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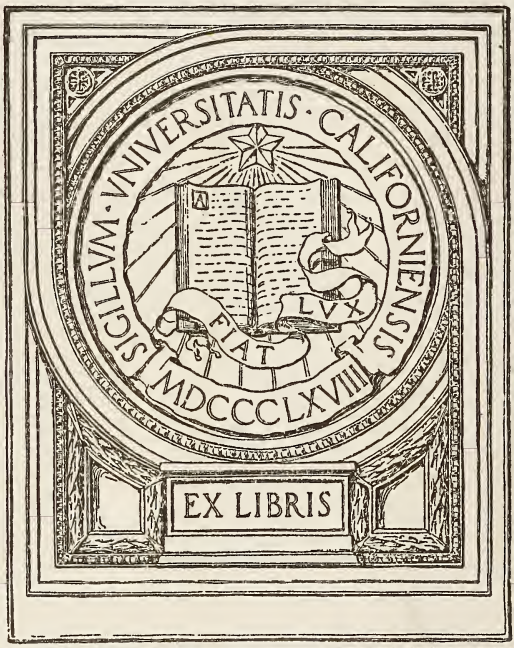

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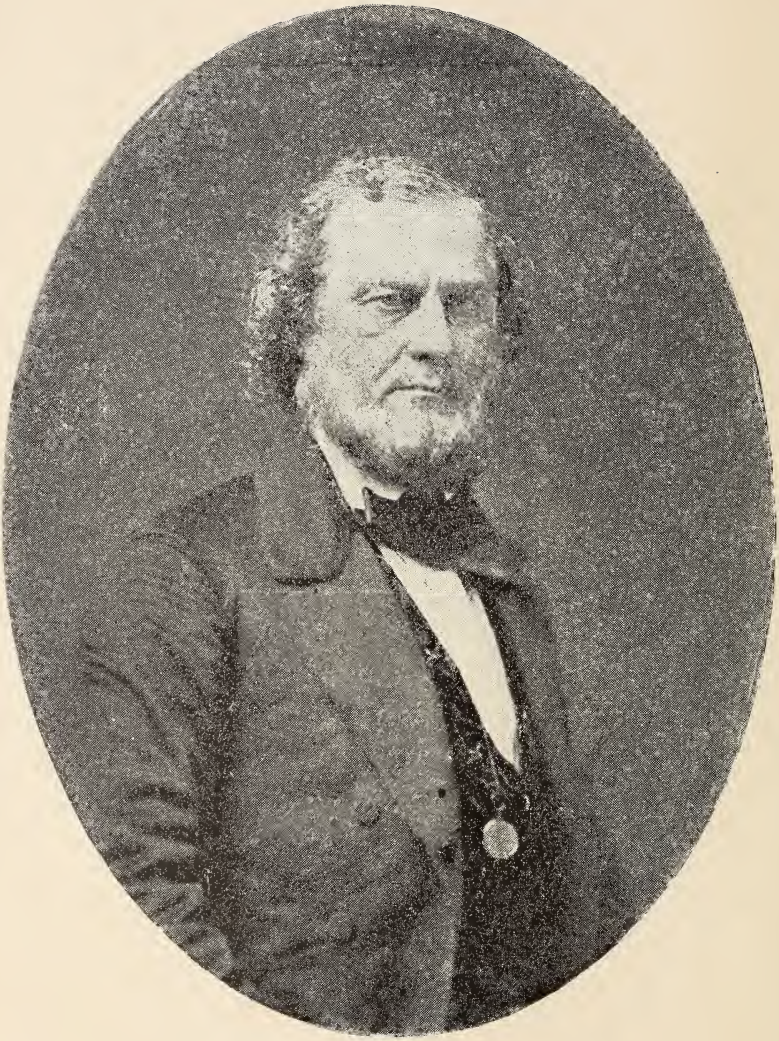

THOMAS HUNT, M. D.

FIRST DEAN OF THE FACULTY.

1808-1867.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

SEXUAL PERVERSION IN THE FEMALE.*

BY DR. A. J. BLOCH, NEW ORLEANS, VISITING SURGEON CHARITY HOSPITAL.

Mr. President and Gentlemen—The subject of sexual perversion, which I present to you to-night, though full of horror and disgust, must receive from our hands as physicians and surgeons the same attention as would be shown to those diseases with which we are more familiar. This moral leprosy is progressively increasing; its taint is entering into the homes of our most elegant and refined; this contagion exists in our schools, seminaries and asylums; its handiwork is shown by our many obscure and unrecognized nervous disorders. It is not only necessary that we pursue a curative course, but prophylactic measures should be used, and to us belongs this responsibility.

To-night I shall limit myself to those conditions of perversion occuring only among females, but in dealing with this subject much that I will say will apply to both sexes.

Of the cerebral varieties, classified by Krafft-Ebing, I will speak only of the following:

A—"Paradoxia—*i. e.*, sexual excitement occurring independently of the period of the physiological processes in the generative organs."

B—"Hyperæsthesia—increased desire, intense libido, lustfulness, lasciviousness." "This may be of central origin, as nymphomania, satyriasis, or peripheral, functional or organic."

* Read before the Orleans Parish Medical Society, June 9, 1894.

C—"Paræsthesia (perversion of the sexual instinct—*i. e.*, excitability of the sexual functions to inadequate stimuli)."

Of the first classification, paradoxia, our most common form, is found in all places where children are segregated. Titillation of the clitoris is the most frequent form of this perversion. Though inherited in some cases, it is often acquired, the older ones teaching the younger ones; in both cases the depravity continues in after years. The cases which I will present to you will fully illustrate this perversion.

Case 1.—Miss A. K., aged 14, school girl, neurasthenic, menstruated one year previous. Was consulted by mother March last for nervousness and pallor, which were both extreme. Gave tonics, prescribed exercise, with negative results. Suspecting that self-abuse might be the factor I asked for an examination of the external organs of generation, which was readily acquiesced to by both mother and daughter. The vulva was slightly reddish in character, the clitoris bound down by its labia and almost obliterated. In touching the clitoris with my index finger I could see a slight tremor come over my patient. I suggested a separation of the folds, telling the mother of my suspicions. A week later the mother returned, telling me my suspicions were well founded; the daughter had acknowledged to the evil, which she had been practising for four years. The following day I liberated the clitoris from its adhesions, had the girl remain away from school, and corrected by lectures, etc., since which time she has been steadily progressing in health.

Case 2.—J. W., æt. 2½ years, was referred to me, February 3, by Dr. J., oculist, for some obscure nervous disorder of eight months' duration. The mother is a neurasthenic, of great nervous irritability, anæmic and inclined to be melancholic.

When 9 years old she, the mother, began to practise masturbation, which has progressively increased with age, and now, though married, resorts to self-abuse as the only palliative to her inordinate sexual desires. While pregnant she abstained from this perversion, though her thoughts would dwell upon it; she feared the perversion might be transmitted to her unborn child. The maternal grandmother died in an insane asylum,

insanity having been induced, it is thought, by masturbation. The paternal grandfather is of an irascible disposition, morose and taciturn. Little J. is unusually bright for her age, though exceedingly shy. She is disposed to be taciturn and avoids the society of other children as much as possible. She was first seen masturbating by her mother six months before, since which time it has been uninterrupted, though every precaution was taken to effect a cure by medical corrective measures, and moral and physical persuasion.

Though precocious in intellect, the patient does not present any unusual physical developments. The legs are symmetrically formed, but childish in character, the nipples corresponding with those of other children of her age, there being no signs whatever of approaching puberty. The eyes are crossed, she suffers from insomnia, lying awake hours at night, and sleep is often interrupted by nervous twitchings. She has a strong predilection for vulgar language and often astonishes her hearers by such remarks as would do credit to the vilest steamboat captains. Inspection of the external organs of generation shows complete obliteration of the labia minora and clitoris by adhesions; the vaginal outlet is red and the hymen intact. On February 20, under an anæsthetic, I separated the adhesions, liberated the clitoris, removing a quantity of smegma, which had accumulated between the folds of the labia minora and clitoris. Two weeks later the mother brought back the child to me, stating that no relief had been experienced from the operation. To assure myself before resorting to a more heroic measure that masturbation really existed as represented, and in order to be able to define if such were true, the pleasure centre, I determined to put the child to a practical test. Having her undressed and put on the bed, I first touched the external orifice of the vagina, then the labia minora, without any appreciable excitement on the part of the child.

However, as soon as I reached the clitoris, the true phenomena developed. The legs were thrown widely open, the face became pale, the breathing short and rapid, the body twitched from excitement, slight groans would come from the patient. Being fully satisfied that the clitoris alone was re-

sponsible for this growing perversion, I decided to excise this organ. Assisted by my friend Dr. H. S. Lewis, I dissected up the clitoris and amputated it almost to its attachment to the pubes. Hæmorrhage was controlled by simple pressure, the denuded surfaces of the labiæ minoræ were brought together by two silk sutures. The patient was allowed to get up and play as soon as the chloroform had worn away; she never experiencing any pain. The sutures were removed on the sixth day, with perfect union.

The result has been a very happy one. The mother writes the cure is complete, the nervous condition has entirely disappeared, the child eats and sleeps well, the eyes are rarely crossed. She has grown stouter, more playful, and has ceased masturbating entirely.

Within the last few years Robert Morris, Geo. Rohé and others have recognized nervous conditions in the female, analogous to those in the male, depending on a phimosis of the glans clitoridis, which were entirely relieved by removing the cause. Acting upon their observations and results they strenuously urge the importance of an examination of the external organs of generation in all neurotic troubles, which might be of reflex origin. Prior to this, Baker Brown had practised clitoridictomy with great success, but meeting with little response from the medical fraternity this operation was finally abandoned. It might be superfluous to say that the milder methods should be the selective one, but when this proves inadequate, as it did prove in Case 2, it becomes imperative to resort to the more heroic procedure.

Class B.—Hyperæsthesia may be the sequelæ of paradoxia, or it may be acquired after full maturity. This is the form of perversion so frequently seen in gynecological practice, where the patient insists upon being treated for an imaginary ailment, experiencing great pleasure from vaginal examinations. Howe relates a case, occurring in his practice in Bellevue Hospital, of a young girl who complained of retention of urine, so as to invite the introduction of a catheter into the bladder. He soon noticed that the retention was not true, but *pari passu* with the introduction of the catheter an orgasm would take place. Catheterization was discontinued, and with it the retention was

relieved. She subsequently went to a gynecologist, but he too soon discovered her perversion and dismissed her.

CASE 1.—Female, white, age about 18, given to masturbation with hair pin through urethra. Five years ago the Charity Hospital ambulance was summoned to remove this foreign body from the urethra, where it had become impacted.

I regret that I have been unable to collect any more data on this case; however, it represents a tyye of this perversion which is by no means infrequent.

CASE 2.—Mrs. W., æt. 28, mother of one child æt. 2½ years, consulted me February 25 for a nervous disorder. When 5 years old began to have sexual connection with little boys, but is unable to say whether penetration ever took place. When 9 years old was sent to a convent, where she was taught digital masturbation by the older girls, since which time this perversion has been uninterrupted. Was married at 24, legitimate sexual intercourse was unsatisfactory, she merely submitting to satisfy her husband, and would often leave his side to masturbate. She says she has masturbated as often as fourteen times a day, the excesses being during her menstrual periods. Her mother died in a lunatic asylum, she thinks masturbation was the cause of her insanity.

Patient was exceedingly anæmic, excitable, and had a tendency to be melancholic. She avoided social relations with other people; did not care to make friends, preferring the seclusion of her room. The external organs of generation presented almost a negative appearance; the clitoris was free of adhesions, there being but a slight redness about the external orifice of the vagina, which I attributed to a slight leucorrhœa from which she suffered. The uterus was slightly enlarged. The left ovary was about the size of an apple and cystic, the right ovary enlarged and very sensitive. Both seemed to be firmly bound down by adhesions. Thinking that her perversion was of reflex origin, I suggested a removal of the diseased ovaries as a probable curative measure. She and her husband readily assented, as they were willing to accept anything that might offer a reasonable chance of recovery. On March 20, assisted by my friends, Drs. H. S. Lewis and S. P. Delaup, I opened the abdominal cavity. I found the omentum firmly bound to the intestines, uterus and ovaries,

which I managed to break up after some perseverance. The ovaries were equally adherent, so much, in fact, that I almost despaired of removing them. The tubes were very short and thickened, the uterus almost immovable. I finally managed to separate the adhesion and remove the appendages, which I found to be as I had diagnosed. I next ligated the omentum, which reached to the middle third of the thigh, and amputated it. Hæmorrhage from the adhesions was very troublesome, the patient was so hydræmic that the blood refused to coagulate. The time consumed was already fifty minutes from the beginning of the operation, and at the suggestion of Dr. Delaup, who was administering the anæsthetic, I closed the abdomen, though oozing was still apparent.

The recovery was uninterrupted, the patient reacted well, the pulse was always regular and even, and the temperature normal. On the eighth day she sat up and on the fifteenth left the sanitarium. My notes show the following:

April 10. Entirely recovered from operation, feels stronger and happier, and delights in the fact that she is cured of her perversion.

April 20. Color returning to face, is able to go anywhere without pain. Has no thought of masturbating, delights in going out and is anxious to meet people and make friends.

May 5. Continues to improve. The perversion entirely removed.

June 2. I will quote from a letter which I have received: "My condition is all I could desire. I know and feel that I am well; I never think of self-abuse—it is foreign and positively distasteful to me."

Krafft-Ebing, G. Frank Lydston and others state that such conditions frequently depend upon some disturbance of the generative apparatus. It is also manifest during pregnancy, the former terminating with the latter. Case No. 2 is a true type of the diseased sexual organs, the perversion was solely of reflex origin, as the results show. I can not urge too strongly upon all gynecologists the necessity of watching for this class of sexual perverts. Inadvertently we may be the means of assisting and promoting this offensive habit, and not infrequently will it develop in our practice. It may be true

that many of these moral lepers may have true disease; in such cases we must use more than ordinary care in our technique.

Class C.—Paræsthesia or perversion of the sexual instinct is common among prostitutes who pander to the diseased traits of man. With them oral masturbation is exceedingly common, and, although the majority are passive subjects, the act being actuated by pecuniary gain, many experience a great sexual delight. If in our city to-day an open book were kept of those men who delight in being the active subject in such practices, a social upheaval would take place which would only rival the great social scandal of London some few years back. I have seen but one case which might be classified under this heading.

Case 1.—Mrs. G., æt. 36, consulted me January last for a slight tumefaction of breast. While manipulating this organ I noticed a pallor about the face, which was followed shortly by a slight cry. I attributed this at the time to pain, which I thought I might have induced. Though I had expressly stated that she should return in one week, she came to my office the next day and asked that I make another examination, stating that she had suffered more pain that night. This time I was exeeedingly careful in handling her breast, and though I was unusually gentle she went through the same phenomena. I now became suspicious, and in order to put her to a final test asked her to return the next day. This time was but a repetition of the two previous days. I had no doubt now that she was a sexual pervert and that each manipulation of the breast was attended with an orgasm. She returned several times, but I scarcely touched the organ; finally she and the swelling both disappeared. The swelling I think harmonized with the perversion; it was the result of active irritation. This condition is frequently seen in mothers who are very eager to put their nursing babies to their breasts, and if such subjects were not so delicate to handle we undoubtedly could add many more such cases to our medical literature.

In closing this subject I can not resist repeating the duties that devolve upon us in rooting out the evil. No greater scourge could enter into our homes that would cause us to array ourselves against it than this psycopathia sexualis. To us, as medical and scientific men, are entrusted the evils of life; it then becomes our duty to eradicate, wholly or in part, this great perversion.

SIMPLE HYPERTROPHY OF MAMMARY GLANDS.*

By Dr. E. D. MARTIN, New Orleans, La.

