an excessive application are best explained

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by the experiment performed on the rabbit, before we had used the liquid air on the human body.

I recently did an operation under the influence of local anesthesia produced by liquid air, for the purpose of relieving a deformity of the hand resulting from a poorly-treated burn of childhood. The hand was freely incised, and the fascia cut here and there, relieving whatever adhesions existed. The operation caused no pain, the result was perfect, and primary union was in no way interfered with. I could mention any number of cases equally successful where liquid air has been used as an anesthetic.

One can readily appreciate in how many cases this anesthesia would be preferable to any other; for example, opening of an abscess, where there is always an element of some danger in the use of cocaine; incising a paronychia; and of what great value it would be in a cardio centesis, paracentesis thoracis or abdominis, where the vital functions are already at so low an ebb as to preclude the use of anesthetics.

As a cold application to allay or abort an acute inflammation, its use is ideal, and should be applied intermittently with the roller. The same would apply to an acute adenitis—not neglecting to treat the cause.

In the treatment of a boil I would use the spray, and, if just beginning, I would completely freeze it, possibly pricking it while frozen here and there with a needle, in order to relieve any subsequent congestion. If pus to any extent had formed I would freeze and make small incisions. It will always abort a boil if taken in time, although of course not preventing others forming.

From my experience in the local treatment of carbuncle with liquid air I am satisfied from every point of view that this is by far the best form of treatment. It is less painful to the patient than any other form of treatment. Only one application is necessary; within 12 hours of the first application, the pain entirely ceases, not to return again, and at the end of a few days only a small ulcer is left—representing the tissue between the openings of the carbuncle—which readily repairs with usual dressings. In the treatment of the carbuncle the spray is used, first projecting it into the openings and using the air quite freely, then quite thoroughly freezing the external surface, which must be well cleansed of discharge resulting from sending air inside of the carbuncle before freezing. After freezing, the carbuncle should be dressed with a dry absorbent dressing, so that the discharge, which will be abundant and accompanied with considerable bleeding, can be readily absorbed.

The reaction from the freezing takes place in about 20 minutes, and it is to this extreme hyperemia that I attribute the success of liquid air in the treatment of this affection more particularly. As a stimulant in the treatment of chronic ulcers, varicose and non-specific, one application, not to the point of freezing, but intermittently for about five minutes with the spray, is of great utility. For the removal of the benign foreign growths we use liquid air to the exclusion of almost all other methods. For the quick and comparatively painless removal of a naevus, without any resulting scar, it is not equaled by anything we now have at our disposal.

537 Fifth Avenue.
EDITORIAL.

REQUIREMENTS OF MEDICAL PRACTICE IN NEW JERSEY.

The following from the Medical Record is so timely that it is presented verbatim: The standard of medical education in New Jersey is high, and the value of a degree in medicine gained in that State is fully appreciated by its holders. This is as it should be, and it also appears just and right that the New Jersey State Board of Medical Examiners should refuse permission to physicians who have taken their degrees in other States, in which the standard is not so high, to practice in New Jersey until they have taken the State examination for medical license, and otherwise met the requirements of the State.

Dr. E. L. B. Godfrey, Secretary of the State Board of Medical Examiners of New Jersey, replying to a sharp criticism of the Board's methods which appeared in an editorial in the Medical Bulletin in November, denies that any objection can be taken to the policy pursued. The
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editorial in question declares the Board to have erected a Chinese wall of exclusiveness designed to shut out practitioners from other States from practising in New Jersey. Dr. Godfrey states that "no physician is debarred by the State of New Jersey from obtaining an indorsement of a certificate of license issued to him, after examination by another State, provided the standard of academic, medical and examining requirements of that State is substantially the same as that of New Jersey; and provided further that the candidate for license complies with the same conditions as are required from candidates examined by the State of New Jersey.

The academic requirements for a New Jersey State medical license are somewhat severe, but after all, when fulfilled, they merely testify that a man has received a liberal education, a more or less necessary adjunct to a physician's professional make up.

The medical requirements are four courses of lectures of at least seven months each, in four different calendar years, prior to graduation from a legally incorporated college.

There is but little doubt that the State Board of Medical Examiners of New Jersey is entirely within its rights when it refuses to recognize the principle of interstate medical reciprocity on unequal terms. To do so would furthermore be manifestly unjust to those physicians who have passed through the course laid down by the ruling powers in medicine of New Jersey. The only basis upon which a fair system of medical reciprocity between the different States can be established is by enforcing a uniform high standard of medical education throughout the country. The time is not yet ripe for this departure, and in the mean time, the medical profession in those States in which a high standard of medical education is maintained, must be protected against competition by practitioners from other States where it is less difficult to obtain a medical license.

DEATH OF W. M. WARREN.

Physicians will learn with regret of the death of William M. Warren, which occurred recently at his home, in Detroit, after a brief illness. He was a most energetic man. Besides his duties as general manager of Parke, Davis & Co., he acted as publisher of the several journals of that enterprising company, including the Therapeutic Gazette, edited by Dr. Hobart Amory Hare; Medicine, edited by Dr. Harold N. Moyer, and Medical Age, edited by Dr. Frederick W. Mann. Until recently Mr.
Warren had also been a book publisher. By his sudden taking away, Parke, Davis & Co. has lost a most valued employe, and medical journalists a prominent and popular confrere.

AN ADVANCE IN PREVENTIVE MEDICINE.

The Board of Health of New Jersey is one of the most efficient and progressive in the country. It has inaugurated many reforms and advocated many radical changes since its inception, but the law passed by the last Legislature for the improvement of local sanitary inspection is the most important measure the State Board has yet caused to be enacted.

By this act the Board is authorized to issue licenses to health officers and sanitary inspectors after an examination, which is thorough and practical. Health officers so licensed are eligible to appointment by any local Board of Health in the State, and as such are general agents for the enforcement of all sanitary laws.

Sanitary inspectors are divided into three classes and work under the direction of health officers or of local Boards.

After January 1, 1905, no local Board can appoint any health officer or sanitary inspector who does not hold a license from the State Board. Persons now filling the office will not be supplanted, however. Candidates for sanitary inspectors are examined in these subjects: Health laws of New Jersey and duties of local Boards of Health; preventable diseases; isolation and quarantine; cleansing and disinfection; heating and ventilation; nuisances; collection and disposal of refuse; plumbing, drainage and gas fitting; vital statistics; record keeping and reports.

In addition to the topics included in examinations of sanitary inspectors, applicants for license to serve as health officers will be examined in the following subjects: Principles of bacteriology; contagion and infection; laboratory diagnosis; germ diseases: agencies in their transmission; diseases due to occupation; dust and smoke; food and drug inspection; lighting of buildings; domestic and public water supplies; sewage disposal; meteorology; public baths; abattoirs.

The efficiency of New Jersey's State Board is due largely to the energy and ability of its president and secretary, Dr. Cyrus F. Brackett and Dr. Henry Mitchell.
SOME TIMELY FORMULAE.

Powders For Cardiac Hypertrophy.—Matlack uses the following combination in cardiac hypertrophy:

- Asparagin 10 gr.
- Potassii bromidi 2 dr.
- Sacchari albi 3 dr.

M. et divide in pulv. 10. One 3 times a day.

Pills For Cardiac Dilatation.—The following is used by Da Costa in the treatment of this condition:

- Pulveris digitalis 5 gr.
- Extracti belladonae 1 gr.
- Ferri redacti 40 gr.

M. et divide in pulv. 20. One 3 times daily.

Mixture For Simple Dilatation.—Bartholow gives the following mixture in simple dilatation:

- Extracti ergotae fluidi 3½ oz.
- Tincturae digitalis ½ oz.

M. f. mist. A teaspoonful three times a day in water.

In Cardiac Asthenia and Dilatation.—Schnitzler gives the following formula for use in this condition:

- Pulveris digitalis 3 gr.
- Quininae sulphatis 15 gr.
- Pulveris rhei 15 gr.
- Sodii bicarbonatis 15 gr.

M. et divide in pulv. 10. One twice a day.

Fatty Degeneration.—For this condition Whitla recommends the following:

- Spiritus aetheris 1 oz.
- Tincturae belladonae 2 dr.
- Spiritus ammonii aromatici 1 oz.
- Tincturae zingiberis 6 dr.

M. f. mist. A teaspoonful in a wineglassful of water when dyspnea is severe.

For Cardiac Asthma.—In cardiac asthma Bamberger has found the following to be of service:

- Tincturae digitalis 1½ dr.
- Tincturae lobelie 1½ dr.
- Aquæ laurocerasi 3 dr.

M. Five drops every hour.

For Cardiac Dyspnea.—For this condition See uses the following combination with good results:

- Potassii iodidi 20 gr. ad. 30 gr.
- Chloral hydrate ½ dr. ad. 1 dr.
- Mucilaginis acaciae 4 dr.
- Syrupii floris aurantiil 4 dr.
- Aquæ q.s. ad. 4 oz.

M. f. mist. A tablespoonful every 2 hours.

For the Anginal Paroxysm.—Powell recommends the following in the treatment of this condition:

- Spiritus ammonii aromatici 1 dr.
- Sodii bicarbonatis 10 gr.
- Tincturae cardamomi compositæ 1 dr.
- Spiritus chloroformi 20 m.
- Solutionis nitroglycerini (1 per cent.) 1 m.
- Aquæ q.s. ad. 1½ oz.

M. f. haust. To be slowly sipped on the commencement of symptoms.
Acute Rheumatism.—Prof. George Dock, of Ann Arbor, recommends the following prescription for acute rheumatism:

- Sodium salicylate
- Sodium carbonate
- Camphor water

M. S.: One tablespoonful in water every hour.

The Treatment of Granular Pharyngitis.—M. Moure (Presse Médical) recommends painting the back of the throat twice weekly with the following:

- Laffanum
- Iodine
- Potassium iodide
- Glycerine

M. This may also be used as a gargle in a strength of a teaspoonful to a half tumblerful of tepid water.

The author also recommends the use in similar proportions as a gargle, or pure as a local application, the following:

- Sodium biborate
- Antipyrine
- Tincture of guaiacum
- Spirit of peppermint
- Neutral glycerine

Painful Cough.

Dil. hydrobromic acid
Spts. chloroform
Syrup

M. S.: Teaspoonful every 3 hours.

Enuresis.—(For an adult):

Tinct. ferri chloridi
Tinct. nucis vomicae
Tinct. cantharidis
Syr. simplicis
Aquæ

M. S.: One ounce 3 times daily.

For a child:

Strychninæ
Pulv. cantharidis
Morphinae sulphatis
Ferri pulv.

M. et ft. pil. No. 40.

S. : One thrice daily.

For Hemorrhoids.

Morphinae sulphat.
Cocaine hydrochlor.
Acid. tannici
Ung. belladon.
Ung. zinci oxid.

M. ft. ung.

S.: Apply locally night and morning.

Gouty Headache With Anemia:

Acidi salicylici
Ferri pyrophosphatis
Sodi phosphat.
Aquæ destil.

M. S.: One tablespoonful in water.
ABSTRACTS FROM THE BEST JOURNALS.

OBSTETRICS AND GYNECOLOGY.

Some Indications for Inducing Abortion and Premature Labor.

Pool, in an article in Brooklyn Medical Journal on this subject, says when the measurements are below 3 inches for the true conjugate, there is the choice of immediately emptying the uterus or of doing the Caesarean operation just before term. When a lesser degree of contraction exists, i.e., 3 to 3 1/2 inches for the true conjugate, induction of labor before term finds its greatest usefulness. It has been stated that induction of labor at the thirty-sixth week causes a fetal mortality of 40 to 50 per cent. Induction of labor at this time or even earlier is certainly not attended with greater danger to the child than the attempt to force the head through the contracted canal at term, and it is much less dangerous to the mother.