H. H., aged 14, female, colored, admitted to Charity Hospital June 15, 1893, for enlargement of breasts. Patient stated she had first noticed that her breasts were increasing in size in July, 1892, and they had continued to grow larger ever since. She occasionally suffered with lancinating pains in the breasts, but did not mind this as much as the inconvenience caused by their size and weight. She had not menstruated until three months previous to her admission to the hospital, and not since. No cause was assignable for this condition, nor had any other cases occurred in her family. The patient, though thin and anæmic, was well grown.

The breasts measured thirty-seven inches in circumference, weighing about ten pounds each, were soft, giving to the touch the feel of a semi-solid tumor with a few hard nodulations. By the advice of a confrère who saw the case with me, she was given iodide in large doses, which treatment was continued for a month; it was *fortunately* interrupted by an attack of remittent fever, which left her in a very weak condition.

On August 5, believing her sufficiently recovered to stand the ordeal, the left breast was amputated. The posterior incision was made first; this extended from a point along the outer margin of the pectoral muscle about two inches below its insertion, and extended to the ensiform cartilage; this extensive incision being necessary on account of the enormous size of the base of the breast. This tumor, which proved to be an adeno-fibroma, was easily enucleated, and the anterior incision was then made. As the flaps were large and badly nourished, some sloughing occurred; the patient's recovery was otherwise rapid and uneventful. The operation was almost bloodless. I did not think it advisable to remove but one breast at the operation, preferring to watch the result. The pressure from the bandages complicated matters in the removal of the other breast, one month later. A large ulcer had formed just on the line of incision, and it became necessary to shorten the anterior flap. Sloughing occurred here also, and left quite

*Read before State Medical Society, May 28, 1894.

a large uncovered surface. As the patient was anxious to return home, I grafted this by Thiersch's method.

Three days after this operation the patient developed a severe case of follicular tonsillitis.

I determined to send her home as soon as possible, fearing to subject her longer to the contagion of a hospital ward.

At the time she left, ten days after grafting, although the graft had taken, the wound was not entirely healed.

When heard from ten months later, she was perfectly well.

I wish especially to emphasize in this case the useless administration of the iodides.

By procrastinating I nearly lost my patient. I do not believe we can expect any results from the iodides in these hypertrophied conditions, unless of a specific character. Much less could we expect any results when the glands had developed to such an enormous size. When patients come to us at this stage of the disease steps should at once be taken toward the removal of the breasts. The patient's condition must of course be considered; but unless the improvement from the proper use of food and tonics is soon perceptible operative measures should be resorted to.

In the case of this patient the improvement after the last operation was marked and rapid.

DIAGNOSIS OF HEPATIC COLIC.*

BY DR. E. M. DUPAQUIER, NEW ORLEANS, PRESIDENT ORLEANS PARISH MEDICAL SOCIETY.

In medical clinic alone, the symptom of pain in the abdominal region is common to so many diseases that only a very precise observation can lead us to a diagnosis. I desire, after this general proposition, to call your attention to this particular fact, that hepatic colic can be diagnosed only by relying on the common classical triad: precise seat of initial hepatic pain, icterus, discovery of gall-stones in the fæces on the sieve. This shall not be, after awhile, as a commonplace statement as it appears to you now. The symptom of abdominal pain, as I have already said, calls to the mind so many ideas that I do not intend

*Read before the Orleans Parish Medical Society, June 9, 1894.

to go over the differential diagnosis of hepatic colic from that of all the diseases with abdominal pain. I will select for differentiation only a part of them, laying stress on a group which is a very new one, a group of dyspeptics that were formerly diagnosed and treated as cholelethiasic subjects and who are now considered as pseudo-lithiasic; and in connection with that class of dyspeptics, more knowledge can be acquired on that obscure condition termed hepatic neuralgia.

I shall, therefore, eliminate beforehand the paroxystic pain of arteriosclerosis, tabes dorsalis, intestinal obstruction, lead colic, renal colic, peritonitis from perforation, appendicitis, catarrhal icterus, cancer and abscess of liver, and limit myself to the following class of cases:

These cases have paroxysmal pains, recalling an attack of biliary colic, but, I wish you kindly note this statement, they never have icterus, and no gall stones are discovered on the sieve. Yet these subjects are usually classed among cases of biliary lithiasis, and this is altogether an error in diagnosis. The authorities at Vichy have stated that 40 per cent. of the cases sent to Vichy for cholelethiasis treatment turn out to have no biliary lithiasis at all, and to be plain dyspeptics, referable to disorders of the duodenum and colons. They are consequently better called pseudo-lithiasics, and it is important to distinguish them from true biliary lithiasis cases, since we can cure them by reliable means; at any rate we can save by such a discrimination quite a number of people from the dangers of morphine habit, which too often follows biliary colic. These dyspeptics have an impaired digestion of the duodenum and of the colons. Two or three hours after the first meals, and at times seven hours after the second meals, that is, at night, usually after midnight, they suffer with cramps—sometimes with paroxysmal attacks, periodically or not, twice a year or every month or oftener. A physician is sent for, morphine is administered, and in 40 per cent. of the cases, as stated by authorities, the case is erroneously pronounced a case of hepatic colic. I will say that women are generally prominent in that class, and the paroxysms are mostly all at the time of menstruation. The same pain from duodenal and colic origin at a lesser degree accounts also for what is termed hepatic neural-

gia when it occurs in nervous subjects already suffering from neuralgia in other parts. What subjects present these nervous conditions more often and periodically than women at the time of menstruation? Thus, duodenal and colic indigestion accounts for that large class of pseudo-lithiasis and hepatic neuralgia cases that are too often called biliary colic cases, and I repeat that these cases never present icterus and gall stones in their fæces, so now you see the importance of relying on the triad, pain, icterus and gall stones in the fæces, to call a case hepatic colic. Here is the development of this proposition:

Last May (1894) I was called to see Mrs. G., a corpulent white lady of 40 years. I was told she had one of her attacks of colic, and as I entered the room she was writhing with pain. This was the second time I saw the lady in her attacks. On the first occasion, six months previous, I had examined the case and I had learned that her gastric and intestinal digestion was impaired, almost daily; that from three to seven hours after meals she not uncommonly experienced pains in the stomach and bowels, had nausea and vomiting. At times, the pain, nausea and vomiting would be unusually severe and lasting. In May it was that time so alarming that the family called in to assist me a very competent physician. I had for three days administered morphine subcutaneously as many as four times one-quarter of a grain in twenty-four hours, and yet the pain recurred. I told my confrère all I knew of the case, insisting on her previous attack that had then lasted but one hour, not followed with icterus or gall stones in the fæces, insisting on her usual difficult digestion having occurred daily in the six months interval of these two attacks. I told him that the seat of the initial pain of this attack had been in the left side, that the descending colon, notwithstanding the corpulency of the lady, could be felt, and hard lumps detected there on the first day I was called in; that for three days after the pain commenced there was no icterus, no gall stones discovered on the sieve in the fæces eliminated from the time of my first visit by purgatives and repeated rectal douches. Finally I told him I was unable to form any opinion. But it appeared to me that the seat of the trouble was in the bowels. The patient, who is

unusually corpulent, has been washing in a stooping position, and as she got up again she felt a sudden pulling and twitching in the left hypochondrium, and that pain was the start of her attacks, the first painful irradiation shooting toward the hypogastrium. So I supposed the phrenico-colic ligament or the ligament that draws up the transverse and descending colon had been strained, that the bowels were suddenly twitched there, causing probably a small localized peritonitis. At this juncture my senior friend and confrère smiled, and objected that there was no fever. But I meant peritonitis of no considerable extension or evolution, a mere shock and slight trauma of the peritoneum on a very limited spot.

Then my confrère expressed his opinion and told me that there was no doubt in his mind this was a case of hepatic colic in a cholelethiasic subject. Of course discussion followed, but the patient was in such agony that we first thought of relieving her and we both concurred in giving at once one-half grain of morphine subcutaneously. I then objected to my confrère's opinion on the ground that all clinical researches should be absolutely precise; that we should not be prompted to forget the common rule for the exception to the rule, that if now, as it is the every day opinion, we do not strictly base our diagnosis of hepatic colic upon the old reliable precise seat of the initial pain in the liver, with irradiations to the epigastrium and right shoulder, because Leven had discovered an abdominal cerebrum in the solar plexus with its far-reaching abdominal branches, so much so that it is now considered the centre of organic life, in opposition to the cephalic cerebrum—so much so that in clinic now it is allowed that, for example, a biliary calculus, in order to speak to the point, can create by reflex action a pain seated in the extended field of the solar plexus far from the liver; if now, as it is the current opinion, we do not strictly base our diagnosis of hepatic colic also on icterus because Woolf has stated that 50 per cent. of the cases presented no icterus; if again we do not strictly base our diagnosis on the discovery of gall stones in the diluted fæces on the sieve because Naunyn has stated that they are dissolved in the bowels—if, in short, summing up, the diagnosis of hepatic colic is not strictly based upon the classical seat of the

pain, icterus and gall stones in the fæces, I say then the art of diagnosis shall collapse for want of its chief foundation—precision—and to dispose so hastily of icterus and cholæmia in severe hepatic colic, it seems to me, is as illogical as to not admit uræmia in severe renal lesions. For, this case I am presenting to you, gentlemen, was a very severe case of pain. Excruciating pain lasted eight days, in spite of repeated and high doses of morphine.

I hold that icterus usually occurs in severe biliary colic, in attacks lasting more than three days, whilst in this instance, after eight days of constant colic, there was not a trace of icterus. A persistency of the pain in biliary colic also usually indicates an impaction of the stone, and consequently arrest of the bile flow usually occurs if the stone is located in the hepatic ducts or in the common duct. The bile flow is not interrupted I know if the colic is caused by biliary sand or if the impaction occurs in the cystic duct; but, then, in protracted impaction there occurs inflammation of the duct or of the gall bladder, there exists cholangitis or cholecystitis, and usually high fever and a well localized pain are the prominent symptoms. No such pain and no such fever were observed in this instance.

Finally there occurred later on some phenomena in the course of this case which are surely not in favor of the diagnosis biliary colic. I said there was never any trace of icterus after eight days of pain; in the fæces no gall stone could be yet discovered. The pain gradually—I say gradually, not suddenly, as in the case of a stone dropping from the common duct into the duodenum—the pain gradually wore off only when the bowels had been thoroughly cleansed by purging and irrigations, only when the expected menses began to flow, only when fifteen grammes of bromide of potassium were taken in twenty-four hours. These facts are suggestive and explanatory.

This lady suffered from gastric and intestinal indigestion every day; she was usually costive, and at the time of her menses, as it commonly occurs in dyspeptic women, her gastric and intestinal disorders were so aggravated that every month she would have pains and vomiting spells. She had strained her peritoneal ligament by adding to the weight of her

large belly an extra pulling by stooping down to work at the time of her menstrual period, and that slight trauma as a spark, so to speak, had set fire to the whole solar plexus, whose branches irradiated the pain all about the abdomen and lower part of the chest.

The initial pain developed hysterical manifestations which never completely yielded to eight grains of morphine, but they pretty soon disappeared after fifteen grammes of the specific bromide of potassium had been administered.

The outcome of this case diagnosed hepatic colic by a competent physician shows how wise it is to rely only on precision in our observations, and if we desire to reach a diagnosis in this particular case of hepatic colic we should yet rely on the classical seat of the initial pain in the right hypochondrium, icterus and discovery of gall stones in the diluted fæces.

My object in opposing the diagnosis of hepatic colic that does not rest on this firm basis is precisely to oppose thecolic rent opinion as stated by Rapin and Colladon, that biliary cur- is more common than it is thought and that many of these so-called gastralgias and enteralgias are typical latent forms of biliary colic. Such an opinion, in my mind, is making too large the province of cholelethiasis. It includes a large class of patients whose colics are not due to lithiasis, who therefore can be saved from the dangers of morphine habits, because their colics are due to disorders of the bowels that can be remedied and cured, as they are relative to Glenard's dislocations.

Carpentier d'Arras reports the case of a lady who had paroxysmal pains that were regarded as biliary colics and that was cured when her bowels were properly treated according to the method of Glenard.

TWO CASES OF SUPPURATIVE ENDOMETRITIS.*

P. MICHINARD, M. D., New Orleans, La.

Gentlemen—That which I desire to read to you to-day is a report of two cases, with their symptoms, clinical history and treatment. They are cases of suppurative endometritis, and

*Read before the Orleans Parish Medical Society, June 9, 1894.

have been selected because they represent the only conditions under which suppuration of the endometrium is supposed to exist.

The lining membrane of the interior of the uterus is peculiar in its behavior when attacked by inflammation, in this respect differing from the mucous membrane of other parts of the body. Unless of a septic origin, I doubt if any one has ever seen inflammation of the endometrium terminate in suppuration or ulceration. Ulceration of the membrane of the cervix may be excepted, but even this is of rare occurrence, for I have not seen it more than twice—unless of a specific or cancerous nature—in nearly three thousand women examined during the past six years. I am aware that some books speak of ulceration of the cervix as though it were not uncommon, but the more I study gynecology the more doubts I have of a great many things found in books. There are some gynecologists who go further than this, claiming that the endometrium is never afflicted with true inflammation, unless of septic origin. By endometritis it is here intended to mean inflammation of the lining membrane of the body and cervix.

The first case, a multipara, consulted me nearly two years ago, and at the time had been ill three months. She complained of pains in both iliac fossæ and about the pubis, in the back, breast, and between the shoulders. There was frontal headache and soreness in the muscles of the nucha, which was intensified when the head was thrown back. At night there was fever, with a slight chill occurring two or three times a week. Her urine had been examined and found to contain some pus and albumen. She had been treated for nephritis, and had consulted me thinking that such was her chief trouble.

Upon close interrogation it was learned that, in addition to what I have just related, her trouble had been antedated by frequent and painful urination, itching at the vulva, and at the same time a vaginal discharge which stained her garments green. I also learned that the sexual act was painful, and occasionally followed by loss of blood. At the time of the examination there was a profuse discharge of pus from the uterus. This pus was creamy in consistence, greenish in color and of very offensive odor. The cervix was red and swollen. The

urine, drawn with a catheter, the vestibule and instrument having been well cleaned with a 2 per cent. solution of carbolic acid, showed no trace of albumen, while the specimen which she brought with her contained pus and a trace of albumen. The pus was from the uterus and the albumen from the pus.

The vagina was now swabbed with cotton saturated with the antiseptic solution and a digital examination made, when the uterus was found in normal position, slightly enlarged, doughy in feel and very sensitive. Pressure in the region of the broad ligament caused great pain, although the tubes and ovaries were not appreciably enlarged. This absence of increase in size was verified when the patient was under the influence of chloroform at the time of the operation. The temperature at this hour (4 P. M.) was 100 deg. F., and the pulse 120. The abdomen was somewhat distended.

The diagnosis made was suppurative endometritis with septicæmia.

As there was no history of either recent confinement or of abortion, and as her husband at the time had gonorrhœa, the disease was attributed to that cause, the inflammation having extended from the vagina to the uterus. But that the malady had left the vagina was indicated by the absence of signs of inflammation there, and by the subsequent history. She was directed to take, twice a day, a hot vaginal douche of one gallon of a 2 per cent. aqueous solution of carbolic acid.

On the night of the fourth day one ounce of Rochelle salts was administered, followed at 6 in the morning by a large enema of soap and water, and at 8 by another enema of a solution of boracic acid —teaspoonful to a quart of water. At 10 o'clock chloroform was administered; she was placed in the lithotomy position on an ordinary kitchen table which had been covered with a blanket. The right leg was supported by an assistant, who at the same time held the Sims' speculum, with which the perineum was depressed. A second assistant supported the left leg. The vagina was now well douched with a 2 per cent. carbolic acid solution, the vulva scrubbed with soap and water and then rinsed with the antiseptic solution. The exposed cervix was painted over with tincture of iodine. The points of the vulsella with which the cervix was steadied

had been filed down to prevent them cutting into its tissues. In such cases there is danger of infection from pus entering the wounds caused by the sharp points. The cervix having been steadied by grasping its anterior lip, its canal was dilated with a Wylie dilator, slightly at first, but gradually increased until a calibre of half an inch was obtained. The instrument was inserted to just beyond the internal os. As this os had a tendency to close when the dilator was removed, the instrument was retained in the canal for ten minutes, thus effectively paralyzing the contracting tissues. With a Skene's curette the endometrium of the cervix or body was systematically gone over, care being taken to scrape the entire surface. Twenty minutes were consumed in this work. The cavity was then washed with an antiseptic solution through a Bozeman's recurrent catheter, wiped with absorbent cotton wrapped on an applicator, and the scraped membrane swabbed with Churchill's tincture iodine by means of cotton on the same instrument.