Chronic nephritis is almost invariably an indication for the termination of pregnancy in the early months, particularly if the renal insufficiency be marked. We have to deal not so much with a present as with a future condition. The mere presence in the urine of albumin, even in large amounts, does not of itself demand abortion. The amount of urea is a more reliable index to go by. The daily amount of urine passed is of importance, and anything less than 50 ounces when albumin is present should be regarded with suspicion. Urinary findings and symptoms of a grave nature towards the end of pregnancy furnish additional indications for the induction of labor because of the toxic effect on the child. Many such children are stillborn or die shortly after birth.

Of diabetes it is stated that more than 95 per cent. of the women affected by this disease are sterile.

The pernicious vomiting of pregnancy presents a most perplexing problem. The disease has been divided into three stages:

1. Vomiting and mal-nutrition; 2. fever, rapid pulse, diarrhea, emaciation, and attacks of syncope; 3. cerebral symptoms, i.e., delirium, hallucinations, etc., followed by coma and death. Surgical measures should be resorted to when medical agents fail to relieve. Abortions should not be induced before all corrections of displacements, etc., have been made. A partial dilatation of the cervix when it is possible, has cured many cases.

It has been said that a woman having heart disease should not marry. But it would seem that no such single rule can be applied to all cases. The indication is found in the form of the lesion. Aortic murmurs and mitral stenosis are of importance and when present in a marked degree, early abortion should be the rule. Of greater significance still is a dilated heart wall and would be an indication that pregnancy should not be allowed to proceed.

Pregnancy is a recognized exciting cause of tuberculosis in women having a tendency to this disease. The subsequent development of tuberculosis in the child is another, though somewhat remote contingency, to be considered. A woman having an active form of tuberculosis should not become pregnant. If conception has occurred, it would seem advisable to terminate pregnancy at the earliest possible moment.

Treatment of Eclampsia.

Krusen, in American Medicine, gives this advice as to the cure of the patient with eclampsia: It is a well-known clinical fact that in the majority of cases of eclampsia the convulsions cease soon after the uterus is emptied. There seems little force in the argument that the delivery of the woman is a violent source of irritation to the already highly wrought nervous system, as such an effect can be prevented by the continuous administration of an anesthetic. The presence of the fetus in utero is the direct cause of those conditions which
produce eclampsia. Its removal, therefore, is most certainly a removal of the cause, a removal of the most apparent and positive etiological factor. Upon this subject the teaching of Duhrssen seems to be sensible and sound; and if the eclampsia comes on during the last month of pregnancy, when the child is viable, its speedy extraction becomes desirable. The fetal mortality is high even under favorable circumstances, and the fetal life is endangered by the repeated convulsions; so that fetal considerations should not influence us materially in securing prompt delivery. To secure this prompt delivery, Cesarian section has been proposed by Halbertsma. Few operators, however, have the temerity to subject an eclamptic or nephritic patient to the dangers of celiotomy unless as a last resort. The author believes it would be better to return to the old method of Goech, of taking care of the convulsions and letting the uterus take care of itself, rather than further jeopardize the patient's life by such a radical procedure. The operation is justifiable only when there is pelvic deformity or some condition which prevents vaginal delivery.

Hillmann has collected 40 cases of eclampsia in which Cesarian section was employed. Of the 40 mothers, 21 perished and 19 recovered, surely not an encouraging report. The operation of vaginal Cesarian section performed by pulling down the cervix, incising the anterior vaginal wall, and pushing aside the tissue until the anterior wall is free to the internal os, then incising the anterior uterine wall and extracting the fetus is open to many of the objections which are applicable to celioterectomy. Among these objections, as stated by Edgar, are the uterine atony and hemorrhage, the irritation of the uterine and abdominal scars, and the curative peritonitis about the uterine sutures, all of which should be avoided as exciting causes of subsequent eclamptic seizures. But the chief mooted point in the obstetric treatment of eclampsia is whether labor should be waited for and terminated naturally, or whether induced labor should be reserved for exceptional cases in which medical treatment has failed.

From the report of the International Congress at Geneva, September, 1896, it would seem that the weight of medical opinion is in favor of emptying the uterus in as short a time as possible in cases of eclampsia, whether the attack occurs before or during labor. If the patient is in the second stage of labor, all authorities are agreed that the immediate emptying of the uterus is indicated, and should be performed promptly; but in cases in which labor has not begun, or in the first stage, widely varying opinions have been expressed. An expectant or palliative treatment, the author believes, means almost certain loss of the child and a loss of 30 per cent. of the mothers. Therefore, mechanical dilatation of the cervix, or deep cervical incisions properly performed under rigid antisepsis, are the best plans of procedure. When the cervical canal is thoroughly dilated, the child may be removed by forceps or version.

While the obstetrician should not cease to combat the convulsions, the sooner he produces or hastens labor the better are the chances for both mother and child. It is unnecessary to detail the method of delivery. It is enough to say that it should be accomplished as rapidly as possible, for we hold with Zweifel that the prompt emptying of the uterus contributes greatly to the patient's recovery. Although very well aware that the majority of cases of eclampsia occur in primiparae, and that cervical dilatation, either manual or by the use of some dilating bags, is a tiresome and difficult procedure, yet, nevertheless, the sooner that dilatation is begun and completed, the better are the chances for recovery. When fatal results do ensue in eclampsia, they are usually due to edema of the brain, the lungs, or the larynx, to apoplexy, asphyxia, or heart failure, or the patient remains comatose, dying from an overwhelming accumulation of the toxins.

**Spina Bifida (Spino-Meningocele) in a Fetus.**

Bouchardiere, in _Indian Medical Record_, reports the case of an infant born to a low-caste woman in Quilon, Travancore. There was such difficulty in extracting the child that he was sent for by the midwife. Natural means and all his efforts failed to extract the fetus, which had perished before he arrived. The head and trunk were alreadyborn, but no further progress had been made. The feet began to present and he at first took them to be those of another fetus, or a case of monstrosity with one pair of legs, two trunks and two heads. A further examination was made, and he felt a soft and thick pedicle at the back of the fetus on the sacral aspect, which could have been mistaken for the distended abdomen of another child; but as traction failed to
deliver it, he examined again, and a distinct fluctuation being felt, he passed the perforator through one side of the detached portion and punctured it. This brought away about 13 pints of clear serous fluid, together with small fleshy masses. A second puncture was made on the sacral side and about 12 pints escaped. After this a little traction brought away the whole mass of the collapsed sac of the tumor, which measured in that state about 14 inches in breadth and 16 inches in length. This was attached by a broad pedicle to the sacrum of the child. Within the sac was found a small fleshy growth springing from the sacro-lumbar region. This is the most extraordinary case of spina bifida that the author has come across during his experience of 29 years. He has had several cases of smaller tumors of the kind.

Puerperal Sepsis—Operative Treatment.

Being impressed with the fact that, with few exceptions, puerperal sepsis is a type of lymphangitis arising in the uterus which through the absorbents produced grave lesions in the remote organs, Prior, in N. Y. Medical Journal, decided to try a method which secures the sterilization of the original wound and accomplishes the absorption, by the affected lymphatics, of a potent yet harmless antiseptic. With this object in view, in thirty-seven cases he curetted the uterus and opened broadly the posterior cul-de-sac, packing both with iodoform gauze. This was done in the expectation of drawing away pus, but in many, even the worst, cases there was nothing to drain away except serum, and yet the result was perfect. In thirty-six of the thirty-seven cases operated upon, streptococci, generally mixed with other germs, were found in the uterine cavity, while in all cases streptococci were found in the serum, lymph, or free pus from the cul-de-sac. In all cases but one it was impossible to find a single coccus of any kind at the second dressing, and they were absent in the third dressing in this exception. In the absence of any large quantities of pus in these cases the iodoform is very rapidly broken up, under the influence of heat and the chemical action of the blood serum, producing prompt local iodism, which sterilizes the pelvis. In all the cases, enterocolysis, or intravenous infusion of normal saline solution, accompanied the operation for the purpose of facilitating the elimination of iodides and toxins by the damaged kidneys.

Of the thirty-seven cases, twenty-seven of the patients had not been operated upon previously, and only one died, while ten had been subjected to curettage before coming under the author's care and three died; thus confirming the belief in the mischieffulness of mere curettage in these cases.

Not only is the mortality in this operation from this method of treatment much lower than by any other, but the morbidity is certainly less, as evidenced by three patients who have since borne children.

Cancer of the Rectum Complicating Pregnancy and Labor.

A. W. Russell, in Scot. Med. and Surg. Jour., reports a case of carcinoma of the rectum in a woman only twenty-seven years of age and pregnant for the sixth time. As the rectal growth was extensive an abdominal hysterectomy was first done. The tumor thus exposed was seen to have infiltrated adjacent structures, so only a left inguinal colostomy was performed. Study of the recorded cases, which are tabulated by the writer, has led to the following conclusions: (1) Rectal discharge and induration of tissues should always be suspected and at once investigated; (2) if cancer of the rectum is discovered early, is still limited in extent, and pregnancy is not far advanced, immediate radical operation should be considered, though probably the emptying of the uterus should be a preliminary owing to the greater risk of hemorrhage in the gravid state and the danger of abortion; (3) in advanced pregnancy with a small circumscribed growth, the uterus should be emptied before removal of the growth; (4) in advanced pregnancy with living viable child, where there is doubt before opening the abdomen, Cesarian section and hysterectomy should be performed, and if the case is favorable and the patient can stand it, an inguinal colotomy should follow and the diseased rectum should be detached from above so as to allow the operation to be easily completed by the vagina; (5) when, on the other hand, the disease is found to be beyond radical treatment, the child should be saved by Cesarian section or hysterectomy, with or without colotomy, as may be necessary; (6) if the child is dead and the cancer is beyond operation, Cesarian section is still likely to be needed unless labor can be accomplished per vaginam easily and without undue crushing or laceration, with the help of perforation, embutyotomy or version.
MEDICINE AND THERAPEUTICS.

Etiology of Simultaneous Development of Influenza and Typhoid Fever.

Slotkind, in Centralblatt fuer Innere Medicin, reports a case of mixed infection in a woman residing in a house where there were both typhoid fever and influenza. Based upon the symptoms, one might have made a diagnosis of a typhoid form of influenza complicated with a lobular pneumonia, or a typhoid fever with early pulmonary complications, or a mixed infection of typhoid and influenza. The early catarrhal symptoms, such as coughing, sneezing, angina, laryngitis, lobular pneumonia, the profuse perspiration which existed throughout the illness, the irregular temperature curve with variations due to no apparent cause—all pointed to the existence of influenza. On the other hand, the enlargement of the spleen, the roseola spots, the diarrhea, sensitiveness and succussion in the ileo-cecal region, the di-crotic pulse, the typhoid habitus, and a typical relapse, were indicative of an existing typhoid infection as well. The etiology at once spoke for a mixed infection, since there existed in the same house two influenza and two typhoid cases. The examination of the sputum and the blood verified the diagnosis which was based upon clinical symptoms. In the sputum were found only the Pfeiffer influenza bacilli. The Widal examination was positive in dilutions of 1 to 10 and 1 to 50.

The author cites a large number of cases of mixed infections of various sorts, such as measles, scarlet fever, and vaccination; recurrent typhus and malaria; recurrent typhus and croupous pneumonia; abdominal typhoid and malaria, etc.

Symptomatology of Locomotor Ataxia.

Von Sarbo, in Deutsche Zeit. f. Nervenheilk., says he has had 7.4 per cent. of cases of tabes in 1,200 patients with various nervous affections in his private practice and 2.6 per cent. in 4,000 in hospital and dispensary patients. The proportion of men to women was 83 to 6 in the first class and 87 to 17 in the second. The age ranged from 23 to 73. The longest interval after syphilitic infection before the tabes developed was twenty-seven years, and in 10 cases it was only one to five years. In 7 instances both man and wife exhibited tabes. The primary symptom in 67.5 per cent. of 195 cases was lancinating pains, while diplopia was noticed as the first symptom in 3.6 per cent., and gastric symptoms, vertigo, or paresthesia were the first in 3.1 per cent. each. Weakness of the feet was the first symptom in 27 per cent., and bladder symptoms, gastric crises, or impaired vision were each the first in 2.2 per cent. In 1.6 per cent. the girdle sensation first attracted attention; in 1.1 per cent. the heart-crices or painful lassitude. In 0.5 per cent. the first symptom noted was dyspnea, deafness, ptosis, or the Argyll sign.

In the total of 195 cases lancinating pains occurred at some stage of the affection in 93 per cent.; the Romberg in the same proportion, and the ankle-clonus was abolished in 91 per cent. Westphal's sign occurred in 89.4 and the Argyll in 88.8 per cent.; analgesia of the peroneus region in 85.5 per cent.; bladder symptoms in 79 per cent.; paresthesia in 72; analgesia in ulnar region in 66 and strophy or blanching of the optic nerve in 61 per cent.; anisocoria in 46.6 per cent.; bilateral myosis in 21 and mydriasis in 14 per cent.; crises in 13.7 per cent.; paralysis of ocular muscles in 10.5 per cent., and trophic disturbances in 4.5 per cent.

Utility of Iron Therapy.

E. Biernacki, in Wiener Med. Woch., studied a large number of cases of various kinds of anemia, investigating not only the variation of the amount of hemoglobin during the administration of iron, but also the number of blood corpuscles and the amount of dissolved solids in the blood. His conclusion is that only in chlorosis is the administration of iron of real value. In other anemias little is to be expected from this therapy. In particular, that large number of neuropathic individuals who, though very pale and having many of the symptoms of anemia, show nevertheless no real impoverishment of the blood, is injured rather than benefited by iron medication. The widespread custom of prescribing iron in all cases of marked pallor without ascertaining whether the condition of the blood demands such treatment, is earnestly to be condemned. When indicated, as in chlorosis, iron should be given in large doses. Small doses, as, for instance, in the use of chalybeate waters, serve no useful purpose.
Internal Treatment of Dupuytren's Contracture.

Leugemann, in Deutsche Med. Woch., says the operative treatment of Dupuytren's contracture is not always satisfactory, even when all the scar-bands are extirpated. Accordingly, the writer tested in Prof. Mikulicz's surgical clinic the absorptive effect upon scars of thiosinamin. In two cases, one mild and one rather severe, this treatment gave good results: the scar tissue grew softer, the fingers could be extended and the patients regained good use of their hands. To say the least, the results seemed to be as good as are usually obtained by means of operative interference.

The treatment consisted in hypodermic injections of 1 c.c. of the following solution: Thiosinamin, 20; glycerine, 40; ac. dest., 140, into the neighboring tissue. At first the injections were given daily, later weekly. No ill after-effects were observed.

Bromiform Poisoning.

Henry K. Dillard, in Therapeutic Gazette, reports the case of a child of sixteen months, admitted to the Children's Hospital, November 13, at 9.45 P. M. The child had been suffering from a bad cold and cough for the previous two days, and at seven o'clock on the evening of the date of admission four drops of bromiform were administered to allay the cough. No relief was afforded by this first dose. At nine o'clock a second dose of four drops (?) was given which the child vomited. A few minutes later her head suddenly fell forward, the eyes became hazy, she gasped for breath, her skin became cold, her body limp, and complete unconsciousness followed. The pupils were contracted to the size of pin-points, and did not react to light. There was an odor of bromiform on the breath, her face was cyanosed, her lips partly open, her skin cold and clammy, her breath sounds irregular and shallow. Her pulse was 80 to the minute, weak and irregular. The heart sounds were distant and feeble. Strychnine and atropine were given hypodermically; brandy and aromatic spirits of ammonia were dropped into the mouth. Lavage of the stomach was performed, and a soap and water enema was given. A cold bath was followed by a thorough rubbing of the body and limbs. Artificial respiration was resorted to. The condition of unconsciousness continued until 1.15 A. M., at which time the child suddenly came out of the unconsciousness, moved her arms and legs, cried lustily, and appeared to be fully recovered. She slept at intervals through the night, but the following morning again went into a condition of unconsciousness, from which she was, however, easily aroused. She was discharged fifteen hours after admission to the hospital, apparently in good health. The points of especial interest in this case are: 1. The rapidity with which unconsciousness came on, and the corresponding rapidity with which the child returned to consciousness, after a period of over four hours. 2. The pin-point pupils, which might have led to an incorrect diagnosis of opium poisoning. 3. The bromiform administered to the child was not the last in the bottle, and therefore concentrated, as six fluidrachms remained in the ounce bottle after the second dose.

Formation of Specific Anti-Bodies After Cutaneous Infection.

F. Kasten, in Deutsch. Med. Woch., says Hoffmann had demonstrated that rubbing in on the razed skin of rabbits the living typhoid cultures resulted in the production of agglutinins in the serum of the animal and that the quantity of this substance so obtained could equal that after intraperitoneal injections. Kasten, under the direction of Kolle, has repeated these experiments and confirmed them. Not only agglutinins, but bactericidal antibodies could be obtained by this method with a concentration almost that of those produced by subcutaneous or intravenous treatment. His main effort was to elucidate in what way the bacteria under these circumstances succeeded in introducing into the body the specific substances (their amboceptors). Very careful investigations proved that at no time and in no case could any bacteria be found within the tissues. Microscopically and culturally the result was always negative. Thus it appears that the bacteria rubbed on the skin die in the most superficial layers of this organ. Since the substances stimulating the anti-body-formation are contained in their dead bodies, they must become liberated in those layers and are resorbed in the lymph spaces. The great resorptive power of the skin facilitates this process. That this explanation is correct, Kasten demonstrates by the observation that dead bacilli, too, applied in the same way bring about the same result. The
degree of agglutinative power was even higher than that in cases where living bacilli were used, while for the bacterial substances the opposite relation obtained.

**Production and Nature of Streptocolyisin.**

G. T. Buediger, in *J. A. M. A.*, calls with this name a substance that is found in the filtrates of virulent cultures of strepto cocci made in a mixture of human and of rabbit serum. Why this name is used and not the correct one, streptococcolysin, is not explained; the word selected by the author is a barbarism. This substance hemolyses blood-corpuscles of various animals and of man; it is inactivated by heating to 70° C. for two hours. Its character is not that of a complex hemolysin, but is said to be analogous to the tetanus and diphtheria toxin! The experiments adduced to confirm this assertion will be hardly sufficient as proof. If this should be the case, the production of antitoxin would have been possible. Altogether it seems that this hemolytic substance will prove to be one of those well-known bacterial hemolysins, that in other bacteria have been found and studied with a totally different result about their character.

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**The Saliva as an Aid in the Treatment of Disease.**

Bergmann, in *Therapie der Gegen.*, claims that there are four diseases in which the saliva may be utilized as an aid in the treatment thereof: (1) In inflammations of the throat: A gargle acts only as a cleansing fluid, having no curative influence on the lesion, whilst the saliva which is constantly being swallowed and thus passing over the whole inflamed area reduces the irritation. (2) Hyperacidity of the stomach: The abnormal increase of hydrochloric acid in the gastric juice cannot be neutralized by the usual alkali therapy; the alkali in the saliva, however, is able to combine with the acid and neutralize it. This end is obtained by having the patient masticate vigorously. (3) Obesity: By continued chewing and expectoration, thus reducing the quantity of water in the system and protecting the heart, a great reduction of weight may be brought about. (4) In effusions by the same process, it is possible during the day to expectorate 400 to 1,000 cubic centimeters of saliva. In four cases of exudative pleurisy salivation was beneficial.

**Pneumonia and Pleurisy Simulating Appendicitis.**

Griffith, in *J. A. M. A.*, reports several cases (and has collected several others from the literature) where the early symptoms have pointed strongly to appendicitis. Marked pain in the right abdomen, with tenderness, rapidity of pulse, and respiration and elevation of temperature, with vomiting and constipation in some cases, usher in the disease. Examination of the chest at this time is frequently negative, but in forty-eight, seventy-two, ninety-six hours the classical signs of pulmonary consolidation show themselves, and the abdominal symptoms gradually disappear. The subsequent course of the disease is then the ordinary one of pneumonia. It is apparent that errors in diagnosis under these conditions may easily be made.

Griffith insists upon the necessity for careful examination of the lungs in children presenting these symptoms.

Additional points which may aid in the establishment of the diagnosis are:

(a) Acceleration of respiration out of proportion to pulse-rate or pyrexia.
(b) Relaxation of the abdominal walls between respiration.
(c) Diminution or disappearance of the abdominal tenderness on deep pressure with the flat of the hand.
(d) Possible presence of cough.

**Two Anomalous Forms of Whooping-Cough.**

Jacobson, in *Arch. de Med. des Enf.*, calls attention to the fact that during epidemics of pertussis, abortive cases occur, presenting all of the symptoms except the characteristic whoop. These cases would oftentimes not be recognized if there were no epidemic to arouse suspicion. They are dangerous from the view-point of prophylaxis, because unless recognized they aid in the dissemination of the contagion, thus favoring the extension of the epidemic. They are dangerous to the patient because they may be the starting-point of chronic pulmonary lesion.

A second abnormal form is the so-called "dyspeptic" one. This is characterized by the predominance of gastro-intestinal manifestation, loss of appetite, nausea, vomiting and coated tongue, mucous diarrhoea, etc.; by attacks of fever accompanying these manifestations, by marked emaciation, and profound depression. These symptoms disappear with the cessation of the whoop. For their treatment a strict mild diet is indicated.
ABSTRACTS.

Bromide of Ethyl in Adenotomy and Ton-sillotomy.

Solenberger, in J. A. M. A., regards bromide of ethyl as a preferable anesthetic for this purpose. It is safe providing it is properly given. The anesthetic should be freshly prepared and pure. It should never be administered in small quantities repeatedly, but the whole dose should be given at one time and the air excluded. The administration should not continue longer than one minute, which is followed by an anesthesia which lasts from one to two minutes. Within this time an expert operator can remove both faucial tonsils and clear the nasopharyngeal space. In case the operation cannot be finished at one time, the anesthesia can be later repeated, as it is harmless when given with these precautions. As a rule, when the anesthesia passes off the patient may be allowed to go about.

Chronic Rheumatism.

At the annual meeting of the American Medical Association, Walsh, of New York, read a paper entitled "The Passing of Chronic Rheumatism." He said there are four different conditions, which are often called chronic rheumatism, but without any good reason. The most common form of pseudo-rheumatism is the relaxation of joints which occurs in the ankle, and which is known as flatfoot, or which follows the dislocation of joints, producing tissue changes which make the patients very susceptible for all their after-life to changes in the weather. Just as there are relaxations of the ankle-joints, so could there be relaxations of other joints. A second form occurs in the so-called occupation neuroses. A third form of vague pains often attributed to rheumatism is neuritis. Persons who are exposed to the weather and who use one set of muscles more than another, especially if there is an absorption into the system of such toxic substances as lead and alcohol, are specially prone to a neuritis in the nerves supplying the overworked muscles. Again, a certain number of cases of so-called chronic rheumatism in the United States presenting evidences of joint degeneration following acute attacks of arthritis are undoubtedly not genuinely rheumatic in character, but are of gouty nature. He said that according to recent statistics gout is only three-fourths as frequent in the States as in England. Acute gout is very difficult to differentiate from acute rheumatism. After considering briefly three forms of rheumatoid arthritis, he stated that it is easy to understand that but little space is left for the so-called chronic rheumatism. Certainly cases of true chronic rheumatism with progressive pathological changes in joint tissues, for which no other cause except rheumatism can be found, are very rare, and he confessed that he has never seen such a case.