The vagina, which had been douched all the time during the curettage, was now wiped dry and lightly packed with 10 gr. iodoform gauze. Nothing was placed within the uterus to facilitate drainage. That night the temperature was 99½. On the third day the gauze was removed and hot antiseptic vaginal douche given. The application of cloths wrung from ice-cold water, which was begun directly after the operation, was now discontinued. The nurse was instructed to administer hot antiseptic douches twice a day for three days longer, when the patient discontinued treatment. She left her bed on the tenth day. There was but one curettage, one application to the interior of the uterus, one gauze dressing of the vagina, and she was well. Her temperature fell to normal on the second night; all the pains, aches and discharges ceased. I am still her family physician. To this day she has remained well, menstruating regularly without pain.

The second case was in my hospital practice. She was admitted to ward 43 of the Charity Hospital, about two months ago, presenting the same history of pains, fever and discharge as the one just reported. The cause of the trouble in this case was abortion produced by the introduction of a sound into the

uterus. This occurred one month before admission. The uterus was large, boggy, painful, and discharged pus profusely. The pus, however, had not an offensive odor. The Fallopian tubes were large, the left especially, feeling almost as large as a banana. There was fluctuation in this left tube.

The operation of dilatation and curettage was performed, the uterine cavity douched and lightly packed with iodoform gauze to facilitate drainage. Let me say that I now use slender lampwick instead of gauze, believing that I get better drainage. The dilatation and curettage were done not only to clean the cavity, but also to clear away the uterine end of the tube.

The cold cloths were applied to the abdomen. An antiseptic vaginal douche was administered twice a day, and every third day a fresh strip of gauze introduced into the uterus. On the twelfth day the gauze drainage was discontinued, but the hot douches persisted in. These had the effect of cleansing the vagina and stimulating the uterine muscular fibre. The escape of pus continued for several days—about fifteen days, I think. About the twentieth day she was discharged to report and be treated as an out-door patient. The fever and pain had disappeared before the end of the fifth day after the operation. At the out-clinic, Churchill's tincture of iodine was applied to the cavity of the uterus and painted over the posterior and lateral vaginal fornices three times a week for one week, then twice a week.

About two weeks ago I examined this patient. The uterus was of normal size, the right tube could not be felt, the left was about the thickness of my index finger; there was no sensitiveness unless very great pressure was made against the left tube. There was no discharge from the uterus; the enlarged tube felt firm, evidently free from pus, and only suffering from inflammatory thickening which will soon entirely disappear.

This case I diagnosed suppurative endometritis and pyosalpinx, with septicæmia.

My object in reporting these cases is to demonstrate the benefit to be derived from properly conducted curettage in suppurative inflammation of the endometrium; not only does it cure the inflammation, but it prevents the extension of the disease to the tubes, and will even cure it there if it has not existed too long.

I have now dilated and curetted over seventy-five times for suppurative endometritis and I have never seen a failure to cure.

N. B.—Since this report was written (about ten days ago) I had occasion to examine the second patient, when it was found that both tubes were of normal size.

Correspondence.

HISTORICAL SUNSTROKE.

There dwelt in ancient Tarsus a young clerk named Saul, who had enjoyed a life of refinement and was highly educated. His learning did not render him unsusceptible to the influences of superstition and ignorance, so prevalent at that time, for we must remember that education then, in most part, consisted in the studies of languages, history, rhetoric and the like, which do not tend to elevate the powers of reason, reflection, nor judgment.

So Saul, though proficient in these branches, was none the less a fit companion for his fellows who dealt in magic, charms, wonders, spirits and devils.

This refined and probably delicate young man undertook a journey to Damascus, armed with warrants for the arrest of certain religious teachers, who seemed to be endangering the peace and quiet of the country. The way was long and weary, the burning sun smote down upon the travelers with merciless and suffocating heat. Though little used to such exposure, Saul struggled on, loath to acknowledge his weakness, till nature gave up the fight; he reeled and fell senseless to the ground. Congestion? Yes! and consequent inflammation involving the centres of vision, for when he regained consciousness there was total blindness. Fortunately for Saul, sight often returns in such cases, as quickly as it disappeared; he was ignorant of this comforting fact, however, and considered his affliction a punishment. For had he not seen a vision during his delirium? His friends and attendants knew nothing of the proper treatment of such a case, but they were equal to the occasion, for was not the *voo-doo doctor there?* as he always is, always has been and always will be, in all places and under all conditions! The services of this omnipotent *wart remover* were engaged, and lo! Saul's sight returned (after

due time, no doubt). Thus ended, in a most fortunate yet perfectly natural manner, this historical case of sunstroke. It is only interesting to us in the fact that it adds another instance in proof that nothing occurs through any supernatural influence. It is no disrespect for the Scriptures that we say that if anything is mysterious to us it is because we are as yet ignorant of facts by which it is easily explained.*

GEO. H. DOUGLAS.

Morgan City, La.

NEW ORLEANS, June 14, 1894.

Editor New Orleans Medical and Surgical Journal:

DEAR SIR—I desire to make a preliminary announcement of the proposed investigation of the long continued fevers of Louisiana, to be carried out by the Special Committee of the Orleans Parish Society. The committee, appointed by the president, is constituted as follows:

DR. F. W. PARHAM, Chairman.

Clinicians: DR. RUDOLPH MATAS,
DR. CHAS. CHASSAIGNAC,
DR. L. F. SALOMON,
DR. E. D. MARTIN,
DR. A. J. BLOCH.

Pathologists: DR. P. E. ARCHINARD,
DR. O. L. POTHIER,
DR. H. D. BRUNS,
DR. A. MCSHANE.

The detailed plan of work is now in process of preparation and will be given at the July meeting of the parish society. Physicians will be requested to record accurate data of their cases of continued fever and keep clinical charts. Blank forms will be drawn up by the committee and sent throughout the State asking for information on important points in the pathology and treatment of this most interesting class of fevers, to the end that the investigation may be as complete and as thorough as possible. The pathological investigation will be conducted by the committee of pathologists above mentioned

* It is always allowable and interesting to investigate and discuss the Bible, which is "full of useful information," as someone has said. Attempts to explain natural phenomena recorded in the Good Book by modern scientific methods can not detract one iota from it as a spiritual guide. Dr. Blanc's article on the Plagues of Egypt, published in a previous number of the JOURNAL, explains these visitations in a perfectly rational manner. Such explanations should strengthen and confirm faith, and not shatter it. The Bible will stand a great deal of criticism.—EDITOR.

and will study especially the means of differentiation of this from malarial and other fevers of this locality, having particular reference to the valuable diagnostic data furnished by the bacteriological investigation of the discharges and the minute examination of the blood.

The clinical sub-committee will gather all other data bearing on the subject, and the whole committee will collate the results of the investigation and present its conclusions at the annual meeting of the Orleans Parish Medical Society next spring.

Very truly yours,

F. W. Parham, M. D.,
Chairman Special Committee.

Editor New Orleans Medical Journal:

Dear Sir—I notice in your issue of June, 1894, quite an extensive article on the treatment of typhoid fever by Dr. I. T. Young, of Lindsay, La.

The article is quite exhaustive and shows mature thought, and is replete with some very correct ideas in the treatment of this disease. I read the article with a great deal of interest, and take it that any article is open to criticism through your columns.

While I agree with the doctor that little medication is needed in this disease, I can not agree with him in his tirade against phenacetine.

His conclusions are:

1. That phenacetine prolongs the disease.
2. That it increases the tendency to hæmorrhage.
3. That it causes a higher range of temperature.
4. That it weakens the heart, while a continued temperature of 106 deg. does not.

In support of his first conclusion he gives the detailed history of two cases, which I think are a mere coincidence and not a consequence of the use of phenacetine.

Such a conclusion can not be reached with a history of but two cases, and is not borne out by the general experience of others. It is utterly impossible for phenacetine *in such doses as used* to have had any controlling influence over the doctor's case, either *pro or con.*

2. As regards hæmorrhage.

When we know the source of intestinal hæmorrhage in typhoid fever to be ulcerative erosions of blood vessels in and around the Peyerian patches, we can not entertain the idea of phenacetine increasing this ulcerative process.

3. That it causes a higher range of temperature.

It is as impossible for phenacetine to raise the temperature in any disease as it is for quinine to do so.

I think the case the doctor cites can be nothing more than a coincidence.

4. That it weakens the heart and causes chills.

This I would admit had it been given in *sufficient doses*, and repeated at too short intervals.

I claim that of all the coal tar products phenacetine is the safest, and this claim is based on as large an experience with the drug as that of almost any physician in the State.

That next to cold water is phenacetine (of the coal tar group).

That where the Brand bath can not be used phenacetine is the safest drug at our command.

That by its judicious use in combination with salol the danger of a weak heart from hyperpyrexia is greatly obviated.

What is the chief factor in producing the tendency to asthenia (heart failure) in typhoid fever if it is not pyrexia?

Why is the convalescent from typhoid fever so emaciated—his muscles soft, flabby and atrophied? It is in consequence of continued pyrexia.

Now, the heart is a muscle, as well as the gastrocnemii, which are so wasted away at the end of this disease, and suffers the same damage in consequence of the continued high temperature as the other muscles of the body, hence our patient's pulse is frequent, quick and weak; and by withholding the phenacetine or cold bath, as the doctor does, and allowing a temperature of 106 deg. to continue from day to day uninterfered with, he subjects his patient to the very danger that he is seeking to avoid—namely, heart-failure.

If phenacetine is not used, cold sponging or the bath should be its only alternative, and one should never, under any consideration, think of allowing a temperature of 106 deg. to continue from day to day uninterfered with in any disease with the mythical hope that it is consuming some *materies morbi*.

Very truly yours,

WARREN G. YOUNG, M. D.,
Rayne, La.

Proceedings of Societies.

CLINICAL SOCIETY OF MARYLAND.

The 292d regular meeting was called to order by the president, Dr. J. E. Michael.

Dr. G. J. Preston read a paper advocating the establishment of detention wards for cases of suspected insanity.

Dr. Billingslea spoke of a case which had recently come under his notice where a lady of respectable family became suddenly deranged and was arrested while in a city store and confined for two days, first in the station house and then in the city jail, before being sent to an asylum. He thought that detention wards were needed for such cases.

Dr. John Morris thought that there was a great necessity in Baltimore for a detention hospital or ward. He did not think that the station house or jail or general hospital was a fit place for cases of suspected insanity.

Dr. G. H. Rohe agreed with Dr. Preston as to the necessity of detention wards and spoke of a class of cases not mentioned by Dr. Preston, namely, persons pronounced insane by examining physicians, but who at present must be kept at home until arrangements can be made to transfer them to some institution, often with great inconvenience and even danger to the relatives.

Dr. Preston hoped that some hospital would inaugurate such wards, and believed that the city and State would aid in the construction and maintenance of the ward.

Dr. R. B. Norment read a paper on

THE MANAGEMENT OF TYPHOID FEVER IN PRIVATE PRACTICE AMONG THE POOR AND MIDDLE CLASSES.

Under the head of General Management he stated that there was no abortive treatment. As a general rule it is best to let the patient know his condition, as this induces the patient to take proper care of himself in the early stages. As soon as the disease is recognized the patient should be put to bed in a comfortable, quiet, well ventilated room. The patient and nurse should be the only occupants of the room. There should be but little bed clothes, and the bed linen and body clothing should be changed frequently. If the abdominal symptoms are not violent the patient can be helped into a chair for a short time daily. The body should be kept clean by sponging with tepid water every twenty-four to forty-eight hours.

Diet.—Milk, beef tea, mutton broth, raw eggs, barley and rice water are better than the artificial foods of the stores. It is not best to insist on the taking of food in the early stages. Water should be given freely, but not in sufficient quantity to overdistend the stomach.

Medicine.—The average American must be medicated when he is sick. As a routine practice the author gives 1½ to 2 grains of quinine with dilute muriatic acid every four hours.

Alcohol.—When weakness is very pronounced and there is hypostatic congestion of the lungs, the free administration of whiskey is of great service.

Temperature.—If the temperature does not exceed 103 deg. and is the only pronounced symptom, it is better to let it alone; above this, the bath in one form or other is best; author's experience is limited to the sponge bath. An oil cloth is put on the bed and water at 90 deg. F. is applied with a good sponge. The patient is sponged until it ceases to be agreeable to his feelings. Tincture of aconite and bromide of potash, or antipyrine in five-grain doses, can be given when the temperature exceeds 103 deg. Phenacetine is very depressing and should be used with caution—five-grain doses three or four hours apart. Tincture of aconite root (one to three drops) and bromide of potash (ten grains) may be given every two or three hours when there is a hard pulse and delirium. Antipyrine is the best antipyretic where headache is the principal accompaniment of high temperature. When the patient is maniacal, chloral is indicated. For stupor maintain the proper action of the bowels and kidneys, and give alcohol to keep up the heart's action.

Diarrhœa.—If stools fewer than five or six, no treatment necessary; if more, then give bismuth and an astringent or tincture of opium by the bowel.

Hœmorrhage.—Absolute rest, gallic acid and opium freely; cracked ice for thirst.

Perforation.—He has never seen a patient with perforation recover.

For Pain.—Morphia.

Recovery.—No solid food should be given until the fever is below 99 deg. for two days. The patient should not be allowed to sit up until the temperature is below 99 deg., and only for an hour or so at first.

Dr. Osler said he would like to be under Dr. Norment's treatment if he had an uncomplicated case of typohid fever without pyrexia. He thought the antipyretic drugs were entirely superfluous in this disease. The cold bath is more efficacious, but is not always available in private practice; but all

the good effects of the bath can be obtained by sponging. A good nurse or doctor can sponge the patient so effectually that the fever will be satisfactorily reduced. When the temperature is high, ice sponging—not with ice water, but with lumps of ice—over the back and legs will reduce the temperature very pleasantly to the patient and satisfactorily to the doctor. Delirium and stupor are also effectually treated by ice sponging. The use of the modern antipyretics in typhoid fever is in nine cases out of ten positively hurtful; they reduce the heart's action and cause weakening sweat, sand their use is an unmitigated evil. In the great majority of cases the treatment may be taken from old Dr. Nathan Smith, of Yale, which was pretty much that of to-day: plenty of fresh air, liquid diet, and cold externally. He was in the habit of turning out the friends of the patient, putting the patient on the floor, and then dashing water, handed through the window by an assistant, over the patient.

Dr. R. Winslow did not believe that it was necessary to give medicine in tyhoid fever, except in special cases. Before using the cold bath system he had used antifebrine and was pleased with the results. It gave the patient comfort and no bad results were observed.

Dr. G. J. Preston, speaking of the coma of typhoid fever, said that while cold baths were best for this condition, yet in some instances they did not relieve it. Strychnine and caffeine used hypodermically have given good results. Recently he has seen very good and prompt antipyretic effects from the use of 20 to 30 drops of guaiacol applied externally.

Dr. Pearce Kintzing said that he could not overcome the prejudice of people against cold water. He uses antifebrine with quinine. With this he secures a reduction of temperature for five or six hours. After cold sponging the temperature comes up more quickly.

Dr. J. M. Craighill had never had any trouble in getting his patients sponged with cold water when a little vinegar was added to the water. In the better class of patients he had alcohol added to the water.

Dr. C. H. Mitchell had had considerable experience with typhoid; he has used antipyretic drugs, and his results are as good as those reported by those who have not used them. The majority of cases which he loses are not those having high temperature. Phenacetine is by far the best antipyretic in his experience. He uses it in small doses, 2½ grains every four hours. He gives tonic doses of quinine in the early part of the day and 2½ grain doses of phenacetine until midnight. It is impracticable in private practice among the poorer classes to

use the bath. One of his patients, a child, was made worse by the fright which occurred every time the bath was used. Deaths are not due to high temperature, and occur in those cases where a bath would not have saved them.

Dr. Norment believed that in this part of the country amongst the poorer classes the prejudice against the use of the bath in disease was insurmountable. Under these circumstances some of the antipyretic drugs occasionally do good.

Dr. Osler, replying to a question of Dr. Norment, said that he did not believe in the use of alcohol as a routine practice, hut in such cases as Dr. Norment had referred to, where there was pronounced weakness and hypostatic congestion, the use of whiskey was very valuable. He preferred it in combination with strychnine.

The 294th regular meeting of the Clinical Society of Maryland was called to order by the vice president, Dr. Herbert Harlan.

Dr. G. L. Tanneyhill read a paper entitled "Notes on and Personal Experience with Puerperal Mania."

Dr. Julius Friedenwald then read a paper on the

"EXTERNAL USE OF GUAIACOL AS AN ANTIPYRETIC,"

comprising work done in conjunction with Dr. H. H. Hayden.

This drug was applied in seventeen cases—eight cases of pneumonia, two cases typhoid fever, two cases pulmonary tuberculosis, one case malaria, two cases influenza, one case acute articular rheumatism, one case facial erysipelas.

Their conclusions are:

1. That this drug has a powerful antipyretic action, occasioning a reduction of from one to four degrees of temperature in from one to four hours.

2. That in all cases this reduction of temperature is accompanied by profuse diaphoresis, which may or may not be accompanied by a chill or chilly sensation.

3. That great exhaustion is frequently produced.

4. That the effects may be obtained from comparatively small doses (from 30 to 50 drops), and that great care should therefore be exercised in the use of the drug. The drug should be applied but once or twice daily, and the initial dose should not be above 30 drops.

5. That the effect produced by guaiacol, though more powerful, is the same as is obtained from most of the other antipyretics of the coal tar series, and that the same care must therefore be exercised as with the other preparations. Its

effect differs from the *stimulating* cold bath in being *depressant.*

6. That the main indication for its use is in diseases accompanied by high fever in which the cold bath can not be applied. It may therefore be especially useful in typhoid fever, as well as in all other diseases accompanied by high fever in which irritability of the stomach prevents the use of other antipyretics.

Dr. Kintzing—It seems Dr. Friedenwald did not vary the dose. Perhaps he might have received the same fall in temperature in some of his cases on smaller doses and had less depression.

Dr. Fleming—I have tried the drug in two cases, and had such depression in both that I decided not to use it further.

Dr. Norment—I see two troubles in regard to use of guaiacol. First, the depression is very sudden, and second, the reaction is violent. It seems to me from Dr. Friedenwald's paper that guaiacol is of very questionable value in private practice.

H. O. Reik, M. D., *Secretary.*

MOREHOUSE MEDICAL SOCIETY.

At a called meeting to organize a medical society in Morehouse parish, La., the following members of the fraternity were present: Drs. A. W. Jones, R. B. Saddler, J. C. Wilkins, A. D. Alexander, W. J. McWilliams and W. P. Perkins.

The object of the meeting being explained by Dr. A. W. Jones, and the election of officers the first order of business, Dr. A. W. Jones was elected president, Dr. R. B. Saddler vice president and Dr. W. P. Perkins secretary.

A committee was then appointed to draft suitable by-laws, and ordered to have them ready at the next meeting.

The secretary was instructed to notify the profession of the parish concerning the time of the next meeting, and to urgently request its full attendance. It was further ordered that the secretary send the proceedings to The New Orleans Medical and Surgical Journal and the two local papers of the parish for publication.

The first regular meeting of the Morehouse Medical Society, in Collins, La., May 15, 1894, President A. W. Jones presiding.

The minutes of the previous meeting were read and approved. On motion of Dr. G. H. Ogbourne, the secretary was instructed to read the by-laws as adopted by the society, for the

benefit of those not having been present at former meetings, and there being no amendments or corrections suggested, the president called upon the essayist, Dr. Lee Dreisbach, to proceed with the opening of the discussion, the subject being "Pneumonitis." The doctor proceeded to read a lengthy and highly interesting paper on the subject, confining himself more particularly to that form known as croupous or lobar pneumonia, considering its etiology, pathology, symptomatology and treatment.

On motion a rule was adopted authorizing the president to call members by rotation to discuss the subject of the paper. Those responding were: Drs. J. E. Hope, R. Trezevant, Ben. H. Brodnax, J. E. Johnson, C. Hope, J. C. Wilkins, W. A. Russell, G. H. Ogbourne, W. J. McWilliams and W. P. Perkins.

The regular order of business was then suspended, and upon recommendation of members of the society, the following physicians enrolled their names as members of the society: Drs. A. Trezevant, Oak Ridge, La.; W. A. Russell, Oak Ridge, La., and J. E. Johnson, Collins, La.

On motion, the following committees were created and appointments thereto were made as follows:

Committee on Efficient Organization of the Medical Profession: Drs. W. P. Perkins, J. E. Hope, W. A. Russell, J. C. Wilkins, and A. D. Alexander.

Committee on State Medicine and Legislation—Drs. W. J. McWilliams, Lee Dreisbach, G. H. Ogborne, and R. Trezevant.

The appointment of delegates to the State Medical Society being in order, on motion, the following appointments were made: A. W. Jones, M. D., and G. H. Ogbourne, M. D.

There being no further business, the society adjourned to meet again in Bastrop, 24th of April, 1895.

W. P. Perkins, *Secretary.*

STATE MEDICAL SOCIETY.

LIST OF COMMITTEES OF THE LOUISIANA STATE MEDICAL SOCIETY.

Dr. R. Matas, president of the Louisiana State Medical Society, has appointed the following committees for 1894–95:

On Arrangements—Dr. Jno. H. Bemiss, New Orleans, chairman.

On Necrology—Dr. G. R. Fox, Jesuits' Bend, Plaque-

mines parish; Dr. C. W. Settoon, Gretna, Jefferson parish; Dr. W. D. White, Abbeville, Vermilion parish; Dr. W. K. Sutherlin, Mansfield, De Soto parish; Dr. F. R. Bernard, Lake Providence, East Carroll parish; Dr. T. T. Tarleton, Grand Coteau, St. Landry parish.

On Organization—Drs. R. Matas, G. R. Fox, W. D. White, W. K. Sutherlin, F. R. Bernard, T. T. Tarleton, A. G. Friedrichs.

On Publication—Drs. P. B. McCutchon, A. G. Friedrichs, W. E. Parker.

On Judiciary—Dr. F. S. Meeker, Lecompte, Rapides parish, chairman; Drs. Chas. Chassaignac, A Gayden, E. T. Shepard, T. P. Singletary, W. S. Bickham, R. M. Littell, L. F. Reynaud, A. E. Arnold, W. E. Brickell, C. A. Duvall.

On State Library—Dr. William Elliott Parker, New Orleans, chairman; Dr. W. T. Whitworth, Shreveport; Dr. Thos. Hébert, New Iberia; Dr. Jos. S. Jones, Baton Rouge; Dr. T. J. Woolf, New Orleans; Dr. A. R. Trahan, Lafayette; Dr. S. L. Théard, New Orleans.

On State Medicine and Legislation—Dr. I. J. Newton, Monroe, chairman. No changes, except in the following: Instead of Dr. R. U. Borde, Dr. H. S. Cocram; instead of Dr. R. Matas, Dr. A. B. Miles; instead of Dr. D. R. Fox, Dr. G. A. B. Hayes; instead of Dr. C. L. Seeman, Dr. A. G. Maylié; instead of Dr. C. K. Wilcox, Dr. E. D. Fenner.

SECTIONS, CHAIRMEN.

1. *General Medicine*—Dr. J. D. Hanson, Donaldsonville, Ascension parish. To open discussion: Dr. Jno. B. Elliott, New Orleans.

2. *Surgery*—Dr. F. W. Parham, New Orleans. To open discussion: Dr. R. A. Gray, Shreveport.

3. *Obstetrics and Gynecology*—Dr. Smith Gordon, Alexandria, Rapides parish. To open discussion: Dr. P. Michinard, New Orleans.

4. *Materia Medica and Therapeutics*—Dr. Jas. Leake, Bayou Sara, West Feliciana. To open discussion: Dr. E. M. Dupaquier, New Orleans.

5. *Otology, Laryngology and Rhinology*—Dr. A. W. de Roaldes, New Orleans. To open discussion: Dr. C. J. Landfried, New Orleans.

6. *Ophthalmology*—Dr. H. D. Bruns, New Orleans. To open discussion: Dr. B. A. Pope, New Orleans.

7. *Dermatology*—Dr. Isadore Dyer, New Orleans. To open discussion: Dr. H. E. Ménage, New Orleans.

8. *Diseases of Children*—Dr. R. Fleming Jones, Houma, Terrebonne parish. To open discussion: Dr. A. J. Bloch, New Orleans.

9. *Oral and Dental Surgery*—Dr. A. G. Friedrichs, New Orleans. To open discussion: Dr. G. J. Friedrichs, New Orleans.

10. *Quarantine*—Dr. F. J. Mayer, Quarantine Station. To open discussion: Dr. S. R. Olliphant, New Orleans.

11. *Medical Jurisprudence*—Dr. J. B. Shelmire, Lindsay. To open discussion: Dr. F. Formento, New Orleans.

12. *Anatomy and Physiology*—Dr. Edmond Souchon, New Orleans. To open discussion: Dr. A. McShane, New Orleans.

SPECIAL COMMITTEE ON COLLECTIVE INVESTIGATION OF THE CONTINUED FEVERS OF LOUISIANA.

Dr. P. E. Archinard, general chairman.

Clinicians—Drs. F. W. Parham,* John B. Elliott, Chas. Chassaignac,* L. F. Salomon,* E. D. Martin,* A. J. Bloch.*

Pathologists—Drs. P. E. Archinard,* H. D. Bruns,* A. McShane,* O. L. Pothier.*

Auxiliary Clinical Committee—Dr. J. M. Gassaway, U. S. Marine Hospital Service, New Orleans; Dr. A. B. Miles, Charity Hospital, New Orleans; Dr. J. D. Bloom, Charity Hospital, New Orleans; Dr. F. Loeber, Touro Infirmary, New Orleans; Dr. H. S. Lewis, Hotel Dieu, New Orleans; Dr. S. P. Delaup, New Orleans Sanitarium, New Orleans; Dr. E. T. Shepard, Louisiana Retreat, New Orleans; Dr. A. Gayden, State Insane Asylum, Jackson, La.

Auxiliary Sanitary Committee on Hygienic Factors—Dr. Jos. Holt, Dr. S. R. Olliphant, Dr. F. Formento, Dr. A. Metz.

To Report on Fevers as they Prevail in the Rural Districts—Drs. G. A. Fox, C. W. Settoon, W. D. White, W. K. Sutherlin, F. R. Bernard, T. T. Tarleton, L. T. Donaldson.

Delegates to the American Medical Association—Drs. J. W. Allen, Caddo; T. Y. Aby, Ouachita; E. T. Beall, Red River; J. M. Barrier, Richland; A. T. Barrow, West Feliciana; Julien F. Bringier, Ascension; Hy. Bayon, Orleans; C. Milo Brady, Jefferson; T. J. Buffington, E. Baton Rouge; E. U. Bourg, Assumption; S. E. Chaillé, Orleans; B. A. Colomb, St. James; W. Penn Crain, Natchitoches; R. de Montluzin, Orleans; J. C. Egan, Caddo; J. B. C. Gazzo, Lafourche; T.

* N. B.—Names indicated by an asterisk are those of members already appointed by the Orleans Parish Medical Society to investigate the same subject.

J. Harrison, Grant; W. T. Haas, Avoyelles; E. L. Irwin, East Feliciana; Hamilton P. Jones, Orleans; R. Fleming Jones, Terrebonne; Q. Kohnke, Orleans; V. Lehman, St. Charles; J. P. Lynch, St. Martin; E. S. Lewis, Orleans; A. B. Miles, Orleans; G. C. Mouton, St. Landry; F. S. Mudd, Lafayette; J. B. Mundy, Calcasieu; C. D. Owens, Rapides; W. G. Owen, Iberville; G. H. Ogbourne, Morehouse; James F. Pigott, St. Tammany; P. Randolph, Pointe Coupee; A. V. Roberts, De Soto; R. W. Seay, East Carroll; L. Sexton, Orleans; B. S. Story, Plaquemines; C. S. Stewart, Tangipahoa; G. J. Sabatier, Iberia; F. M. Thornhill, Bienville; R. M. Walmsley, Orleans; Braxton Wise, Bossier; J. H. P. Wise, St. Mary; Kelley Williams, Madison.

ORLEANS PARISH MEDICAL SOCIYET.

(Extract from minutes of meeting of June 2, 1894).

Dr. E. M. Dupaquier, president, in the chair.

Dr. Isadore Dyer read the following report on the

LEPROSY QUESTION IN LOUISIANA.

At last there is some intention on the part of the Louisiana Legislature to take some action in the care of the lepers in this State.

The totally indifferent method of isolation at present practised in this community leaves a wide field for the spread of the disease. A few unfortunate lepers, about a dozen, are huddled together indiscriminately in a partitioned shed, without proper treatment and with no hygienic care, as a pretence of sanitary quarantine. Meantime, the hundred or more other lepers are mingling with the community, sharing seats at the theatre, and at the public restaurant, and are imperfectly cared for, or are neglected in their treatment. Negroes afflicted live in the best possible atmosphere to spread the disease, unhindered even by preventive legislation. The race is discriminated against at the leper reservation, when they are perhaps a more likely source of contagion than the latter.

Some observers have held that leprosy found in Louisiana occurs in individuals of foreign birth, or of immediate foreign extraction, and that it is among this class that leprosy spreads by preference.

In his conclusions drawn from the observation of eighty-four cases of leprosy seen in his five years of dermatological practice in New Orleans, Dr. H. W. Blanc favored this view (1892).

The existence of leprosy in Louisiana since 1758, the in-

discriminate contagion, with the occurrence of all types of the disease, point to an indigenous disease.

Leprosy is a disease, the bacillus of which is identified. It is held contagious by inoculation. It is possibly hereditary. It spreads under all conditions of climate. In the salubrious Sandwich Islands the disease has become endemic in less than thirty years. Dr. Zambaco-Pacha's recent investigations in Brittany, in France, show the disease tenacious to a degree, persistent for generations, occurring in milder forms, often far from characteristic In Louisiana the same types seem to occur. It is accepted that the most common type of leprosy found in countries where the disease is endemic is the anæsthetic.

Since October, 1892, I have observed twenty-five cases of leprosy. Nineteen of these were whites, five negroes. Thirteen were males. Of these, three were under twenty years of age, three were between twenty and thirty, three between thirty and forty, six between forty and fifty, and ten between fifty and seventy. In other words, sixteen of the twenty-five cases occurred after the fortieth year. The disease, then, was more frequent in late adult life. In three cases, the disease had been present less than six months; in five, less than one year; in ten, over two and less than five years; in four, over five and less than ten years; in one, for eleven years, and in two cases no history could be had.

In only one of these cases was there a history of possible contagion. This was in a man, whose daughter had been afflicted for seven years before he manifested any evidence of the disease. Seventeen of the twenty-five cases had received no previous treatment, and only four of the remaining eight had followed systematic medication.

Of the total number of cases, ten were of the anæsthetic type, nine of the mixed type, and six of the tubercular type. There are really but two types of leprosy, the mixed being a combination of the tubercular and the nervous, or anæsthetic.

For a century and a half, leprosy has been cultivated in Louisiana. I say cultivated advisedly. The utterly impotent methods of extinction employed have only developed the malady by exciting opposition on the part of family and friends of the afflicted.