Bacteriologic Examination of Blood in Scarlet Fever.

Hektoen, in J. A. M. A., says the recent advertisements of a treatment of scarlet fever by anti-streptococcus serum have led to many misconceptions. Scarlet fever cannot be cured by it, and we are as yet not fully informed to what degree secondary streptococcus infection takes place in cases of scarlatina. Much more to be regretted is the inclination to consider streptococci, in some way or another, acting etiologically in scarlet fever. From a number of very careful observations Hektoen comes to the following conclusions: That streptococci may occasionally be found in the blood of mild, uncomplicated cases; that they are more frequent in the blood of more severe and protracted cases; that even in grave cases of this kind recovery occurs; and, finally, streptococci cannot be demonstrated always, even in fatal cases. The theory that scarlet fever is a streptococcus disease does not receive any support from this work. A noteworthy point of Dr. Hektoen's paper is that all through it the famous Class coccus is not mentioned.

Toxins in Inflammations of the Eye.

Randolph, in Johns Hopkins Bulletin, presents a series of experiments which demonstrate, he thinks, the importance of the condition as regards integrity of the conjunctival surface in relation to toxins; and also that pathogenic bacteria, even those for which toxins had not previously been satisfactorily demonstrated, do harm through the action of specific soluble poisons.

Bacterial toxins, so far as tested, when instilled even for many hours into the healthy conjunctival sac, were found incapable of producing inflammation or causing other injury. The same toxins, when injected into the tissue of the conjunctiva or into the anterior chamber, invariably set up local inflammation, the extent and intensity of the inflammation varying to some extent with the concentration of the solution employed. Again, local conditions, such as foreign bodies, may influence the production of inflammation by toxins.
degree, according to the species of bacterium yielding the toxin. Bacteria which had not previously been proved to produce soluble toxins were found to produce them even in young cultures, and it is suggested that injections of bacterial filtrates into the eye, particularly into the conjunctival tissue, constitute a more delicate biological test for the detection of certain toxins than the tests usually employed for this purpose. The experiments recorded in his paper furnish additional examples, in a comparatively new field, of the importance of toxins in explaining the pathogenic action of bacteria, and likewise emphasize the etiological significance of injuries of the covering membrane of the eye in favoring the action of toxins and of bacteria.

**Engorgement of the Hands in Scarlet Fever.**

Aubertin, in *Archives de médecine des Enfants,* says that Mayer, in 1898, called attention to a sign of scarlet fever which is not mentioned by the classical authors, and was probably confused with rheumatism. This symptom consists of an engorgement of the hands, which appears at the same time as the eruption and is often accompanied by pricking and formation. As a rule, this swelling is slight, but sometimes it is marked. The engorgement is usually localized in the hands, and occasionally limited to their palmar surface. Mayer occasionally noted engorgement of the whole upper extremity. It is rare on the feet excepting when it is confined to the heels and toes. This swelling commonly appears in connection with, or a little in advance of, the eruption, rarely later, and it lasts from a few hours to one or two days. Aubertin during his service at d'Aubervilier has frequently observed this symptom in scarlatina, but has never found it in the other eruptive fevers. He has found Mayer's description and analysis of the symptom to be exact.

**Antistreptococcic Serum in Malignant Endocarditis.**

The graviest symptoms, combined with streptococcic infection, even of the bloodstream, are not incompatible with recovery if treated with injections of anti-streptococcic serum, says Ogle, in *Lancet.* This is true also in malignant endocarditis; but here the chances are probably less favorable on account of the colony of micrococci involved in the vegetations in constant contact with the blood-stream. In malignant endocarditis staphylococci are frequent or a mixed infection of staphylococci and streptococci. If an examination of the blood be negative, it would be prudent, therefore, to use injections of antistaphylococcic, together with anti-streptococcic, serum.

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**SURGERY AND PATHOLOGY.**

Suture of Vessels, Transplantation of Vessels and Replantation of Amputated Extremities.

Hoepfner, in *Archiv fuer Klinische Chirurgie,* says his method of making endo-to-end anastomosis between arteries is to bring the central stump through a magnesium ferrule, and then turn back the vessel in a cuff over the end of the ferrule, so that the endothelium is on the outside; now, the end of the distal stump is drawn over the other and a ligature tied around the whole, thus bringing endothelial surfaces in contact. He did twenty-eight of these. In some cases the magnesium tube was disintegrated within two weeks, while in others it lasted many months. In four out of six simple anastomoses the result was perfect; in the other two a thrombosis of the vessel took place at the site. One of the most interesting experiments was as follows: Three centimeters of a carotid and a like amount of femoral artery were excised from the same dog and each anastomosed into the area which the other had occupied, with the interesting result that both healed into their new positions and functionated normally. Next, the same experiment was tried on two dogs, the carotid of one replacing the femoral of the other; here the result was only partially successful; the new femoral became thrombosed while the new carotid did perfectly, and when laid bare at the expiration of forty-five days pulsated normally.

The author gives as his conclusion that anastomosis after this method of Payr should be the operation of choice in injury to more than half the circumference of an artery. The transplantation of sections of vessels is to be thought of where the removal of tumors necessitates the removal of segments.

Most interesting of all, a hind leg of each of three dogs was amputated; then the femoral artery and vein anastomosed and the sciatic nerve, as well as the muscles and skin, sewn together. One dog went bad from the beginning, the second kept up his circulation for five days, but on the fifth a phlegmon formed and the vessels rapidly became thrombosed, while in the
third the result was all that could have been desired. The replanted leg was in perfect condition up to the eleventh day, when the animal was killed by an accident. In order to keep him still while the bandage was changed, chloroform was administered and the animal succumbed to its effect. All the tissues were found nicely healed together and the vessels free from thrombi. The novelty of the article surely recommends it as worthy a perusal in the original.

Sterility from Obstruction at the Epididymis Cured by Operation.

Martin, in N. Y. Med. J., having demonstrated upon dogs that the operation was feasible, performed it upon a suitable azoospermic man. This is the operation: Under ether the vas of the left side was freed at about the level of the top of the testis, and by means of a sharp-pointed pair of scissors, a slender bistoury, and a grooved director, such as are used by ophthalmologists, its lumen was opened by a longitudinal cut a quarter of an inch long. The epididymis was then approached from the outer side, and its entire length was exposed. An incision into the tail failed to show the presence of a milky fluid, though coverglass preparations subsequently examined demonstrated a few spermatozooids in the expressed fluid. A portion of the head was then picked up in a toothed forceps and excised. A few minute, whitish drops at once appeared on the resulting cut surface, made up in the main of spermatozooids, some of which, when examined fifteen minutes later, were motile. Into the wound of the epididymis the vas was implanted by means of fine silver wire sutures carried on small face-needles from the outer surface of the vas into its lumen; thence from the cut surface of the opening made into the epididymis through its fibrous tunic. A suture was placed at either end of the vas incision, and the latter was held open by two other sutures, one to either side. The skin was closed by catgut. The dressing slipped the next day, exposing the wound, which became infected and suppurred superficially. Semen, twelve hours old, sent for examination eighteen days later, showed the presence of spermatozooids; not so plentiful as usual, but very actively motile.

Sixteen days after the operation the patient resumed marital relations, and two hundred and eighty-one days later his wife was delivered of a normal girl baby, exhibiting an almost ludicrous resemblance to her father.

Abscess of Temporo-Sphenoidal Lobe Presenting Symptoms of Amnesic Aphasia: Operation, Recovery.

Knaggis, in Lancet, records the case of an army officer, aged twenty-six years, who had had slight otorrhea since childhood, suffered a moderate concussion of the brain by a fall from his horse. Some months later he began to have pain in the head, general convulsions, and subnormal temperature. His demeanor was apathetic, and there was a distinct pause before he would begin to answer a question. When he would attempt a sentence he would stop short here and there and repeat the last word until the word he wanted would come to him, then go on. He complained of great pain over the left anterior portion of the head, and at the vertex. There was exquisite tenderness upon pressure in front of the left auditory meatus, but none whatever over the mastoid.

There was optic neuritis in the left eye, the right much less. The knee jerks were exaggerated, but there was not clonus, loss of power or unsteadiness of gait.

Diagnosis of cerebral abscess secondary to ear disease was made, and an operation performed, opening the antrum freely. Pus discharged, and an opening in the roof of the antrum was discovered. A probe inserted into this revealed a cavity upward, backward and inward, and pus escaped from this also along the probe. The skull was opened along the floor of the middle fossa and the opening in the dura was enlarged. From three to five ounces of pus escaped. A drainage tube was inserted and fastened.

It was withdrawn on the tenth day, a dram of pus escaped, and that was all. The tube was gradually shortened, and removed entirely at the end of the third week. Recovery was uneventful. There was no headache after the operation, and the word difficulty soon disappeared. The optic neuritis remained about the same until after the removal of the tube, when it disappeared in a week.

The writer speculates as to how the infection reached the brain. In this case it was not due to direct extension through the intervening structures. We are justified in assuming that an erosion having formed in the roof of the antrum, the dura covering it became involved in the inflammation, and it is probable that there lay in immediate relation with this infiltrated patch, one of the small branches of the posterior cerebral artery. By means of this artery the infection could have been con-
veyed to the brain in one of two ways; its perivascular connective tissue sheath becoming infected from direct contact, could furnish a pathway for micro-organisms to the brain, or the vessel itself becoming involved, a septic thrombus might form in its interior, break down and lead to infective emboli.

Fusiform Aneurism Treated by Matas' Method.

Morris, in Annals of Surgery, says he constructed some three inches of arterial channel through a fusiform aneurism. After the sack had been opened and clots evacuated, he sutured together the walls of the lower portion of the sack, in such a way, with chrome-gut, that the channel above referred to was left. A second row of stitches reinforced the first, and when the blood was let back into the old course no leakage occurred. The sack was left in place and after superficial suture the wound healed in its entirety. Before the operation there had been great disturbance of function in the operated side, this having been a popliteal aneurism; but after the wound healed there was complete physiological restoration in the arterial regions previously affected.

The Animal Suture.

Marcy, in Denver Medical Times, states that he knows of no better method of preparing catgut at the present day than Lister's original formula, using chromic acid, carbolic acid and oil. Physick was the first to use any sort of an animal ligature; these were strips of chamois skin, cut thin and rolled round upon a marble slab. These became extensively used in England and America. Then came parchment, buckskin, kid, tendons of the deer and a great number of other animal fibrous structures. An excellent description is furnished of the way in which commercial catgut is prepared; something which is surely unknown to the most of us. The fact that loadsome putrefactive changes are incidental to the preparation of the raw material make it highly desirable that some other absorbable suture and ligature material supplant catgut. In modern aseptic practice the tendons of every animal, from the whale to the rat, have been used, and many of them have been found admirably suited to the purpose, the writer now preferring kangaroo tendon to all the rest.

Ligating the Femoral Vein Below Poupart's Ligament.

Halberstaedter, in Beitr zur Klin. Chir., asks why it is that the ligation of the femoral vein in a young, vigorous person leads to gangrene of the leg sometimes, while the same thing can be done occasionally in an emaciated old man without the slightest ill-effect? There seems to be two reasons for this: in the first place, there are not regularly present collateral ways for compensation to take place, and in the second place there are usually valves in the existing collaterals which must be overcome before the stream can flow backward, as is necessary if compensation is to occur. Now, the anatomy of the valves shows them to be very inconstant, hence they can be overcome in one case much easier than in another; which would in itself explain the matter. Unfortunately, however, we have no means of telling accurately in advance just which patient possesses perfect valves and which can stand ligation of the vessel in question. The author has seen one case in which gangrene occurred, and finds in the literature fifty-four cases reported, with but two such accidents. Where the femora artery is ligated at the same time, there is much greater likelihood to gangrene; since it is only by a high intravenous pressure that we can hope to overcome the valves and see compensation established; this is directly combated by ligation of the artery. Further circumstances which favor collateral circulation are the removal of the shortest possible segment of the vein, and the greatest protection, in other ways, of all the collateral veins.