Leprosy is a germ disease, and the very rarity of directly traced contagion is the purest evidence of its insidious development. Slow of incubation, it may require a decade or two to manifest the effect of a germ accidentally, or innocently, acquired by the economy, at the caravansary, drinking fountain, sleeping car, or other public institutions.

Contagion is, then, traced with difficulty. I have remarked that in only one of the cases reported above was possible con-

tagion traced. The other cases occurred in localities widely separated from each other.

Ten of these cases were born and have always lived in New Orleans. Of the fifteen remaining, four were born in Louisiana, six in other parts of the United States; while of the other five two were born in Ireland, two in France, and one in Germany. All of those born outside of Louisiana had lived in the State for a period exceeding twenty years.

Not only then does the disease affect those native to the State, but accepts as its victims individuals coming from any other region, irrespective of locality, race or color.

One day to my clinic at the Charity Hospital an old man came with his hands wrapped in bandages, reeking with the discharges from a mass of ulcers on both his hands. How long he had been so it was impossible to ascertain, but every minute of his existence exposed dozens to contagion.

Of the cases above mentioned, eight were occupied in domestic work; four had no occupation; four were laborers; three, clerks; two, engineers; one, butcher; one, machinist; one, music teacher, and the last one was a beggar.

Only one of these realized the gravity of the affliction and the necessity of family protection. Any one of you can see, from day to day, a negress with a green blind over her eyes begging on Dryades street. Her hands are deformed from the loss of several phalanges, the result of mutilating leprosy. Where does the money thus obtained go? How often does this woman send the implements of contagion into the community? Truly does Dr. Benjamin Lee, of the Pennsylvania State Board of Health, say that "one case of leprosy outweighs a hundred of any other disease." (N. O. Med. and Surg. Journal, May, 1894.)

Now is an opportune time to legislate. Louisiana is not alone threatened.

In 1859 there were but two cases of leprosy in the Sandwich Islands. In 1885 there were 4500. To-day there are many more than that. In 204,866 cases of skin diseases classified according to the returns of the American Dermatological Association for the period extending from June 30, 1878, to January 1, 1893, there were but fifty-two cases of leprosy reported in the United States (*Morrow's System, Vol. III, pp. 959-960*).

I warrant that there are twice that number in New Orleans to-day.

At the recent Congress of American Physicians in Washington Dr. J. N. Hyde, of Chicago, made the assertion that he did not believe that there were as many as 200 lepers in the

United States. With Dr. Blanc's case, those referred to in this paper and the number now in the leper hospital, a large proportion of that 200 is already accounted for.

I do not flatter myself that I see all the cases of leprosy in New Orleans, and there are certainly more in the breeding ground in the Lafourche district. California, Minnesota, Texas, New York, and, less often, other States are afflicted with these unfortunates.

In a recent letter to a member of the State Legislature (*Times-Democrat*, May 16) Dr. Joseph Holt commented on the proposed isolation of the lepers at Fort Pike.

Dr. Holt said, among other things: "The disease is preventable and should be eradicated from among the American people. The disease should be limited to the individual by isolation in an asylum, or hospital, for lepers only. Such an institution should at once be established and properly maintained by the State or national government. It is a grievous imposition upon a community to permit lepers to go at large or even to remain in it. The simple fact of their presence inflicts an intolerable public injury. They should be removed and tenderly cared for by the government, State or national. Their lives could thus be made happier, their relatives and friends relieved of a weary burden and the community of a dangerous menace."

In a later letter to the same gentleman. Dr. Holt expands the reference to the management of lepers in suggesting very plausibly that the whole subject be relegated to the United States Marine Hospital Service, thus making it a purely national question.

The wisdom of this interpretation of the question is fully evidenced by the subsequent action taken by the American Association of Physicians last week in Washington. A bill has been proposed by this association demanding of Congress legislation of a national character, with the essential object of establishing a commission to investigate the whole question and to suggest the best method of accomplishing the eradication of leprosy from the United States.

Bearing upon the establishment of a national asylum for the care and segregation of lepers, Dr. Walter Wyman, of the Marine Hopital Service, presented a paper before this same association last week, in Washington, on "The National Control of Leprosy." It practically endorses the views taken by Dr. Holt and only offers details in the discussion. Says Dr. Wyman: "One reason alleged for a national establishment is the fact that in some States the disease is of so rare occurrence that the erection of a special hospital or a place of con-

finement for lepers is scarcely justified, and that it is desirable, therefore, that there should be established an asylum to which any of the States might send these unusual but highly objectable patients. It is further urged that by reason of the difficulty of properly caring for lepers, and because of the uneasiness and excitement that would prevail in cities or localities should the presence of a leper be announced, the health authorities themselves are tempted to conceal the case from the knowledge of the public. Thus, if there is anything in the doctrine of contagiousness whatever, the local authorities may directly aid in the extension of the disease. If a national asylum were provided there would be no motive for concealment." In considering the subject further, the doctor asks the questions, "First —Does the right of national control exist? Second—If it does, how may that right be best exercised?" In the discussion, the point is brought out that unless the necessity for such an institution can be established, the power of arranging such an institution does not rest with the national government. On the other hand, the same object might be obtained, suggests Dr. Wyman, by the establishment of such an institution by one of the States, in which lepers from other States might be received for commensurate compensation.

From this it will be seen that the conclusion arrived at by the author of the paper is that the national government could only act in the matter under the restrictions imposed by States rights. In the light of this evidence, and the consensus of opinion of the recent Medical Congress in Washington, it seems that it must now or later devolve upon our State to adopt suitable legislation. While rarely a case of leprosy is cured, the chief aim of medical opinion is at the prevention of contagion.

The result of the investigations of the British Leprosy Commission suggests the conclusion that leprosy, if isolated, dies a natural death. The best means for public protection, then, are, first, the extinction of existent leprosy by proper segregation; second, the reduction of possible contagion, or spread of the disease. Aside from isolation, the prevention of marriage and intermarriage is the absolute indication. It matters not whether the State or national government controls the method of management, radical and prompt action is demanded.

Living, as we do, in a community so afflicted with the disease, it seems only proper that our parish society should adopt some resolution as expressive of our views on this subject, with the double purpose of letting our convictions be heard, and of offering some guidance to our legislators for

their intelligent consideration of this question. At the suggestion, therefore, of the chairman of the Committee on Scientific Essays, I have to present the following for your consideration:

WHEREAS, 1. Leprosy is of frequent occurrence in Louisiana in all of its types.

2. It occurs in various sections of the State and indiscriminate of apparent sources of contagion.

3. It has rapidly increased in the past decade when its slow incubation is considered.

4. It is undoubtedly endemic in this State.

5. It is a menace to the entire population of this and neighboring States.

6. There is at present a worse than inefficient protection offered to the community.

Be it Resolved, That it is the sentiment of this society:

1. That the public health is the first consideration.

2. That suitable legislation for community interests is demanded, now.

3. That this legislation should be based on these lines:

   a. The absolute isolation of all lepers.

   b. The prevention of intermarriage.

   c. That no discrimination be made against race.

   d. The registration of all lepers, and their immediate relatives, where possible.

   e. Their proper hygienic and medical care.

   f. That this be done under the supervision of qualified medical skill, under the direction of a higher board of control, *appointed for that purpose by the State.*

   g. That the place of detention be based upon the highest humanitarian plane; that comfort, and all that can conduce to ameliorate the condition of the unfortunate afflicted be considered; and, finally, that the place of isolation be made, as far as possible, an asylum of refuge, rather than one of horror and reproach.

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DR. WILL H. WOODS.

Editorial Articles.

OUR SEMI-CENTENNIAL.

The present number of The Journal marks the beginning of its second half-century. Established by Dr. Erasmas D. Fenner, in 1844, it has witnessed many changes and great events, and has itself undergone a number of transformations and endured many vcissitudes. It has been a quarterly, a bimonthly, and finally a monthly magazine, which form it still maintains. It was our wish and expectation to signalize the beginning of its fifty-first year by making it a semi-monthly, but we were not able to carry out the plan laid down, and have been compelled to defer the change.

The oldest members of the profession now living found the Journal already a factor in medical life when they began the practice of their profession. The subscription book of the Journal contains the name of one venerable gentleman who has been a subscriber since the very beginning. This veteran worker, grown gray in the service of humanity, has become too feeble to discharge the active duties of his profession, but his mind retains the vigor of earlier years, and to him his various journals serve not only to inform him of the deeds of others, but also to bring back, in his declining years, the

memory of great and good men who have unselfishly devoted themselves to the good of mankind. With this one exception, we may safely say that those of our profession in the Southwest who witnessed the birth of the JOURNAL have long since passed to their rest. The JOURNAL has preceded all who now practise; it accompanies them in their unceasing toil; and when they, too, are laid to rest, the JOURNAL will live to chronicle their deeds and be the constant companion of their successors. Men die, but the JOURNAL lives. From the first it has been, so to speak, a part of the profession. It has often changed hands, but it has always been the JOURNAL—that is, it has always been the familiar friend of the physicians of the Southwest, and the repository of their best thoughts. As long as there is a medical profession in this part of the world there will always be a medical publication, and the JOURNAL, from its close connection with all branches of the profession, has become almost part and parcel of the body professional.

When, in the year 1944, the then editor of THE NEW ORLEANS MEDICAL JOURNAL will pass in review the history of medical achievments of the century then about to end, we fondly hope that the men who have nobly struggled through the trials of a great civil war, and those of the younger generation who are now clamoring for recognition, will claim a large share of his attention for their heroism, achievements and devotion to their fellow men.

THE CONTROL OF LEPROSY.

Elsewhere in this number will be found a paper read by Dr. Isadore Dyer before the Orleans Parish Medical Society, which has a deep interest for the people of Louisiana. The increase of leprosy in this State is alarming. The pages of the JOURNAL have from time to time chronicled the extent of the loathsome disease in Louisiana, and the JOURNAL has endeavored to arouse interest in the subject. The disease has increased simply because it was allowed to increase. The indifference of our people is astonishing; but all over the State they seem to have been aroused from their apathy, and the Legislature has taken an active part in the solution of the

problem. The daily press is entitled to a large share of the credit of arousing the people and our lawmakers to a sense of duty, and of stamping out an institution of this city, miscalled a leper hospital, that was at once a mere shadow of protection against the disease and an insult to latter-day common sense.

Dr. Jos. Holt, of this city, ex-president of the Board of Health, was compelled, from the fact of his official position, to study the subject of leprosy in Louisiana, and, incidentally, the extent of the disease in the United States. He recommended that the Fort Pike reservation, in this State, be set apart as a leper colony. His suggestion aroused a storm of indignation from the good people of St. Tammany parish, who objected to the location of a leper hospital in an abandoned and uninhabited part of a swampy region, but were perfectly willing to allow the pest house to remain on the outskirts of a big city, where the chances of infection are a thousand times greater than in a lonely part of the rural districts. We now have a board of control empowered to deal with leprosy in all parts of the State. Such a board, composed of representative men from different parts of the State, permits us to hope that leprosy will, at no distant day, be stamped out of Louisiana.

But, granting that the State Legislature has done an excellent thing in the premises, it may fairly be asked if the whole subject has been exhausted, and if, at some future time, another step forward can not be taken. The JOURNAL has already advocated a plan which is humbly submitted as an improvement even on the valuable system about to be inaugurated for the proper handling of leprosy as required by modern standards. In July, 1893, we said:

"The practical question now intrudes itself: What shall those comprehensive measures be? Leprosy is not confined to Louisiana. Louisiana is too poor to do her duty. The people (and the profession) are callous or indifferent. Lepers should be forced to go to a secluded spot and remain there. The medical service, always distasteful, should be strict and efficient. Perfect discipline should prevail. We know of no better means of stamping out leprosy in the United States than to make it a national question and put the lepers in charge of the Marine Hospital Service. As to the location, Uncle Sam

has a great many islands in pleasant climates situated some distance from the mainland, where the lepers could be confined without fear of escape, and where they could enjoy what pleasure life still holds for them. Members of the Marine Hospital Service, being under a discipline almost military, could be detailed from time to time to care for the unfortunates. The lepers from all parts of the country could there be gathered together, and in the course of a generation indigenous leprosy in the United States would be a thing of the past."

In the early part of this century we had a leper hospital in this city. When the disease died out (or was supposed to have died out), the hospital crumbled to pieces and leprosy was no longer a live issue. When, owing to years of indifference, the disease took a fresh start and gained a firm foothold in the State, half-way measures were adopted, but the only efforts at control were confined to the city. Now, the people of the whole State see that the question is more than a municipal affair, and the State government has taken a hand in the affair. In this we can easily see the result of educating the people up to the point of doing a plain duty. The educating process should, in our opinion, be carried a little further. Among us, leprosy was first placed under municipal control; now it is in the hands of the State government, and we hope the time is not far off when the plan of national control outlined above will be adopted as the most thorough and satisfactory way of dealing with an unpleasant but irrepressible question.

Biographical Sketches.

THOMAS HUNT, M. D.

(See Frontispiece.)

No medical history of Louisiana has yet been written. The vast mass of valuable material in which this State abounds remains in its orignal chaotic condition, and only awaits the touch of an orderly hand to make a volume that would be a source of pride to her sons, and serve as a guide to those filled with an ambition to rise.

We desire to preserve, as much as possible with our limited powers, the memories of men who have contributed to the advancement of medical science in this State. It is our design to publish, from time to time, biographical sketches, with portraits of prominent physicians and educators of Louisiana, and we deem that we can not more fitly begin the series than by recalling the life and deeds of one who took a very prominent part in founding and strengthening a school that has grown to be one of the prominent schools of the country, and that has been the Alma Mater of a very large proportion of medical men practising in the Southwest.

Dr. Thomas Hunt was born in Charleston, South Carolina, on May 13, 1808. His father, Thos. Hunt, was a lawyer, planter, and was a member of the Legislature of South Carolina. His mother was Louisa Gaillard, a member of a distinguished family of the same State. His early education was the subject of the greatest care and attention. He was a thorough classical scholar, and for a time devoted himself to the study of law. He decided to adopt medicine as his profession, graduating in 1829 from the University of Pennsylvania. After graduating he spent eighteen months in Paris, and then returned to Charleston, where he at once began to practise. At the age of 23 he lectured on anatomy and operative surgery. In 1832 he distinguished himself by his splendid work on Folly Island, where cholera had been introduced by an infected vessel wrecked on its coast. One of the passengers of the ill-fated vessel was Dr. Warren Stone, who is also remembered as one of the greatest surgeons of Louisiana. The friendship between these two men, begun under such tragic circumstances, lasted until the death of Dr. Hunt.

In 1833 Dr. Hunt moved to New Orleans. He found the cholera prevailing in different parts of Louisiana, and with his characteristic zeal he fought the plague in his new home. He was elected House Surgeon of the Charity Hospital, but he soon resigned that position. His aim was to establish a Medical College, which he did in September, 1834. His associates in this work were Drs. Chas. A. Luzenberg, J. M. Mackie, T. R. Ingalls, A. H. Cenas and E. B. Smith. Dr. Warren Stone was appointed Demonstrator of Anatomy. Dr. Hunt was elected Dean of the Faculty, and it was he who delivered the initial lecture. In 1845 the Medical College was merged into the State University, of which it became the Medical Department. It enjoyed increasing prosperity until the civil war, when it had to close its doors. Dr. Hunt moved to Havana, Cuba, where, in August, 1863, the university granted him a degree. He studied Spanish, and practised his profession in Havana until the close of the war in 1865, when he returned to

New Orleans, to find the college buildings dilapidated after having served as quarters for the United States troops. The library, apparatus, etc., were much the worse from the visits of the soldiery, and it was only by a herculean effort that Dr. Hunt (who had been elected President of the University) and his associates could efface some of the damage caused by the war. An appropriation of $25,000 was obtained from the Legislature of 1866, which was expended in repairs.

Dr. Hunt received an appointment in August, 1866, as a surgeon of the Marine Hospital Service, but increasing infirmities prevented him from assuming the duties of the post. Indeed his career was drawing to a close; his originally strong constitution had been undermined, and in the fall of 1866 he became a confirmed invalid. On March 20, 1867, he died of dysentery in New Orleans.

An estimate of his character is best given by the Law Faculty. They spoke of him as "a man of varied and extraordinary abilities, and of extensive, profound and accurate learning, an elegant and accomplished scholar, zealous, persistent and efficient advocate, a promoter of public education, the founder of the Medical College of Louisiana, an influential adviser and aider in the establishment of the University of this State, a lecturer unsurpassed for eloquence and didactic talent, a citizen of high spirit and exemplary worth, and a gentleman universally esteemed for his private virtues."

The records of the Medical Department contain the following entry: "Thomas Hunt, born in Charleston, S. C., May 13, 1808. Died in New Orleans, March 20, 1867, of gout and chronic dysentery. Professor Physiology and Anatomy, first session. Resigned May, 1835. First Dean of the Faculty, first session. Professor of Special Pathology, Anatomy and Clinical Practice, October 15, 1836, to May 31. 1837. Professor Physiology, Pathology and Pathological Anatomy, March 28, 1849, to March 20, 1867, died. Dean, April 30, 1852, to November 10, 1862."

Abstracts, Extracts and Annotations.

SURGERY.

ON PARENCHYMATOUS INJECTIONS IN DISEASES OF THE TONSILS.

PROF. V. ZIEMSSEN.

The method of parenchymatous injection of carbolic acid solutions into the tonsils, as recommended by Tawbe and

Heubner in 1886 for the treatment of scarlatinal diphtheria, has been found efficacious by V. Ziemssen in the treatment of catarrhal, lacunar and phlegmonary forms of tonsillitis. V. Ziemssen considers that most forms of angina tonsillaris are of bacillary origin. In this view he is supported by all recent investigators of the pathological histology of the tonsils, who have invariably found micro-organisms of all kinds in the lacunæ as well as agglomerations of epithelial cells and leucocytes. Of the schizomycetes, the streptococci, staphylococci and diplococci are most frequently met with. As these pathogenic germs are often found in the lacunæ even when inflammation of the tonsils is absent, one is justified in concluding that these germs are innocuous so long as the epithelium remains intact, and that they only develop their infectious action on the parenchyme when the epithelium has been eroded by some traumatic or other insult. This also holds good for the angina of scarlet fever. In V. Ziemssen's clinic cases of catarrhal angina are treated with an eight-minim injection of a 2 per cent. carbolic solution in each tonsil. The result is rapid subsidence of the pain and diminution of the irritation on swallowing. Only one (bilateral) injection is, as a rule, necessary to bring the morbid process to a standstill.—*Provincial Med. Journal.*

CANCER AND ITS TREATMENT.

PROF. ADAMKIEWICZ.

According to Adamkiewicz the cancerous process exhibits two of the principal characteristics of chronic infective maladies, viz.: the primary focus and subsequent metastases. Ergo, one is justified in suspecting the infective agent to be a microbe. Such, however, has never been detected in spite of the most careful investigations, and consequently cancer has come to be looked upon as a disease standing quite apart from all others. Cohnheim attempted to account for this exclusive position of cancer by a special hypothesis. According to him the cancer elements were epithelial cells, which had not been used up during embryonal life, but which at a later period had been stimulated to resume that proliferative activity which is characteristic of both embryonal and carcinomatous epithelia. Adamkiewicz holds this hypothesis to be untenable, and comes to the conclusion that the premise upon which it is based, viz.: the identity of epithelial and cancer cells, is erroneous. Two forms of cell present the most striking morphological and physiological differences. Stability in shape, regularity of formation, and immutability, are the characteristics

of the epithelial cell; whereas, the carcinomatous cell is typified by its shapelessness and disrespect of all rules, lives but a very short time, and presents three stages, viz.: the leucocytic form in youth, the epithelial at the acme of its development, and the vesicular in old age. When once the latter stage has been reached, disintegration sets in. Moreover, from a physiological point of view, every epithelial cell possesses and exercises a function both important and beneficial to the body, whereas the carcinomatous cell only acts destructively.

Now assuming the cancer-cell to be non-epithelial, it might very well be the result of microbic activity, just as the "giant-cell" is produced by the tubercle bacillus. Adamkiewicz consequently examined the statements made by investigators who, having found various parasitic bodies in carcinomatous tissues, assumed the same to be the excitants of the so-called "epithelial proliferations;" but he could only conclude that those organisms had no connection whatever with the development of cancer-cells. But the infectivity of cancer is so well established that its parasitic nature follows as a natural consequence; therefore Adamkiewicz proceeded to investigate this part of the question from another point of view. All parasites produce certain substances called toxines; consequently could it be proved that cancer evolves a toxine, then the parasitic nature of the disease must be looked upon as established. Adamkiewicz considers he has established this property of cancer in the substance termed by him cancroin.

As the cancer parasite, whatever it might be, will not thrive in a dead medium, Adamkiewicz inoculate various organs of the rabbit with fresh cancerous tissue, and found that the living brain of these animals forms an excellent medium for the development of cancer-cells. The latter leave their nests, wander along the fissures of their brain, here and there forming broods which devour the cerebral substance. The speaker was able to establish by experiment that toxine is formed in the cancer-cell, which must consequently be looked upon as the parasites of carcinoma. This parasite is termed by Adamkiewicz the coccidium sarkolytis. An examination of cancroin showed that its physiological action is akin to that of neurin, which substance was consequently employed by Adamkiewicz in the treatment of carcinoma. In a case of cancer of the lower lip, the diseased tissue "reacted" to the application of neurin, swelling up, pus being formed and cancerous matter discharged. Similar results were produced in other cases, and Adamkiewicz expressed the hope that later on cases of complete cure would be wrought by cancroin, which moreover possesses anodyne and deodorizing properties; at present he must be satisfied with having recognized the nature and being of the

cancerous process, which had been such a riddle to medical men for thousands of years, and with having discovered the principle upon which the treatment of cancer must be based.

Microscopical preparations were exhibited, showing cancer-cells leaving their nests in the brain of rabbits, and also the formation of metastases.—*Provincial Med. Journal.*

THE TREATMENT AND CURE OF CHANCRE WITH PEROXIDE OF HYDROGEN.

The subject of the best treatment of the primary sore of syphilis has occupied the minds of investigators of late years to such an extent that almost every surgeon has a different method, and the general practitioner is somewhat at a loss to know which is the best treatment to employ as the most expeditious means of relieving the anxiety of the patient and curing the lesion. The special purpose of this paper is to draw attention to a particular method of treatment, which not only relieves the anxiety of the patient and places him in a delightful buoyancy of mind, *but cures the chancre in the shortest possible time*, without pain or detention from business, and with less scar and less destruction of tissue than any other method.

The chancres of the following cases, selected from a good many recorded, were of the large Hunterian variety, embracing the worst forms of sloughing and phagedena.

Case 1.—Mr. K., aged 38 years, came to me, on January 29, 1891, with a large sloughing single chancre, situated on the right side and at the base of the glans penis, at the junction of the prepuce and very deep; incubation about thirty days; penis large and soft. Sprayed it with full strength solution (15 volumes) of peroxide of hydrogen medicinal (Marchand's), at 60 pounds pressure, and dressed with iodol powder, and continued the same treatment every morning at 7 o'clock.

February 20, sprayed it as above; sore now only skin deep, and continued till February 23; sore healed; duration of treatment twenty-five days.

Case 2.—Mr. W. B. came to me, September 6, 1892, with a single sloughing chancre on left glans penis, and corresponding ulceration on prepuce; incubation about thirty days; sprayed with peroxide of hydrogen, full strength, 60 pounds pressure, and dressed with iodol; continued same treatment every evening at 7:30 o'clock, for sixteen days.

September 23, sore almost healed.

September 25, sprayed for the last time to-day; duration of treatment nineteen days.

Case 3.—Mr. L., aged 28 years, came to me, August 23, 1893, with a phagedenic chancre, thirty-five days' incubation, situated immediately at meatus urinarius, and sloughing its way very rapidly into the urethra; sprayed it with peroxide of hydrogen, full strength, 60 pounds pressure, and dressed with iodol powder. Continued the same treatment every evening at 7:30 o'clock.

August 30, sore almost healed up, only some granulations left. Continued the same treatment every evening till September 4. Sprayed it to-day for the last time, there only being the surface of the sore about the size of pin's head. Considered himself cured and said he would not come again. Duration of treatment eleven days.

The above cases, selected from many recorded cases, on account of their possessing the worst features of the initial lesion, serve as good examples of the treatment by the peroxide of hydrogen method.

I treated Mr. K., of Case 1, on two different occasions, for the same disease, in exactly the same manner, and the two cases are about identical in regard to length of time of treatment and as to details, and he got well in about the same manner.

The case of Mr. L. presented the worst features of phagedena, which was so virulent that I think he would have lost the greater part of the glans penis if he had been treated by the nitric acid or caustic method, and, as it was, the ulcer healed with a very small scar, scarcely noticeable.

The pressure of the spray (sixty pounds), which is one of the most important factors in the whole method, not only cleanses and produces thorough asepsis of it, killing the germs of the disease at the very bottom of the ulcer, but the oxygen of the peroxide aërates the blood through the capillaries, and arrests the progress of the disease at the nearest possible point, allowing the process of repair to commence as soon as possible, according to the severity of the disease, with the least loss and destruction of tissue and consequent scar. It must be particularly understood that in using this treatment all instruments, spray-tubes and bottles must be made of either glass or hard rubber, for the reason that metals, with one or two exceptions, coming in contact with the peroxide, will destroy its component parts and render it useless, and I have found also a great difference in the results if the peroxide is fresh or otherwise. The first effect of a spray of peroxide upon the ulcer is to deposit upon it a thick film of albumen; this should be allowed to remain for about half a minute or less; then continue the spraying till a large tubeful has been used (one ounce); as the

sore progresses the spraying causes a good flow of rich arterial blood upon it, which merely shows returning healthy conditions.

The treatment is entirely painless, and the patients do not experience any annoyance or inconvenience whatever while carrying the disease, and freely express themselves as well pleased with its effect.

No internal medication during this stage is given. The iodol powder is used only as an antiseptic, to protect the sore from external influences until it is sprayed again the next day, keeping the sore in as good a condition as it is left by the spraying, which must be done once every day until the ulcer is healed.

This method of the treatment of chancre has been, in my hands, the best and most successful of all methods that I have heretofore adopted.—*Worster, Journal of Cutaneous and Genito-Urinary Diseases.—New England Medical Monthly.*

THE TREATMENT OF CHRONIC URETHRAL DISCHARGES.

By Edmund E. King, M. D., of Toronto, Canada.

A patient who consults us regarding a chronic discharge should always be subjected to a very thorough local examination. The urine should be examined to discover the presence of gonorrhœal shreds. These are in themselves of diagnostic importance in determining the extent of surface implicated, but not in locating, as was and is now frequently taught, the site of disease. The patient should be directed to pass urine into two glass vessels; in the first an ounce or two will be sufficient, and, in the second, a like amount will answer. Should the second glass contain clear urine, the discharge arises from the urethra anterior to the bulb, but it will contain some shreds and comma specks if the prostatic urethra be involved. These shreds can readily be distinguished by their large size, and a tendency to immediately fall to the bottom of the vessel, while those composed of mucus will continue to float for some time. They are easily examined under the microscope, and are seen to consist of pus and epithelial cells, or of either separately. They do not exist as such in the urethra, but are formed by the rolling over and over of the sticky discharge during micturition. In all cases of chronic discharge where the shreds are found, no matter how limited in quantity, an examination should be made for gonococci. If the patient contemplate matrimony, and the gonococci are observed, it is the duty of the surgeon to advise against the marriage until a cure be accomplished, on account

of the evils that may follow; the gonococci often exist in very minute quantities, but so long as they are present a fresh inoculation may occur at any time. Should the examiner be undecided in regard to their existence, his duty lies in the line of increasing the discharge by injections of nitrate of silver, and again examining for the germs.

We also find a condition in which the urine in the second glass, as well as that in the first, is very cloudy; a sediment, either flocculent or white granular, is formed on standing. The cloudiness often leads to an erroneous diagnosis of vesical catarrh, but when the urine is examined microscopically and chemically we find it to contain phosphate and carbonate of lime, the former amorphous, the latter in wedge-shaped crystals. The urine is feebly acid, neutral, or feebly alkaline, thus increasing the suspicion of cystitis. On adding a few drops of acetic acid, however, the urine clears up and completes the diagnosis of phosphaturia. Now the calibre of the urethra should be tested by means of bulbed sounds, or Otis's urethrameter. If the meatus will admit of a larger size than No. 17 F., the urethrameter had better be employed; it should be passed as deeply as possible, and expanded to, say, 30 F. or 34 F., then gradually withdrawn until it comes in contact with some obstruction, when the screw should be lowered till it will allow the passage of the instrument through the stricture. The distance from the meatus to the commencement of the stricture and length of the stricture are to be noted, and the size once more increased to the original. This manœuvre should be continued until the whole urethra has been examined; thus an intimate knowledge will be gained of the calibre of the urethra, and the locality that must be treated. We must bear in mind that the calibre is not uniform throughout, being narrowest in the membranous urethra.

If the meatus be smaller than 17 F., and a bulbed sound of that size passes unobstructed into the deeper urethra, the meatus should be slit to admit 30 F., and a full-sized bulb passed, or the urethrameter used. In a majority of cases the patient will complain that at some particular portion of the urethra a peculiar sensation is caused by the passage of the urine, or even at other times. While the patient's location of this spot may not correspond to the situation of the disease of the urethra, it attracts the attention of the surgeon to the pathological condition which should receive attention. If no stricture be found, we ought to employ some instrument by means of which the interior of the urethra may be investigated by the eye. In this we are far in advance of our confrères of a few years back. They had endoscopes, but their instruments were cumbersome and costly, so that few availed themselves of their advantages,

but continued to treat the chronic discharges on the old and time-worn plan.

The optical examination of the urethra was first practised by Bozzini in the early part of this century. His endoscope was carefully constructed, but was looked upon with little favor, and had almost been forgotten when Segalis, in 1826, constructed a very similar apparatus. Next, the English surgeon, Avery, in 1840, constructed an endoscope. Following this several instruments of less notable construction were placed before the profession, those of Malherbe, Espezel and Cazenave. This brings us to the end of the first half of the century. Then a new series of instruments was introduced by Desormeaux. In 1853 he brought to the notice of the Academy of Medicine in Paris his endoscope, which, though large and clumsy, introduced a new era in the construction of such appliances. Cruise, of Dublin, made in 1865 a modification of Desormeaux' instrument, and placed it before the profession. The same, with a slight modification, was used by Christopher Heath in the Lock Hospital for some time. These instruments were, in their turn, modified until 1879, when the electric endoscope was first constructed.

The numerous lights put into this service have been seen, candle, lamp, calcium and Drummond, with plane or concave reflectors. A great drawback to the use of these instruments, and one which was not corrected till some time after the electric apparatus was introduced, was in the fact that the tube which passed into the urethra and the source of light, had to be detached in making applications to the urethra, thus making the manipulations exceedingly painful and awkward. The light was not thoroughly under the control of the operator, and he could not regulate its intensity, which point alone was a great detriment to the careful study of pathological changes, some of which must be viewed with much stronger lights than others. This can now be regulated from the battery. In the construction of the electric endoscope, as we have it to-day, all these inventions and modifications have been utilized, the result being a simple apparatus, capable of great control of the light.

The one I have now before me is Leiter's modification of Neitz'. It consists of short endoscopic tubes fashioned after Steurer's, at the ocular end of which is applied the easily-handled illuminating apparatus by means of its funnel-shaped end. The illuminating apparatus is connected by two wires with the battery, and consists of an arc lamp, and behind it a fixed concave mirror, which throws the rays of light parallel into the funnel, and through it into the endoscope.

The eye of the observer looks over the rim of the mirror into the funnel, and tampon, brush or other instruments are introduced in the same direction.