Investigations into Cancer of the Stomach and Intestines.

At a recent meeting of the German Society for Surgery, Dr. Peterson reported his anatomical and clinical investigations into cancer of the stomach and intestines. They had extended over 160 cases of cancer of intestine and 100 of cancer of the stomach. The development of the disease was either multicentral or unicentral. According to his investigations they only developed unicentrally in lymph tracts. The outer portions of the growth were useless as regarded the study of histogenesis, as they were not developed primarily. This development could not be brought into accord with the parasitic theory. Bowel carcinoma grew more deeply, while carcinoma of the stomach spread more laterally and superficially. After extinguition recurrence could only develop from cells previously
diseased. Another question was whether disease must always return from such diseased cells. Everywhere were seen transitions from cancer to normal cells; so, also, in the stomach. In their margins were seen peculiar cells, but he could not say whether they were carcinomatous or not; whether normal cells were formed from them, or whether they degenerated carcinomatously. In the glands also in carcinoma of the uterus similar cells were seen which were not held to be carcinoma. Such cells, in the speaker’s opinion, do not give rise to recurrences; the system in virtue of its protective power (phagocytosis) might become master of the diseased cells, so that small gland collections met with in extirpation of the disease in the stomach might be left with safety. The demand to fully clear out every trace of disease in carcinoma of the stomach rests only on theoretical grounds. He has operated on fifty-seven cases of carcinoma of the stomach. Thirty of these operations had been done over three years; of these, seven were still living, in whom it was not possible to remove everything. Up to the present no recurrence has taken place in any of the seven. One has to distinguish between organic recurrence, connective tissue recurrence, and gland recurrence, which are of varying importance in the different organs. This has to be decided at the operation.

**Abscess of the Spleen.**

W. M. Spear, in *J. A. M. A.*, says that abscess of the spleen is rare, but not as rare as we are led to believe.

It is most likely to occur after malarial or typhoid fever, because of the hyperemic condition of the spleen in these diseases.

Absence of fever does not preclude the possibility of an abscess.

Early diagnosis and operation are very essential and give a fairly favorable prognosis.

Splenectomy is the operation of choice, but its application is limited.

Preliminary aspiration is an unnecessary procedure, and its use should be condemned.

**Sunshine in Tuberculosis of Joints and Bones.**

Sunlight, fresh air, good food, and fixation of the affected joints remain the most important agents for contesting tuberculous infection, says Willard, in *J. A. M. A.* Direct exposure to sunlight of the whole body is essential, the head and eyes being protected by green, but the affected parts may be covered with blue screens, as they secure easiest passage of the actinic rays. Concentrated sun’s rays are recommended by Finsen, Butler, *et al.*, and are valuable bactericidal agents, but the direct sun is most effective. The actinic rays and x-rays are apparently helpful, but it will take several years of experimenting to put the treatment on a determined basis.

**Local Analgesia by Adrenalineuccaine.**

Barker in *Lancet* remarks that this method of abolishing pain has, with little doubt, a future before it. He states that he believes, now that the principles which underlie it are well understood, it will be widely employed. Full credit is given to Corning for his admirable work in this direction, and attention is called to the fact that because of the rapid absorption of the injected material no operation lasting more than twenty minutes can be performed without a constant reinfiltration of the tissues and nerves.

Beta-eucaine, he notes, is less toxic than cocaine; both these drugs have the following drawbacks: (1) The difficulty of injecting directly through the nerve trunk and through the skin; (2) the need of employing a large quantity of the solution of 1:500 to thoroughly anesthetize a region supplied by several nerve trunks.

It is well known that anything which retards or diminishes the circulation of the blood in a part infiltrated with an analgesic agent enhances the potency of the latter. This fact suggested the possibility of increasing the local anesthetic effect of eucaine by the injection of adrenalin, which would necessarily diminish the stream of blood in the part. It was noted that after a lapse of about twenty minutes the part thus injected with the combined drug was quite blanched and wholly insensitive to pain, and that this loss of feeling lasted on an average about two hours. Barker has been so well satisfied with the result of his first test that he has employed the combination for several months, and with results far superior to those produced by the eucaine alone. His method of preparing the solution is as follows: To 100 cubic centimeters of boiled sterile water 0.2 gramme of beta-eucaine and 0.8 gramme of sodium chloride are added; thereafter 18 minims of adrenalin chloride is dropped from the stoppered bottle in which this drug comes into the eucaine solution. If the bottle be corked at once, it will not spoil. This makes a solution of 1:500 eucaine and 1:100,000 of adrenalin chloride.

There were no instances of secondary hemorrhage, though a number of operations, such as those for the radical cure of hernia, were successfully performed.
Dr. Charles Edward Norris, of Passaic, and Miss Katharine Mae Losee, of Brooklyn, were married on December 9.

Dr. and Mrs. W. D. McKim have taken the Flagg house, on Madison avenue, Morristown, and will spend the winter there. Dr. McKim is a retired physician, from New York, and will hereafter make his home at Morristown.

Dr. R. C. Newton, referring to a statement regarding a conflict between the Health Board and the School Board, in Montclair, N. J., says that the friction was very slight and of short duration. The School Board declined at first to close one or two of the schools at the suggestion of the Health Board, but after a conference between the two boards the schools were closed. There was a delay of only twenty-four hours. Twenty cases of diphtheria were reported during a period of nineteen days instead of ten, and now the outbreak is apparently at an end.

Dr. R. S. Woodruff, treasurer for the Bayonne Doctors' Baseball Club, has turned over to the Bayonne Hospital $738.68, as the proceeds of four ball games played for the benefit of the hospital.

Tableaux were recently presented in Elizabeth for the benefit of the General Hospital.

At a meeting of the Italian residents of Orange, a movement was set on foot for the establishment of an Italian Hospital for Orange. It will be in charge of a Catholic sisterhood, but will care for patients of any nationality or creed. The hospital is now established in a rented building. The plan is to erect a stone and brick building next year.

Dr. James E. Mansfield, the Democratic Mayor-elect of Oswego, N. Y., was formerly a resident of New Brunswick, N. J. He was elected by a majority of 335 over his Republican opponent.

Dr. J. F. O'Connor, of Kearny, has been named as medical examiner of St. Cecilia's Branch, L. C. B. A., to take the place of Dr. B. A. Daly, who died a few weeks ago.

The committee on public health of the Orange Common Council has decided to recommend the erection of a garbage crematory. It is believed that the plant can be erected for $13,000, and being operated in connection with the pumping station the cost of maintenance of both plants will be less than would be the case were separate stations maintained.

The trustees who will have charge of Jersey City's new city hospital, have cut down the architect's plans, so as to keep within the $200,000 appropriation. The bids recently opened showed that it would cost at least $316,000 to erect the building from the present plans.

Newspaper reports show an epidemic of diphtheria at New Brunswick. There were many cases and the funds set apart for combating contagious diseases were exhausted.

Dr. F. J. Pond, for several years a member of the chemical force of the Pennsylvania State College, has accepted the position of assistant professor of engineering chemistry at Stevens Institute, Hoboken. Dr. Pond is the American editor of Prof. Fr. Heusler's important work on "The Terpenes."

City Physician A. C. Forman, who has been confined to his home in Bayonne with a severe attack of rheumatism, has recovered.
Dr. William H. Holmes, for many years a prominent physician and surgeon of Orange, N. J., died Nov. 30 at his residence, No. 48 Hillyer street. He was sixty-nine years old. He had been a sufferer from heart trouble and Bright's disease for more than a year, and these contributed to cause his death.

A leading feature of Governor Murphy's message to the Legislature at its approaching session will be a strong and urgent plea for the delayed appropriation for the tuberculosis sanitarium. He is greatly impressed with the seriousness of this matter, and in this he undoubtedly reflects intelligent public sentiment.

At the annual meeting of William Pier- son Medical Library Association, of Orange, the following officers were elected: President, Dr. Thomas W. Harvey; first vice-president, Dr. R. C. Newton; second vice-president, Dr. R. D. Freeman; secretary, Dr. J. H. Bradshaw; librarian, Dr. Henry Pulsford; executive committee. Drs. T. Y. Sutphen, W. B. Graves and Mefford Runyon.

The work on the new building for the Mountainside Hospital, Montclair, is rapidly nearing completion and within a few months the much needed addition will be ready for use. The cost of the construction, alterations and equipment will be more than $50,000. A little more than half this amount is already subscribed.

Drs. Wagner, Gage and Wickham, who constitute the medical staff of the Elizabeth General Hospital, have been served with papers in a suit for $5,000 brought by Samuel Gersburg, who claims that he was falsely arrested and locked up over night in police headquarters.

The doctors say they were sitting on the piazza of the hospital on Saturday afternoon, when a boy ran up and asked permission to use the telephone saying he wished to notify the police that there was a burglar in his house. While he was talking with the doctors a man came up and when he was about to pass the hospital, the boy said to the doctors: "There's the man now. Catch him for me."

The doctors ran out and caught the man and he was taken to police headquarters. After being released for lack of evidence, Gersburg went to the hospital and there demanded that the three doctors apologize. This they refused to do.

Dr. Merit H. Cash Vail, known as the "Father of Vailsburg," after whom the place is named, with Mrs. Vail, celebrated his golden wedding anniversary at his home in Long Beach, Cal., November 24. For many years Dr. Vail was county superintendent of schools of Essex county, and he has a war record, having been a surgeon from the outbreak to the close of the civil war, seeing active service on the field. He was born in Glenwood and studied medicine at Castleton, Pa. He has been noted as an oculist, and was an organizer and the first president of the Newark Eye and Ear Infirmary. Politically he is a Democrat, and has served as an Assemblyman, Alderman and member of the Board of Education of Newark. He founded Vailsburg borough, being a large property holder there.

Smallpox has been rife at Camden, and it became necessary for the board of health to order general vaccination among employees of factories, and to disinfect eight schools, where 5,300 pupils were enrolled.

Dr. F. D. Gray, of Jersey City, who spent a long time in European hospitals studying surgery, has opened his office at 604 Bergen avenue, and will limit his practice exclusively to surgery and consultation work. Dr. Gray will thus become the first surgical specialist Jersey City has had, but if his work at Christ and Union Hill hospitals is any criterion, he is abundantly fitted for the duties of his new field.
methods of registration, the use of uniform and comparable tables and rates in bulletins and reports, and the improvement of the international classification of causes of death. A pamphlet on "Statistical Treatment of Causes of Death" has been issued by the United States Census Bureau, requests for which should be addressed to W. A. King, Chief Statistician for Vital Statistics, Census Bureau.

It has special reference to the difficulties encountered in compiling deaths returned from several causes, and asks for the cooperation of the profession in framing a thoroughly satisfactory method of procedure in such cases.

The Committee on the Senn Medal begs to call attention to the following conditions governing the competition for this medal for 1904: A gold medal of suitable design is to be conferred on the member of the American Medical Association who shall present the best essay on some surgical subject. The award will be made under the following conditions: 1. The name of the author of each competing essay must be inclosed in a sealed envelope bearing a suitable motto or device, the essay itself bearing the same motto or device. The title of the successful essay and the motto or device is to be read at the session at which the award is made, and the corresponding envelope is to be then and there opened and the name of the successful author announced. 2. All successful essays become the property of the association. 3. The medal shall be conferred and honorable mention made of the two other essays considered worthy of this distinction, at a general meeting of the association. 4. The competition is to be confined to those who, at the time of entering the competition, as well as at the time of conferring the medal, shall be members of the American Medical Association. 5. The competition for the medal will be closed on, and no essays received after, March 1, 1904. Communications may be addressed to any member of the committee, which consists of the following: Dr. James H. Dunn, chairman, Minneapolis; Dr. M. L. Harris, 100 State street, Chicago; Dr. Floyd McRae, Atlanta, Ga.