As a means of making a clear and positive diagnosis in these cases, there is no instrument to take the place of the endoscope. Its use is surrounded by an air of simplicity that is deceptive, but, like the study of ophthalmoscopy, the pathological changes must be known to be recognized. This, of course, requires constant practice and ample material, but when once acquired the results will fully repay for the trouble.

The urethra, anterior of the bulb, should be examined first, and to do this the tube is passed through the urethra, along the upper wall to the membranous portion, and then, withdrawing the obturator, the lighting apparatus is attached, and the examination is begun from behind forward. The field of vision may be obscured by the secretions, mucus, pus, blood, or by the oil used for lubricating the instrument. A cottonwood applicator should be used to clear the field of vision, without separating the lighting apparatus from the tube. The instrument should be withdrawn, not continuously, as one might suppose, but by short stages, and the field thoroughly examined before proceeding further. This manœuvre may seem a small detail, but changes are wrought in the color of the mucous membrane by the continuous pressure, and occur quickly as the tube is withdrawn.

If the disease be discovered in the portion anterior to the membranous urethra, the more painful operation of examining the deeper urethra may be unnecessary; but, if not, the instrument should be passed continuously until urine trickles along the pipe. The patient may either lie down or stand for the primary examination, and should the deeper one be necessary, the patient should be placed in the lithotomy position.

Through the endoscopic tube we notice that the mucous membrane passes from the rim of the endoscope like a cone or funnel. The color of the mucous membrane is darkish red in the deep urethra, surface smooth and rigid longitudinally. The color changes as we pass outward, and is of a much paler red in the pendulous portion. In chronic urethritis the greater portion of the mucous membrane remains as normal, but there are certain modifications from swelling, inflammation and granular spots. If the swelling be great the mucous membrane may even project into the tube. If stricture be present, we lose this funnel-shaped condition of the mucous membrane and it remains rigid. Various shades, from red to dark red and bluish red, are the distinguishing points of the granular condition of the urethra, and the surface shows a velvety roughness.

These changes may occupy a large surface, or may appear as small circumscribed patches. Other conditions, such as fungous proliferations, polypi and ulcerated spots may also be distinguished.

The simple endoscope, with head mirror to reflect either gas or sunlight, answers a very useful purpose for those who have not the electric apparatus; and, from its simplicity of use and inexpensiveness, I should advise all who treat these diseases to become possessed of one.

Treatment.—Internal and local. Of the former, Berkeley Hill says: "For medical treatment I have little benefit from drugs." With this opinion I quite agree. The internal treatment of chronic discharge is a very unsatisfactory way of handling the trouble, and of itself would never cure the disease; it must be treated locally. The actions of the balsams and sandal wood oil in the acute stages is of use only in rendering the urine aseptic and bland. The secreting condition of the urethra is very different in chronic cases where the discharge is small and not always of specific nature.

If these drugs had no deleterious effect we could wish for nothing better; but we are aware of the injurious influence upon the kidneys, stomach and skin when continued for a lengthened period, not to speak of those isolated cases in which albuminuria arises, such as are mentioned by no less authority than the late Robert Ultzmann.

We have recently had a drug—salol—highly extolled for its action in rendering the urine aseptic; at the same time having no deleterious action on the digestive system, and no systemic symptoms resulting from its use. The drug, which is tasteless, is a product of the carbohydrates; but like all new drugs, has had what might be termed a "run" on it. It has not entirely disappointed us, however. While in the cases in which it has been used it appears to have given great satisfaction, yet we must not expect too much from its use, although in combination with boracic acid its effect is pronounced.

The local treatment of that portion of the urethra situated anterior to the bulb differs, in many respects, from that of the prostatic portion. The anterior alone being the seat of stricture is, therefore, amenable to the pressure treatment of Otis, while instrumental treatment in the prostatic urethra is likely to do more harm than good by possibly relighting an acute attack. In the anterior urethra the Otis treatment should first be used if any coarctations exist, and should be carried on until No. 27, at the least, is reached, and No. 30 F. should be used, this being the average normal calibre. The slight slitting of the meatus to admit a No. 30 is a very trival matter, and perfectly

painless when cocaine is employed. Should this treatment prove insufficient, then local application through the endoscopic tubes must be tried. For this purpose we use cotton wool on a tampon holder or a camel's hair brush to carry the application. The tube is inserted and withdrawn until the diseased spot is reached, and then the surface is cleaned of any discharges or oil, and the application made. The most frequently used solutions are nitrate of silver, varying from 1 per cent. to 10 per cent.; sulphate of copper, in the same strength; or iodine, pure, 1 gr., potass. iod., 5 grs., and glycerine, 1 drachm. The passage of a large-sized steel sound immediately before these manipulations will greatly lessen the pain of operation. Suppositories may also be introduced through these tubes. In this region the ordinary clap syringe can be employed to great advantage, great carefulness being exercised in its use. The syringe itself is an important article. It should be perfectly air-tight, preferably of hard rubber, blunt pointed, and capable of holding sufficient to thoroughly distend the urethra. Any of the soothing or astringent lotions can be used.

The treatment of the posterior urethra differs from that of the anterior in many points. The Otis sounds are of little use, and irrigation plays a more important part. The irrigating catheter of Ultzmann is the most convenient; it is seven inches long, has four slits at its vesical end, and a rubber tube is attached to the extra vesical end, so that the irrigating syringe may be more readily connected. A marked plate indicates the direction of the cure. With this instrument large quantities of medicated fluids are made to pass over the diseased portion and into the bladder, the point of the instrument being beyond the compressor muscle. After the irrigation the patient is made to empty the bladder thoroughly. Should there exist any bladder insufficiency, the contents should be withdrawn by a soft rubber catheter.

The following solutions can be confidently recommended: Acid carbolic 1-500, or potass. permanganate 1-5000 to 1 in 1000. They are best used while warm.

I have had great benefit from the use of iodoform and iodol in these cases when made into suppositories and applied with Ditell's Porte Remedie, an instrument catheter shaped, open at the vesical end, and fitted with an obturator mounted on a connecting rod. The suppositories are made with cacao butter and contain about one grain of either drug.

The instrument that has given me more satisfaction than all the others combined is Keyes' deep urethral syringe, both in its original shape, and with my modification. Keyes' instru-

ment consists of a shaft, No. 13, about eight inches long, with syringe attached, and wide lateral wings to facilitate its use, and serve as guides to the direction of its curve. I have modified this instrument by adding a bulb to the end with lateral openings. This serves two purposes. It separates all folds of the mucous membrane, applies the medicine more uniformly and allows of the use of ointments. Keyes uses this almost universally in treating these cases. His solutions consist of nitrate of silver in varying strengths, from ¼ to 10 per cent. One to 5 drops are carefully deposited where required and allowed to remain. The pain produced is slight, and the changes wrought almost incredible. The use of the solid stick caustic is sometimes, though rarely, called for, and can be applied through the endoscopic tube. It should never be used blindly, and never resorted to until all other measures fail.

The diet of the patient should be well regulated, and wine and malt liquors forbidden, the only wine allowable being claret. The urine should be kept bland and unirritating, and only slightly acid. Blisters and other counter-irritants to perineum are highly spoken of by Milton, and I have frequently had great benefit from their use. They can not, however, be employed with patients who have to keep on their feet.—*College and Clinical Record.*

ELECTRICITY IN THE TREATMENT OF CHRONIC PROSTATITIS, AND OTHER CONDITIONS UNDERLYING THE IMPOTENCE IN MEN.

By G. Betton Massey, M. D., Philadelphia.

The several forms of electricity have been quite generally accorded an honorable position by many writers on male impotence, yet the value of the remedy has seemed of late but little appreciated by the workers in this department. A survey of the literature of the subject has convinced me that the following causes have mainly contributed to his recent neglect of a most valuable adjunct to the work of the genito-urinary specialist:

First, the new methods of electrical application which have attracted such universal attention in the diseases of women have not been generally applied to men. The age of accuracy in electro-therapeutics appeared only about eight years ago, while nearly all of our literature on genito-urinary electro-therapeutics is much older. No Apostoli has thus far appeared to guide us to the great truths undoubtedly hidden in the possibilities of electric energy scientifically applied to the prostate, seminal vesicles, vas deferens, and testicles—the analogues of the uterus, tubes and ovaries. The fault of the older work was its inaccuracy of dosage and uncontrollability—two faults that are fatal to scientific results, except by accident.

The meter and controller are as essential in this work as in the diseases of women; without them applications of electricity in either class of affections are like using a powerful drug without weighing or measuring it.

A second, and probably a more important reason for lack of advancement in the genito-urinary electro-therapeutics of the male, is the surgical air and infection of the day, which leads the physician to look for stricture rather than glandular, muscular or nervous diseases. The late S. W. Gross, for instance, judging from his work on the subject, looked for a stricture in every case of impotence, and if one could not be induced to appear in the deeper parts of the urethra by the irritation of abnormally large sounds of bulbous probes, he remorselessly divided the inoffending meatus itself, whose only fault could have been to act as a barrier to useless and possibly harmful stretching of the important structures deeper down. If a narrow meatus is a cause of impotence, the small mouths of the reigning belles of society must as surely indicate dyspepsia.

This extreme view is, I believe, held by few at present, yet the practice of too many specialists ends and begins within the urethra, even prostatitis being regarded as a stricture of the prostatic urethra, and its treatment confined to repeated dilatation, or more heroic measures that look mainly toward maintaining a really abnormal calibre in this tube.

Far more information can be gained of the condition of the prostate by the rectal touch than by these explorations of the urethra, and I am inclined to think that the male urethra has been about as much abused in this way as the uterus was some years ago by rigid sounds and stems. The recent enormous increase in the expertness of the gynecological finger, within the vagina and rectum, particularly when combined with bimanual palpation, point to a largely unused means of information in male diseases, by which the many abnormal conditions of the prostate, the vesicles, and the ducts may be explored by the rectum. The same avenue is peculiarly well adapted to the interpolar and modified polar applications of electricity, the insensitiveness of the rectum permitting really enormous current strengths being passed through the diseased parts. Intra-urethral exploration and treatment will, of course, be requisite in many cases, the length of the canal and the difficulty of maintaining its calibre being both unique as compared with the female urethra. The possibility of ocular inspection of ulcerated surfaces by means of the endoscope will also lend importance to intra-urethral manipulation, but in the diseases under consideration—prostatitis and other forms of impotence—entirely too much dependence has been placed on this method of examination and treatment.

Chronic prostatitis is unquestionably a microbic invasion of the glandular substance of this sexual organ. An increased secretion accompanies the earlier stages, but later the chief evidence of the trouble is shown in an increased bulk due to parenchymatous enlargement, analogous to what occurs in chronic metritis. Accompanying this catarrhal inflammation of the gland there will be found certain functional derangements of varied character, in accordance with the existing condition of the nervous apparatus. Where no sexual excesses have contributed to or accompanied the condition, I have seen complete retention of potency by an enlarged prostrate. Usually, however, the catarrhal prostatitis seems to be aggravated by sexual indulgence; and I do not doubt but that many cases in young and middle-aged men are caused by sexual excesses, the irritated organ being a ready-made culture medium for stray microbes. The later stages of this catarrhal prostatitis will be found to be accompanied by a catarrhal invasion and distention of the seminal vesicles, which further compromise the functional soundness of the parts. Epididymitis and orchitis may also result, but when they occur are more easily recognized than similar conditions of the internal organs.

I doubt whether simple functional abuse can create these conditions. The most profound nervous or psychic impotence may exist with all the pelvic organs of man in an apparently normal condition. If, however, these chronic catarrhal and parenchymatous inflammations of the pelvic organs be permitted to remain for some months or years, the neuro-muscular derangement is sure to follow. The incapacity for proper functionation on the part of the prostate and vesicles reacts negatively on the spinal centres. Imperfect functionation acts positively upon them; and we sooner or later have a genito-spinal neurosis developed, which turns a pelvic disease into a spinal one.

The field of electricity in these several conditions is peculiarly apparent to the physician familiar with its recent applications in the diseases of women. As a remedy for a chronic catarrhal inflammation of a gland there is nothing superior to the local action of the galvanic current. The negative pole may be applied to the prostatic urethra by the means of Newman's olive pointed sounds, properly insulated, or in old men by converting a prostatic-curved silver catheter into an electrode by covering it with fused shillas or hard rubber, except a small space back of the eye. This latter is useful in accurately indicating the neck of the bladder by the flow of urine. The positive pole is, however, best when small currents of five to ten or twenty milliamperes are to be used, and it is best applied by

converting a linen or red rubber catheter into an electrode by winding No. 30 platinum wire around the end, back of the eye, until a half-inch surface is made, the end of the wire being carried through the wall of the catheter and brought out through the tube to make the conducting cord. The outer end remains as a knot within the tube. Such an electrode, an adaptation of Martin's uterine electrode, is extremely convenient and easily cleansed when the basis is the red rubber catheter. If the application is continuous for three or five minutes, five to eight milliamperes are sufficient. If, on the other hand, my own method of swelling currents be used, as much as thirty or forty milliamperes may be safely employed in skilled hands, the small time during which the current acts preventing much irritation from electrolysis.

This intra-urethral application of electricity may be exceedingly mild or exceedingly violent, in accordance with the skill and judgment of the operator. None but a specialist should employ the method, and it is practically criminal for any one to use it without a meter. The applications should rarely be made oftener than once a week. They are indicated only when prostatorrhea or spermatorrhea is present, when the urethra is obstructed by the growth of the prostate, or when the organ is manifestly enlarged. In either of these conditions it is as valuable as in the Apostoli method in chronic metritis or fibroid tumors of the uterus, conditions closely analogous to those under consideration. The insertion of an electrode into the urethra is never warrantable for the purpose of applying faradic currents, which are equally well directed to the same parts through the rectal wall.

Rectal applications of the galvanic current are usually sufficient for most cases of deranged functionation and incipient enlargements of the prostate. The active electrode is an olive-shaped ball, about the size of the end of the index finger, mounted on an insulated staff. This is pressed against the under surface of the gland. In order that the bulk of the current from this may penetrate the prostate and its neighboring structures, the indifferent pole must be on the abdomen, and fully as large and as good a conductor as that used in the Apostoli method. The effect of currents of forty and sixty milliamperes thus applied by the swelling method is but slightly unpleasant, and their power to cause absorption of effused and adventitious material and promote healthful contractions of unstriated muscle is very great. In one case, where a cystic accumulation within the left seminal vesicle had been discovered by the rectal touch, a two week's continuance of the method had promoted such absorption and resolution of inflam-

matory products as to permit the vesicle to empty itself. A profuse, clear discharge was mentioned by the patient as having occurred in the morning when this happened, and a re-examination that day showed the vesicle collapsed and of ordinary consistence. Shrinkage of the prostate itself is promoted by the conjoint use of the primary, or coarse wire secondary faradic current, turned on by a controller, with the electrodes arranged as just described. By carrying the active electrode a little higher, which is facilitated by its being hollow and serving to introduce a cushion of water before it from a syringe, the method may be used as a powerful stimulus to an atonic bladder, which is so often found associated with prostatic enlargements. The adherence to the swelling method will permit of daily treatment within the rectum without the mucous membrane being excoriated.

Finally, a most important element in the electrical treatment of impotence is the action of the current on the neuro-muscular apparatus and the genito-spinal centre. The rectal applications described may be made to produce contractions of various groups of associated muscles by slight changes in the position of the active electrode, simulating successively the several associated movements occurring in functionation. But probably the most valuable detail of the method is the application of the galvanic current to the genito-spinal centre. For this, large currents are used, usually from 60 to 100 milliamperes, the patient lying face down upon a large indifferent electrode applied to the abdominal surface. The active electrode, an elastic, wired-cotton pad, about seven inches in diameter, thoroughly wetted and soaped, and attached to the negative pole of the battery, is passed up and down the lumbar region until a good lather is raised. The current is now turned on, and the electrode slowly moved up and down over the centre for five minutes. No better plan of detecting the existence of this centre need be wanted, as erectile sensations are often distinctly produced during the passage of the electrode over the situation of the centre or of its efferent nerves.