The thirtieth annual meeting of the Mississippi Valley Medical Association, will be held at Cincinnati, October 11, 13, 1904.

The following are the officers of the association elected at Memphis: President, Edwin Walker, M.D., Evansville, Ind.; president-elect, Hugh T. Patrick, M.D., Chicago; first vice-president, Bransford Lewis, M.D., St. Louis; second vice-president, Geo. W. Cale, Jr., M.D., Springfield; secretary, Henry E. Tuley, M.D., Louisville; assistant secretary, S. C. Stanton, M.D., Chicago; treasurer, Thos. H. Stucky, M.D., Louisville.

The following resolution was offered by Dr. S. P. Collings, of Hot Springs, Ark., at the Memphis meeting:

Whereas, The value of perfect sight and hearing is not fully appreciated by educators, and neglect of the delicate organs of vision and hearing often leads to disease of these structures; therefore, be it

Resolved, That it is the sense of the Mississippi Valley Medical Association that measures be taken by boards of health, boards of education and school authorities, and, where possible, legislation secured, looking to the examination of the eyes of all school children, that disease in its infancy may be discovered and corrected.
CONTENTS:

ACUTE INFLAMMATION OF THE ACCESSORY SINUSES OF THE NOSE. By Norton L. Wilson, M.D. of Elizabeth, N. J. This instructive article deals with the predisposing and exciting causes, bacteriology, pathology, diagnosis, transillumination and treatment of acute sinusitis, an affection which is becoming very common of late years. 235

MOUTH BREATHING. By Clifford M. Miller, M.D. of Richmond, Va. Dr. Miller shows in a clear and concise manner the ill effects resultant upon mouth breathing. He says the nose has a most important physiological function to serve and that nasal stenosis and consequent mouth breathing is a menace to general health 240

THE VALUE OF NASAL RESPIRATION. By A. C. Bardes, M.D. of New York. This article follows Dr. Miller's and goes into the physiological action of the nasal organ carefully 244

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Netter, Wenckebach, Drs. C. G. Cumston, S. Marx, J. D. Voorhees, and many others.

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NEWS AND NOTES.

J. H. Tilden, M.D., of Denver, in the June number of the Chicago Medical Times, in an article advocating the use of tampons in gynecological practice, reports among others a case which was characterized by severe reflex symptoms and which had not yielded to the treatment accorded by two other practitioners. Dr. Tilden's procedure was the introduction of a glycerine tampon and the administration of anti-kamnia in ten grain doses (two five-grain tablets) to relieve the pain. The tampon was removed each night at bedtime and followed with hot water injections. The patient on being discharged remarked that since following this treatment she could run the sewing machine without the usual pain and tired feeling.

The Journal of Infectious Diseases, a new magazine to be established at the University of Chicago, has been endowed with $125,000 by Mr. and Mrs. Arnold F. McCormick, the parents of John D. Rockefeller's favorite grandson, whose death from scarlet fever three years ago inspired the establishment of the Rockefeller Institute for Medical Research. The magazine is to be distributed free of charge to libraries and to sanitary experts of various cities. Dr. Ludvig Hektoen, head of the department of pathology and bacteriology at the university, and Dr. Edwin O. Jordan, associate professor of bacteriology, are to be the editors. The first number will appear from the University of Chicago press on January 1.

The New York Times says: "A judgment recovered by Herbert Hazard on an assigned claim of Drs. Emory M. Wadsworth and Stuart H. Benton against Mrs. Caroline Potts for medical services has been reversed by the Appellate Term. The court holds that a married woman is not liable for medical attendance rendered to her husband and his family unless in the first instance she pledged her personal credit to the attending physician."

The New Castle County Medical Society of Delaware held its annual meeting June 19, and the appropriate officers were elected. Provision was made to have within the society a "Press Committee," whose function shall be to write as occasion may demand popular articles on important medical subjects, particularly hygiene and sanitary science; (2) to control so far as possible the reporting of medical news in the local papers; (3) to endeavor to influence lay editors in favor of properly handling medical subjects editorially and otherwise. The suspicion of self-advertisement, which is attached to signed articles written by medical men, will thus be avoided, since any article written by a member of the Press Committee will simply be signed by "The Press Committee," and the public will have no knowledge of the individual writer.

Physicians who have been using the old-fashioned poultices will do well to give the Thermocompress a trial. It is the most rational method of applying heat and cold externally that has ever come to our attention. The compress, which can be applied to any part of the body, combines the good qualities of poultices, blisters and all counter-irritants.

In the presence of a large assembly of citizens, Mayor Paul Capdevielle has turned the first spadeful of earth in the work of constructing a vast system of sewerage, water and drainage for New Orleans. The total cost, roughly, is $18,000,000, and the undertaking is to be finally completed within the next five years. There are to be built such systems of sewerage and water supply as only have been developed in other cities of similar size by gradual growth extending usually through several generations. They will ultimately accommodate more than double the present population.

Among those who recently received the degree of M.D. from the Medico-Chirurgical College of Philadelphia were these New Jersey residents: Enoch Blackwell, Frank Fisher Moore, Edward Parry, Ph.G.; Frank Remington Sheppard, John Van Ess.

More New Jersey men receiving a D.D.S. were: Harold C. Davis, Burritt B. Filer, Arthur M. Knight.

Neurosine is composed of no new or untried drugs, but such as are well and

(Continued on page 17.)
CONTENTS:

CERVICAL INCISIONS IN LABOR. By Rudolph W. Holmes, M.D., of Chicago. This paper considers the proper methods of procedure for cervical incision. The author finds that while such incisions are always potentially dangerous, they are indisputably of value and many times absolutely necessary. Immediate delivery should follow the incisions .......................................................... 267

THE MICROSCOPE IN PRACTICAL MEDICINE. By E. B. Ferebee, M.D., of Raleigh, N. C. This is a practical exposition of the value of the microscope to the practitioner as a clinical assistant. He shows its worth in examinations of the blood, sputum, stomach contents, feces, and pays particular attention to the various anemias and typhoid fever .......................................................... 273

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CLINICAL NOTES.

TYPHOID FEVER.

By S. D. WARNOCK, M. D., Atlanta, Ga.

The subject is of far greater importance than it would appear at first sight, although every general practitioner recognizes that typhoid fever is a disease always with us and of sufficient severity oftentimes to produce death. The decrease in the frequency and mortality of typhoid fever is undoubtedly due to improved sanitation and a better knowledge of the methods which should be employed in treatment.

Having had much experience with typhoid fever I cannot support the doctrine that this disease must run its course, that an attack must last a given period of time, with broths, sweet milk and ice water constituting the treatment. That attacks of typhoid fever are often cut short or mitigated by proper and timely medication, though having reached the typhoid state as proven by the Widal reaction, is a fact beyond controversy.

The physician always dreads typhoid conditions, and inasmuch as they are likely to be encountered at any time, he should be equipped with such remedial agencies as clinical experience alone has proven to be best adapted for successfully carrying the patient through the trying stages. While I do not know of any medicine that is really abortive, I do know that the early and continuous employment of sustaining remedies and systemic antiseptics will lessen the severity and duration of the attack, and hence not infrequently saves the patient's life. When typhoid conditions are suspected, it is my custom to commence the administration of Proto-nuclein, which adds to the power of cell structure in overcoming disease by increasing leucocytosis. I give three tablets every three hours, decreasing the dose as the system responds to the treatment.

Typhoid fever, although a distinct and separate disease, is often found associated with other primary troubles. The most frequent pathological processes without a semblance of typhoid character, but which later assume the well defined typhoid features are those of the alimentary canal. Some morbid conditions of this class have reached serious proportions before evincing typhoid characteris-
tics, thus proving that the system in its morbid state becomes the laboratory for the propagation and dissemination of the typhoid bacilli.

The ills most likely to assume typhoid features are gastritis and various gastrointestinal troubles. Hence, the very medium of infection in the one case, may originate and disseminate the typhoid germ in another, or in other words, local functional disturbances that may have been a complication resulting from typhoid infection in one case, are frequently the point of origin and primary infection in others. It seems that a low state of the system, a process of tissue waste or a destructive metamorphosis produces the culture media adapted to the propagation and dissemination of typhoid germs. We must not ignore the fact that a separate and characteristic disease generally recognized as typhoid fever is the form most fatal, and regarded at present as contagious.

In the treatment of typhoid fever symptoms must be treated as they present themselves. In every case I at once commence the administration of such remedial agents as will best preserve the vital forces, sustain assimilation and systemic nutrition by favoring a normal metabolism and thus stimulate the elimination of waste products and lessen the destructive metamorphosis. Agents of this class will serve as tissue food. Trophonine has served me admirably in this way, undoubtedly carrying the patient through. Ordinary foods must be sparingly allowed and Trophonine answers well for such a regimen, without giving rise to any detrimental results, in doses of two teaspoonsful every three hours. In the early stage, calomel should be given for its influence over the secretory function. The temperature should be controlled and bowel and other complications should be fully and timely regulated. The cold water bath ought only to be employed in exceptional cases, as it often proves injurious when not carried out with proper caution and conveniences. Under the treatment as outlined, patients seldom suffer from perforation, hemorrhage or relapses from dietetic indiscretion, and as a rule make a rapid and uncomplicated recovery.

In a very forceful and exceedingly interesting paper on "Melancholia, Insomnia and General Lowering of Nerve Power," published in the *Cincinnati Lancet-Clinic*, Dr. T. D. Fink, of Louisville, Ky., writes the following: "I am convinced that there is no other remedy so useful and attended with such satisfactory results in the treatment of melancholia with vasomotor disturbances, anemic headache, emotional distress and active delusions of apprehension and distrust as antikamnia tablets. These tablets also increase the appetite and arterial tension, promote digestion, and are particularly serviceable in relieving the persistent headache which accompanies nervous asthenia. In neurasthenia, in mild hysteroid affections, in the various neuralgias, particularly ovarian, and in one nervous tremor so often seen in confirmed drunkards, they are of peculiar service. Patients who suffer from irritable or weak heart, needing at times an analgesic, can take them without untoward after-effects, knowing that the heart is being fortified. In delirium tremens, they relieve when there is great restlessness with insomnia and general lowering of the nerve power. The pain of locomotor ataxia yields to treatment with antikamnia tablets in a remarkable degree, their analgesic power being of a peculiar kind, in that they will relieve painful affections due to pathological conditions of the peripheral nerves, as neuritis, etc., also lumbago, sciatica and myalgia. In chronic catarrh of the stomach, with its often accompanying headaches, in cardiac dropsy, and in ascites, they are of decided benefit."

The German central committee for the erection of sanatoria for tuberculosis consists of 1,300 members. Among them are 83 physicians, 6 government ministers, 24 insurance companies, 159 government employees, 344 merchants and manufacturers, 39 business houses and 4 boards of trade. There are now 74 sanatoria, and 30,000 patients were treated last year. Of this number 80 per cent. were returned to active life practically cured. The duration of the stay in sanatorium averaged seventy-nine days.
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THE ETIOLOGY AND PATHOLOGICAL ANATOMY OF ANEURISM. By W. Loundes Peple, M.D., of Richmond. This number of Gaillard's is given up to a symposium on Aneurism, and Dr. Peple opens it by giving in detail the etiology and pathological anatomy of the affection. .................................................. 299

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Literature on Application.
NEWS AND NOTES.

Bovinine in Consumption.

From the prevailing disbelief, which was almost a despair, the recent knowledge that consumption is curable is rapidly disseminating.

This is not due to any miraculous medical specific that has appeared, or ever will appear; nor to climate alone, for cases originate in California, Colorado, the Riviera, and the most noted resorts of the Swiss Alps, but it is accomplished by the rapid restoration of tissue-waste with nutrition that contains all the elements of the human body, in right proportions and ready for immediate assimilation, to enable the system to build faster than the malady can break down.

While it has been abundantly proven that the tubercle bacilli is often the means of perpetuating consumption, it never has been satisfactorily demonstrated that it is the sole cause of the disease. No doubt every human being in the civilized world is sooner or later exposed to this germ, but only a small minority are susceptible to its infection. The great majority are immune by virtue of normal vigor, normal nutrition, which does not furnish the nourishing nidus for this bacillus.

The long and feverish search for a drug that shall demonstrate its right to be called a specific has been almost abandoned. The thousand and one alleged “cures” or specifics for consumption have all proved cruel delusions. Tuberculin is a sorry example. Creosote, cod liver oil, guaiacol and all their derivations and modifications have signally failed. Recent searchers have confined their efforts mainly to the field of antagonizing serums, but instead of reaching favorable results, it looks as though the whole serum theory would, ere long, be abandoned as a mistake.

There is no positive cure for consumption outside of an element or influence that restores normal nutrition that enriches the blood and builds the tissues. This being accomplished, Nature does the curing. The sooner we all accept this demonstrated fact that general vital recuperation, by whatever means it may be accomplished, is the only cure that is scientific, that has ever been known or ever will be known, the less time we will lose in conducting the battle royal with this fatal scourge.
Patients who die of tuberculosis, starve to death. Those who recover from tuberculosis are fed to health—cured by feeding. Feeding, however, is not necessarily nourishing, no more than eating is assimilating. Thousands of victims of this wasting disease starve with stomachs full, and plenty more within reach. There is no dearth of elegant and costly viands—it is availability they lack. They call for an exhibition of vito-chemic force which the consumptive’s stomach does not possess. Bovinine does nothing of the kind. It is living tissue pabulum in natural solution and instantly available. It responds at once to the demands of the starving organism.

Life nourishes life, cell rebuilds cell, and the life of all cells is the circulating, vivifying fluid, the sap in the tree, the blood in the animal. Plants transmute crude inorganic matter into organic forms; animals take up vegetable organisms and advance them to a higher stage. Each advance is an intensification, a rise in the vital scale, a further refinement of cell structure and cell function.

Bovinine quickly and permanently restores the broken constitution of the consumptive by supplying the vitalized protoplasm, living cells, ready for instant appropriation, without taxing the digestive system. It builds up the demoralized system by furnishing the ready-prepared pabulum and by resting them restores the digestive and assimilative functions. The victims of consumption starve because the vital organs tire out and give up the struggle, surrendering to the forces that disintegrate and destroy.

Bovinine bases its claims wholly on its direct and positive influence in restoring vital tone, flesh and strength to the debilitated system. It begins at the foundation by restoring the blood. It supplies the shattered and wasted organism with exactly what it must have in order to recuperate, and supplies it in a form that is immediately available.

The following excerpt from an article in the Virginia Medical Monthly, by Stephen J. Clark, M.D., 66 West Tenth street, of this city, plainly outlines the useful combination of two leading remedies in materia medica:

“Binz claims specific antiseptic powers for quinine; other writers are in accord with him on this point, and report good results from large doses in septicaemia, pyaemia, puerperal fever and erysipelas. It is a germ destroyer of the bacilli of influenza (la gripppe). Antikamnia and quinine tablets will promptly relieve in this disease. Quinine is a poison to the minute organism, sarcina; and antikamnia exerts a soothing, quieting effect on the nerve filaments. A full dose (two five-grain tablets) of this remedy will often arrest a commencing pneumonia or pleuritis. These tablets are also useful in the typhoidal fever of the South—particularly for the hyperpyrexia—both quinine and antikamnia, as previously said, being decided fever reducers. They are likewise most valuable in cases of periodical attacks of headache of undefined origin; of the so-called ‘bilious attacks;’ of dengue; in neuralgia of the trigeminal; in that of ‘ovarian catarrh;’ and, in short, they are effective in every case where quinine would ordinarily be prescribed and without the ‘ringing’ which generally accompanies the administration of quinine alone.”—New York Medical Journal.

The Tenth International Congress of Ophthalmology is to be held in Lucerne, Switzerland, September 19-21, 1904. A circular issued by the organizing committee of the congress gives many points of information regarding the meeting. The mornings will be devoted to discussions and the afternoons to practical demonstrations. To this end the papers are to be sent before May 1, 1904, when they will be printed and sent to each subscriber to the congress at least two weeks before the meeting. Reading of the papers can thus be dispensed with and the discussion at once begun. Only one official subject will be presented, this being “To Settle the Question of Indemnity as Regards the Value of an Eye. Lost or Injured.” Full information may be obtained from the following American correspondents: Dr. G. E. de Schwenitz, 1401 Locust street, Philadelphia, Pa.; Dr. Coote, Quebec, Canada. 

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NEWS AND NOTES.

Dr. John Moir, in The Therapist, London, says: "Latterly I have been using heroin very extensively in tablet form in combination with antikamnia, and found the combination to act charmingly, both for relieving pain and in procuring comfortable, restful sleep, so very desirable and necessary after sleepless periods, caused by a protracted, irritable cough. The soothing rest in these cases was also characterized by a light but well-marked fall in temperature; but the greatest benefit of all in this treatment is that, although the distressing frequency of the respiration was reduced, it was stronger and heavier and less spasmodic, with a beneficial effect upon the heart at the same time. The tablets I use contain antikamnia 5 grs., heroin hydrochlor. 1/12 gr., and were given every two, three or four hours, in cases of cough, bronchitis and respiratory affections generally, according to the severity of the symptoms, but usually one tablet every three hours. I found that the respiration was rendered easy, the expectoration was loosened without difficulty, and sleep was more readily obtained than with morphine, and unlike morphine there were no after-effects. I have, personally, been taking Antikamnia and Heroin Tablets three times a day for an irritating cough, with occasional inclination to breathlessness; so that I have every reason to be thoroughly satisfied with them as sedatives and calmatives."

An investigation made under the auspices of the Philadelphia Bureau of Health has shown that of seventy-eight cases of typhoid fever in one ward, forty-one occurred among persons who obtained their milk from a single dealer in whose family there were cases of the same disease. Other cases occurred in the customers of another milkman, in whose family also there had been typhoid fever. In both instances the sale of milk was stopped, and a process of general cleaning and disinfection instituted. Other hygienic deficiencies were found, but it was definitely shown that there was no relation whatever between the disease and the filtered water.

I have used Sanmetto in enlargement of the prostate, suppression of urine and
chronic inflammation of the bladder, and can recommend its use for any and all of the troubles of the urinary tract.

J. A. WILSON, M.D.
Columbus, Ohio.

The following gives a brief review of the loss of life from various disasters in the first half of 1903, but makes no mention of the enormous loss of property and of suffering aside from the fatalities: On January 27, at Westfield, N. J., a railway collision occurred which killed 23 people; on February 16, a trolley car collision occurred at Newark, N. J., killing 9 persons; on March 20, a collision occurred on Long Island Sound between two boats in which 6 persons were killed; on April 9, a tornado in Arkansas and Alabama killed 21 people; on April 20, a landslide occurred in S. W. Alberta, Can., which killed 56 people; on May 30, and the following days floods along the Missouri and Des Moines rivers caused the death of 75 people; on June 1, the tornado at Gainesville, Ga., killed in the neighborhood of 100 people; on June 6, at Clifton, S. C., a cloudburst killed 58 persons; on June 8, the breaking of a levee at Granite City, III., on the Mississippi river, killed 35 people, and on June 9, an embankment broke at East St. Louis, by which 30 persons were lost; on June 14, a cloudburst at Heffner, Ore., caused a loss of life which is estimated at 500 persons.

Between December 27, 1902, and May 22, 1903, there have been 18,735 cases of smallpox with 617 deaths in the United States, as compared with 34,184 cases, with 1,053 deaths, during the same period of the previous year.

I have lately had occasion to try your blood-builder, Pepto-Mangan (Gude), in the case of a young anemic person, in which other treatment had proved unsuccessful. The results have been rapid and excellent.

DR. E. ZBINDEN.

Orbe.

Dr. Morris Bailey, of Titusville, Pa., lately celebrated his eighty-fifth birthday, and especially marked the day by erasing from his books accounts extending over half a century and aggregating about $42,000. He still has some $10,000 "hard to collect" accounts, and may some day settle these in the same way. But paying patients have supplied him with a competency.

Bioplasm contains nuclein, lecithin, diastase, trypsin, all animal enzymes, and an alkaloid, but its chief therapeutic virtue lies in a new product created in its process. It results from mycetous (and digestive) action on a wort made from the Nepenthe plants (Saracen) macerated and united with the animal enzymes by the process stated, checked at a precise degree. The ferment, alkaloid, and the new product (the bioplasmic force) are separated, desiccated, triturated with chemically pure sugar of milk (Merck) all at a temperature of 108° F. Bioplasm (per ox alk) differs only in the excipient, which has the lactose substituted by an oxide (super) of magnesium (C. P.) for use in cases complicated by anamolous dyspepsia.

On May 21 there was formally opened, about five miles from Denver, what is to be called "The Denver Association Health Farm," the aim of which is to provide a sanitary home with nutritious food and pleasant occupation for persons of small means who are in need of the restorative influence of the Colorado climate. The Association Farm consists of ninety-four acres—a thirty-four acre fruit farm, the gift of Mr. and Mrs. David Brothers, and a sixty acre ranch. The present equipment includes a brick house for office, superintendent's residence, parlor, dining room, kitchen, cellars for one thousand barrels of apples, stable, and a group of cottage tents for the guests of the farm. Only one resident will occupy each tent.

I most heartily recommend Noitol in the treatment of the various forms of skin diseases, especially these presenting as a prominent symptom, itching and burning of the surface.

In the treatment of pruritis, I have found it superior to any other agent.

(Continued on page 17.)
NOTES ON CHALYBEATE THERAPY.

By DR. J. W. FRIESE R, of Vienna.

The medicinal use of iron dates back to a remote period, and since ancient times ferruginous medication has played an important part in the treatment of anemic conditions. To this group belong, first, the large number of constitutional affections, especially scrofula and rachitis; second, tuberculosis in certain stages of its development; third, certain nervous disorders which are commonly attended with anemia, such as neurasthenia and hysteria; fourth, all conditions of weakness and exhaustion following severe acute-febrile diseases or appearing during the period of convalescence from other serious diseases; and, finally, the anemias arising in the course of chronic and wasting disease.

The chalybeates comprise a quite considerable number, all of which are intended to fulfill the therapeutic aim of supplying the lack of iron which is the source of the anemic condition, of bringing about an improvement of the pathological state of the blood, and of promoting blood formation in a normal manner. According to recent studies we have to deal in anemia and chlorosis, as well as in other anemic forms of disease, besides the loss of iron, with a marked diminution of the manganese, which, like iron, is not an unimportant constituent of the blood, and for this reason an adequate equivalent appears necessary. Our widened knowledge of the physiological action of remedies, and the constant striving of chemists to produce drugs of the greatest possible specific nature, have enriched the materia medica with very valuable acquisitions which permit of a method of use corresponding to the requirements and more convenient for the patient. We are led more and more to recognize the fact that inorganic iron, owing to its slight absorbability and assimilability, as well as its difficult digestibility and its irritating action upon the mucous membrane of the digestive tract, is not at all adapted for the rational treatment of the forms of disease considered here, and that only iron of organic character which approximates in its composition to the iron present in our foods presents those advantages in improving the quality of the blood which conform most
closely to the demands of a logical and successful therapy. In judging a ferruginous preparation, we must decide the important question as to what should be the requirements of a useful and efficient chalybeate in every direction if all demands are to be met in a scientific and practical manner. Above all, such a preparation must be capable in a high degree of absorption and assimilation, must be digestible, easily borne, palatable, and must not in any manner exert disturbing by-effects upon the functions of the organism.

According to my extensive observations, these postulates are fulfilled in a satisfactory manner by pepto-mangan (Gude). I have had frequent opportunities, in a considerable number of cases (42) in which the preparation was employed with success, to acquaint myself with its therapeutic value and its beneficial medicinal properties.

In the administration of pepto-mangan to anemic and chlorotic patients I have been able to make the positive observation that under its use the constitution of the blood underwent a very satisfactory and sometimes remarkable improvement, often after a comparatively short period of treatment. The examination of the blood frequently showed a rapid increase of the number of red blood cells and of the percentage of hemoglobin, this being attended by a marked improvement of the general health and an increase of strength. Pepto-mangan contains iron and manganese combined with peptone in the proper proportions and in a readily digestible and absorbable form, so that the preparation can be completely utilized by the organism. The peptones represent artificial predigested products which when taken into the organism make no special demands upon the digestive functions, which in anemic and chlorotic persons are usually weakened and impaired in action. It has been most gratifying to me to observe that during the use of pepto-mangan, it does not interfere with or exert any disturbing effect upon the digestion. On the contrary, under its administration the appetite and the digestion are stimulated in a very satisfactory manner. It seems to me particularly noteworthy that often, even after a brief use of pepto-mangan, the anemic appearances, especially the often marked apathy, lassitude and drowsiness, the palpitations of the heart, and headache, disappeared in a very satisfactory manner, and that even in those patients who suffered from insomnia frequently a good refreshing sleep occurred.

Aside from primary anemia and chlorosis, the preparation produced beneficial effects in all those diseases which are apt to be attended with or followed by anemic conditions of various kinds and degrees. As a rule, its action in scrofula and rachitis was excellent, and no less favorable in the incipient stages of tuberculosis in which anemic phenomena are frequently observed. Furthermore, it proved of value in conditions of debility, during convalescence from acute febrile and exhausting diseases and in those chronic wasting maladies often accompanied by anemic states. Particularly striking was the success of treatment in three cases of very severe chlorosis and in two cases of marked acute anemia following considerable losses of blood. In a comparatively short period of administration (five weeks) a most remarkable improvement, both of the general state and the appearance of the patient, as well as of the condition of the blood, took place. I cannot refrain from mentioning that in several cases in which the administration of iron appeared contraindicated owing to marked digestive disturbances or to an acute febrile state, pepto-mangan was prescribed by me without any drawbacks, but rather with eminently satisfactory results. It is my custom to direct that pepto-mangan be taken in the treatment of anemic conditions and chlorosis to the exclusion of other treatment, and only in combination with appropriate dietetic measures, for periods of several weeks, and if necessary longer, three to four months. For adults I prescribe three tablespoonfuls to three to four dessertspoonfuls daily, for children three teaspoonfuls daily, in water or some white wine. During the entire time of administration I prohibit the use of raw fruit, acid or highly spiced dishes, and order a vigorous and regulated diet. In severe

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THE SURGICAL TREATMENT OF PUERPERAL INFECTION. By H. J. Boldt, M.D., of New York. This abstract condemns indiscriminate curetting. The author reaches the conclusion that in acute forms of Septicemia and Pyemia, in which the general circulation has been invaded by micro-organisms, surgical intervention is of no benefit. 402

THE TREATMENT OF PUERPERAL SEPSIS. By Hiram N. Vineberg, M.D., of New York. The author, who is a most successful operator, advises radical treatment in this serious condition. 405

POSSIBILITIES OF LIQUID AIR TO THE PHYSICIAN. By A. Campbell White, M.D., of New York. Liquid Air is proving of great benefit to the medical profession, and Dr. White is well qualified to tell of its use. He promises a longer article for Gaillard's in the near future. 410

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Schering’s Formalin Lamp
Simple—Convenient—Safe
A powerful auxiliary in the treatment of catarrhs, whooping cough, influenza, diphtheria, measles, scarlatina, small-pox, etc. It renders the course of the infection shorter and milder, and lessens the danger of contagion. The vaporization of the Formalin Pastills can be regulated at will, and perfect deodorization may be effected without the slightest discomfort to the patient.

Formalin-Schering (the standard 40% formaldehyde solution) should be specified when the liquid is to be used, to prevent the substitution of inferior brands of varying strengths. If "formaldehyde" is prescribed, the pharmacist may suppose that the 100% gas is meant and dispense a solution 2 1/5 times as strong as desired. Such errors are excluded by designating "Formalin-Schering", the original product.

Beta-Eucain
Is only one-fourth as toxic as cocaine and more constant in action. Can be used much more freely and never shows untoward by-effects. Its solutions keep indefinitely and can be sterilized by boiling. Highly recommended by Profs. R. Matas, Willy Meyer, John B. Murphy, R. Guiteras, R. H. M. Dawbarn, H. Brann, Arthur E. Barker, R. Reclus, C. S. Schleich, and many other eminent surgeons.

Urotropin
is now universally acknowledged as the safest and most efficient urinary antiseptic and uric acid solvent. As a prophylactic in genito-urinary instrumentation and a typhoid preventive, its place can be taken by no other drug. A résumé of its literature, comprising over 200 reports and embracing recommendations by the most eminent specialists, furnished upon request.

To prevent substitution, Urotropin tablets are now stamped "E. Schering".

Sublamine
A Non-irritant Surgical Disinfectant of Greater Efficiency than Sublimate
Does not roughen the hands, hence they are always easily disinfected. Penetrates deeply into the tissues, as it does not coagulate albumin. Retains its full bactericide efficiency in the presence of soap suds. Dissolves almost instantly, causing a pleasant softening of the water. Alcohol is not required in hand sterilization by the Sublamine method. Sublamine is indicated in all cases where sublimate is used.

Glutol
An odorless, non-irritant and non-toxic powder, acting as a homogeneous occlusive wound dressing, without injuring cell activity. It cuts short acute suppurations, quiets the pain of burns, and quickly heals them.

Trikresol
For surgical use and instrument sterilization, being much more efficient, far less toxic and relatively cheaper than carbolic acid. It is 100% pure, while lysol and creolin contain only 50% or less of raw cresols.

Schering’s Glycero-Phosphates
Readily Assimilable Nerve Tonics
Indicated in all debilitated conditions of the nervous system, in neurasthenia, anemia, phosphatic albuminuria, diabetes, rickets, and convalescence from acute diseases. The Lime and Iron salts are also supplied as 5 grain tablets, bearing the imprint "E. Schering". They are guaranteed to be true glycerophosphates, not mere phosphates.

SCHERING & GLATZ, New York,
Literature on Application. Sole Agents for the United States.
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NEWS AND NOTES.

The Oppenheimer Institute, in addition to new institutes at Saratoga and Johnson City, Tenn., has organized a Woman's National auxiliary to assist in furthering the excellent work of Dr. Oppenheimer. The officers of the new organization include such well-known women as Mrs. Dunlap-Hopkins, Mrs. Isabella C. Davis, Mrs. Donald McLean, Mrs. J. Ellen Foster, Mrs. Colgate Hoyt and Mrs. Lovell Jerome.

This board, with the strong advisory directorate, the strongest, by the way, in the country on any board, should be the means of spreading temperance most effectively.

The rule of many physicians is to administer Dioviburnia in teaspoonful doses, four times a day, one week before the time for periods, during the last three months of gestation. Experience has convinced them that Dioviburnia not only prevents miscarriage, but also facilitates parturition. To obtain satisfactory results, great care should be taken to avoid substitution.

The Milwaukee Medical Magazine has ceased publication.

We would not banish opium. There are times when it becomes our refuge. But we would restrict it to its proper sphere. In the acute stage of most inflammations, and in the closing painful phases of some few chronic disorders, opium in galenic or alkaloidal derivatives is our grandest remedy—our confidential friend. But here the application should cease; and it is just here that the synthetic products step in to claim their share in the domain of therapy. Among the latter, perhaps none has met with so grateful a reception as Antikamnia Tablets, and justly so. Given a frontal-temporal-vertical or occipital neuralgia, it will almost invariably arrest the head pain.
In the terrific fronto-parietal neuralgia of glaucoma, or in rheumatic or post-operative iritis, they are of signal service, contributing much to the comfort of the patient. Their range of application is wide. They are of positive value in certain forms of dysmenorrhea; they have served well in the pleuritic pains of advancing pneumonia and in the arthralgias of acute rheumatism. They have been found to allay the lightning, lancinating pains of locomotor ataxia, but nowhere may they be employed with such confidence as in the neuralgias limited to the area of distribution of the fifth nerve. Here their action is almost specific, sur-passing even the effect of aconite over this nerve.—*National Medical Review*.

Dr. John Ferguson reports a case of extreme anemia, in the Canadian Medical Record, which was relieved by protonuclein after other treatment had failed. The lips and conjunctiva were almost colorless. The skin had a pale lemon tint. The red blood corpuscles were only 1,200,000 per cubic millimeter. The urine was normal. No organic disease could be discovered. In spite of all efforts at treatment and feeding, he gradually grew worse and was sent to the Toronto Western Hospital. There the bowels were washed out daily with a large enema, containing boracic acid. Daily he was given a sponge bath, and the stomach was washed out. He was fed on peptonized milk, egg albumen and beef juice.

He had been in the hospital a little over a week, and all the appearance pointed to an unfavorable termination of the case. He was then placed on protonuclein tablets. The enemata, lavage of the stomach, and the same nourishment was continued. Tablets were given every three hours. By the third day it became apparent that the patient was improving. The red blood cells which at first numbered 1,000,000 to the cubic millimeter rose rapidly to 3,500,000, and the patient left the hospital in excellent condition.

Dr. M. W. Curran, of 134 E. 72d street, New York, announces that he desires a physician as staff correspondent in every town in the State, to supply scientific, social, institutional and personal news, for which regular newspaper rates will be paid.

It has been decided to erect a new dispensary building on the grounds of the Methodist Hospital, Philadelphia. The structure will be 40 by 80 feet in size, of Pompeian brick, and it will cost $15,000.

Life sustains life—it is the law, order and sequence of Nature. Our present knowledge does not enable us to define this mysterious life, but we know how it is nourished. The animal transmutes plant, pulp and seed into assimilable nutriment, dissolves it in a saline fluid (serum) and sends it coursing through the distributing channels of the body. It is free from waste, distilled, refined, perfected by unerring vital chemistry—it is ready for instant use.

Bovinine is this vital fluid, perfectly sterilized and protected from deterioration. In Bovinine the life giving elements that go to sustain and build the body retain all their nutritive integrity, ready for immediate absorption into the circulating medium, that medium through which all degenerative processes are interrupted, all repairs accomplished, all growth induced. There are no artificially prepared foods to be compared with it, since Nature herself compounds, refines and perfects it to her own needs and purposes.

Aside from the value of Glyco-Thymoline as an application to the mucous membrane in various abnormal conditions, Dr. J. William Henry, of Brooklyn, considers it of great value in the treatment of diatherasia. In a recent case, a most severe attack, in which every symptom pointed to a discouraging diagnosis, Dr. Henry used Glyco-Thymoline by spray and swab in conjunction with the ordinary constitutional treatment, with the result that, much to his surprise and gratification, the crisis passed without serious trouble. In tonsilitis, Dr. Henry has adopted the use Glyco-Thymoline for some time, its action being rapid and the results very agreeable to the patient. —*New York Medical Journal*, Oct. 24, 1903.

The Woman's Medical College of Pennsylvania has planned the erection of

*)Continued on page 17.*