The statements of patients as to the effect of these methods on moderate degrees of pelvic and spinal impotence vary somewhat, the general consensus pointing to its great value. In one case the restoration of potency was so pronounced that truly remarkable sexual excess was subsequently indulged in with impunity.—*Practice.*

MEDICINE.

OUR PRESENT KNOWLEDGE OF THE CURE OF MALARIA BY MEANS OF QUININE.

PROF. C. BINZ.

In this contribution to the quinine-treatment of malaria, Binz states that just twenty-six years ago he opposed, in the pages of the *Centralblatt*, the then generally accepted theory that the curative action of quinine in malaria is developed through the nervous system, and propounded the theory that quinine, in all probability, acts as a protoplasm poison on the pathogenic micro-organism, at that time undiscovered, which is at the root of all paludism. It has now been discovered that all forms of malarial fever are brought about by organisms of the genus amœba, which penetrate the bodies of the red blood-cells at whose expense they increase in size, finally sporulating and destroying their host. Laveran, who first discovered and described the parasite of tertian ague, also investigated the action of quinine on that organism, and found that when microscopical preparations of the parasite were treated with quinine, the vitality of the disease-germ was speedily destroyed; a fact which has been substantiated by Machiafava, Celli, Grassi and Feletti. The influence of quinine on the malaria parasites has also been studied by examining the blood of malaria patients before and after the exhibition of the drug. In this instance the investigations of Laveran, Romanoffsky, Baccelli, Golgi, Machiafava and Bignani established the fact that the parasites were killed by the quinine absorbed into the blood.

Dr. Mannaberg, who has recently investigated this question in the malarial districts of Dalmatia, Istria, etc., finds, among other things, that about three hours after the exhibition of from seven to fifteen grains of quinine the amœboid movements of the amœboid form of the parasite of tertian ague slacken to a very perceptible degree, and that after a lapse of a further period of three to six hours, the number of parasites in the blood of the patient greatly diminishes, whilst many of those still left are torn and mutilated. On the full grown parasite of tertian, quinine either produces a complete cessation of all movement in the pigment whereby the parasite acquires a glittering, cloddy appearance as though coagulation had set in- or else dropsical swelling is set up, or, finally, the parasite fall, to pieces. Shortly after the exhibition of quinine, mediums sized parasites of tertian ague develop intense activity. It appears that quinine possesses a stimulating action before causing

coagulation and immobility. This phenomenon has also been observed by Baccelli. According to Golgi, the medium-sized parasites of quartan fever acquire a glittering appearance and tendency to shrivel when the patient receives quinine internally; the large forms, however, become distended, then pigment exhibits lively oscillatory movements and they frequently contain vacuolæ or abortive spores.

About three hours after the exhibition of a dose of 7½ grs. of quinine, the nucleoli of some of the amœbæ of the milder forms of true quartan had either partially or entirely lost their tinctorial characteristics. After twelve hours of the treatment stainable nucleoli were hardly met with at all, most of the parasites having broken up into irregular fragments.

From these and other experiments it is evident that the amœba of malaria is not only visibly enfeebled by the presence of quinine in the blood, but that its capacity for producing viable spores is greatly diminished.

In these forms of malaria which are not curable by quinine that drug has no effect whatever on the parasites present in the blood. Baccelli, however, has found that many such severe forms which defy the ordinary method of treatment may be speedily cured by injecting the usual dose of quinine into a vein.

In spite of certain differences on minor points, Mannaberg and the other investgiators one and all agree that quinine is a direct poison for the malaria parasite, and that the therapeutic doses employed are non-injurious to the cells of the human organism. Any assistance from the nervous system in the process of cure is neither evident nor necessary.

With regard to the prophylactic action of quinine, it is to be noted that the drug disappears very gradually from the blood and in an almost unaltered condition. By this means any young amœbæ and spores are kept in constant contact with the drug and are thereby checked in their further development. As to the part played by the leucocytes it appears that phagocytism is prominent in cases of spontaneous cure of malaria, but not when quinine is employed.—*Provincial Medical Journal.*

BRONCHITIS IN INFANTS AND CHILDREN.

Dr. A. Richards, New York Academy of Medicine, March 8, 1894, read a paper on

COMPLICATIONS: DIFFERENTIAL DIAGNOSIS.

The most serious complications of bronchitis in children are:

1. Inflammation of the small tubes.

2. Inflammation of the capillaries or broncho-pneumonia. These complications are far more frequent in bronchitis of the exanthemata than in the simple disease. The lining of the bronchial tubes is the seat of the inflammation. There is shedding of the epithelium and infiltration of the connective tissue. If this continues we find distinct consolidation of the lobules and sometimes extensive infiltration forming the so-called pseudo-lobar pneumonia. The consolidation is usually located at the base, is often wedge-shaped, and is also accompanied by atalectasis, some emphysema and frequent involvement of the capillaries. As to the mode of origin, the inflammation originates either from the stopping of a small tube, or more rarely by the primary affection of the connective tissue. After the stopping of the broncerules with a mucus plug, collapse develops rapidly, two hours sometimes being sufficient for the absorption of the air and falling together of the walls. By the second method of origin, the epithelium is involved after the inflammation of the peri-bronchial connective tissue. The process is followed by bronchiectasis, cirrhosis and tuberculosis.

Bronchitis of the smaller tubes is marked by an increase of all the symptoms. The respiration is characteristic. The inspiration becomes shorter at the expense of the expiration, the latter being accompanied by a moan. As it progresses, and but few lobes are involved, physical signs are uncertain, but become marked as pneumonia develops.

Dr. Charles G. Kerley read a paper on

MANAGEMENT IN INFANTS UNDER ONE YEAR OF AGE.

The methods of management described and the conclusions arrived at were taken from an experience of several hundred cases of bronchitis seen at the New York Infant Asylum, in which the writer gave personal attention to the patients and was able to make close observation. Flannel worn next to the skin is a necessity, the clothing being comfortable and loose fitting. The band should be disposed of in an infant over six weeks of age. Its chief office is to slip under the arms and form a constriction which interferes with the respiration. Even when held down to the napkins, it is apt to obstruct the lower part of the chest. Clothing damp from any cause should not be allowed. The jacket made of non-absorbent cotton and oiled silk is frequently of help.

The child should not be held in the lap. In a weak child the lower lobes are most often involved, hencec hanging the position frequently is necessary. The child should not be allowed to remain long on the back. Bathing or sponging with lukewarm water is also beneficial. If there is slight fever in the evening the sponging should be done at this time, for it re-

duces the temperature, and its tonic effect is seen in producing quiet. The general bath and packs the author does not use. If there is dyspnœa and a hard, tight cough, a hot mustard bath (100 deg.) may prove of great service. A hot mustard pack will also be found of service. This hot bath or pack should not be given more frequently than twice a day. As the disease becomes deeper seated with rapid breathing, cyanosis and cough, the use of the steam spray will aid materially. It may be used with plain or medicated water. The spray should be used fifteen minutes every hour, or every half hour, or even continuously for a time. With some children it is impossible to use the spray, as they rebel against it. The child's cloths should be protected with a rubber sheet during its use.

Counter irritation to the chest has given the writer the best results of all methods he has used. In mild cases champhoretted oil, turpentine and vaseline, or camphor oil, spirits of ammonia may be used. They should be rubbed in quite thoroughly until the skin is reddened. In the more severe cases, a mustard paper should be applied from one to three minutes twice a day. Equally efficacious is a paste made of mustard and flour, one to five. This spread between two pieces of muslin and applied quite moist can usually be left from ten to thirty minutes.

Drugs are much less important than either of the foregoing methods. Castor oil in small doses (three to five drops) has an excellent effect in infants, and may be given every two hours, for two or three days. Ipecas (1-20 to 1-30 grain) alone or combined with tartar emetic (1-80 grain) may aid considerably. The most convenient form of administration is the tablet triturate. In a strong child of eight months a tablet composed of muriate of amonia (1-20 grain) ipecac, (1-20 grain) tartar emetic (1-100 grain) may be given every two hours. If it is desirable to produce emesis, fifteen drops of wine of ipecac every fifteen minuteswill usually be successful in an hour. If the case is urgent, a teaspoonful may be given at one dose. If a stimulant is required, ten to thirty drops of whiskey should be given every hour. For irritability and restlessness, small doses of bromide and chloral, or a small dose of Dover's powder (1-8 to 1-10 grain) may be given. The administration of sweet and nauseous cough preparations should not be tolerated.

Dr. Henry Koplik read a paper on

TREATMENT OF BRONCHITIS IN CHILDREN.

In a previously child uncomplicated bronchitis should be treated simply with a full knowledge that it is a self-limiting disease. The fever, if present, needs but little treatment.

Antipyrine and phenacetine should be avoided, and all the drugs which reduce the vitality. Cold packing is also unnecessary. Bathing should be interdicted, for careless exposure may cause serious results. A mild opiate may be given if indicated. The so-called capillary bronchitis of the elder writers we now believe to be beyond the category of simple bronchitis. It should be assigned to the subject of pneumonia. Cough is nature's method of curing the affection by draining the bronchi. Nothing should be given which will seriously interfere with this action. Small doses of ipecac are often of value. Strychnia in small doses is one of the most valuable drugs in this condition. It does service by improving the appetite, and aiding the action of the heart. In more serious cases, es pecially when the child coughs when placed on the back, some drug of the balsam series is indicated. Terebene is one of the best. In moderate doses (½ to 2 min.), dropped on sugar, it is very efficaious and does not disturb the appetite. We frequently find in chronic and subacute cases that there is more or less trouble in the naso-pharynx. The cough will not cease until this is relieved.

Quinine is rarely indicated, a statement which is also true of whiskey and wine. Iron in the form of syrup of iodide is very valuable in the subacute stages.

The treatment of bronchitis in a delicate child suffering from rickets or other serious disorders requires the addition of other drugs, especially phosphorus.

Professor William H. Thomson said that the title of the papers implied that bronchitis in children presented especial features and that this was true. Bronchitis except in exanthemata is never primary in the bronchial tubes. It starts with disorders elsewhere, usually in the skin. Wetting of the back of the neck followed by slight exposure to cold will invariably produce pharyngitis in a strong child. Covering the back of the neck at night is sometimes sufficient to prevent the disease when it is prone to recur. Children who perspire freely about the head and neck during sleep are always liable to bronchitis. It can frequently be prevented by sponging the neck with cold salt water at bedtime and protecting the nape of the neck. The skin of a child is thin and vascular and especially susceptible to cold.

Bronchitis in a child is a serious disorder. The younger the child, the more serious the disorder. This is due to the very small relative muscular strength. The expiratory muscles are especially weak in infancy. Hence the pharynx readily becomes clogged with mucus, and the difficulty is greatly increased. The mechanical effort of breathing rapidly exhausts

the strength, hence it is important to keep the back of the throat clear as far as possible. Children who are apparently doing well, will sometimes change suddenly and the condition become alarming from sheer physical collapse. Mucus should be removed from the back of the throat, and it sometimes becomes necessary to give an emetic to accomplish this. Ipecac should be used, but not in the form of syrup. The powder itself should be employed dissolved in water. As the child vomits, the thick mucus should be drawn from the back of the throat with the finger as much as possible. Capsicum is a better counter irritant than mustard. It may be used as a pack as follows: A teaspoonful of red pepper is dissolved in a pint of water. Flannel should be wrung out of this and applied to the chest as a pack. It will not blister. The condition of the heart and respiration should be closely watched. Nux vomica is an excellent stimulant. One drop may be given at one year. Muriate of ammonia is a drug of considerable value. An expectorant cough is very different from an irritant cough, and requires very different treatment. The best remedy for an expectorant cough is an emulsion of linseed oil. If there is an irritant element, a very small dose of morphia or chloral may be added.

Dr. Simon Baruch advised a judicious process of hardening as the best preventive of bronchitis. This is best accomplished by a tepid bath, properly given. After the usual bath, the nurse should dip her hand in water at 80 deg. and gently slap the baby's body. The temperature should be reduced two degrees each day, to 60 deg., but not lower. At this point water at 80 deg. should be again resumed, but instead of slapping the body, the water should be taken in the hollow of the hand and dashed on. The temperature should be again gradually reduced, and this process should be repeated every day.

At the outset of the attack he usually gives a mercurial to act upon the bowels. He uses bathing gently to open the surface vessels, and thus relieve the heart. By taking away obstructions in the capillaries, the heart's action is greatly relieved. The reduction of temperature is a minor point. The temperature of the bath should not be over 95 degs., and should be reduced to 85 deg., perhaps 80.—*New York Polyclinic.*

LEPROSY AT CONSTANTINOPLE.

At the request of an Israelitic alliance, Dr. Zambaco-Pasha has instituted a further inquiry into the condition of Jewish lepers at Constantinople, and publishes the result of his investigation in the form of a pamphlet. Our learned con-

frère is entirely opposed to the contagion theory. In spite of the fact that a very considerable number of lepers is at large in the Eastern capital, he has never seen a single case of contamination. He completely refutes the conclusions of Dr. Duhring, relative to the case of a woman said to have acquired leprosy by contact; clearly showing that the disease was due to hereditary taint. Leprosy in oriental countries is maintained through heredity; but want and privation are not without influence in its development. "Although I remain firm in the conviction regarding the non-contagiosity of leprosy," says the Pasha, "I am nevertheless of opinion that in order to arrest the propagatiom of the disease through procreation, and thereby fulfil the duties of humanity toward the unfortunate lepers themselves, it is necessary to create asylums wherein all the patients shall be collected and treated. They should be entirely interdicted from marriage, as this is the only way to prevent the provision of candidates for leprosy." It is much to be feared that so enlightened a method of dealing with the loathsome plague will not find favor in our country, where free trade in disease is one of the most cherished institutions.—*Provincial Medical Journal.*

GYNECOLOGY AND OBSTETRICS.

VAGITUS UTERINUS, WITH HISTORY OF CASE.

By H. Marion Sims, M. D., Professor of Gynecology in New York Polyclinic; Surgeon St. Elizabeth's Hospital.

Foster's dictionary describes "Vagitus Uterinus" as follows: "The intra-uterine cry, or the cry of a fœtus while its head is yet within the uterus, showing that air has entered the uterus and that the child breathed. The possibility of the occurrence is denied by some writers."

I, myself, had always supposed that such a phenomenon was of extremely rare occurrence, but, on looking up the history of such cases, I found recorded many more than I had expected.

Two months ago I was called to attend Mrs. X. in confinement. She was 25 years old, tall, and a very large-boned woman. Had never been troubled with any serious illness in her life. From her build one would imagine she would be just the subject for an easy confinement. From the calculations of the patient and her husband the delivery should have taken place ten days sooner than it did. The pains came on about 2 o'clock in the morning, but were very mild in character for

some hours. The waters broke about 5 o'clock, and from that hour until 4 in the afternoon the pains were very irregular, and not at all hard. At 5 o'clock hard labor pains came on, and continued with regularity thereafter. The position of the child was the "first," or occiput to the left. The os dilated very slowly, although the pains were frequent and very violent. The head became engaged in the upper brim of the pelvis, and the os dilated to about the size of a silver dollar. From this time on there was no progress whatever made in the descent of the child. At 11:30 at night the patient having been in labor twenty-one hours, and showing unmistakable signs of exhaustion, I came to the conclusion that I should have to resort to "accouchment forcé," in order to save both mother and child. I told the family of the patient that I should have to turn the child in the uterus in order to deliver it, and, as I needed assistance, would send for Dr. Grandin. The doctor came very promptly and found the head tightly wedged against the brim of the pelvis, and fully agreed with me on the course to pursue. Before starting to turn the child we tried the forceps, but absolutely no headway could be made with them. The patient was put profoundly under the influence of chloroform, and Dr. Grandin, having small hands, "ideal obstetric hands," proceeded to turn the child at my request. One foot had been brought well down into the vagina, and the doctor was reaching for the other, when the doctor, myself and the two nurses were more than astonished to hear from within the uterus five or six distinct cries, short and quick, just such a cry as a hungry child would be apt to give. We could hardly believe our ears, but there was no mistaking the cry, or from whence it came. Each time the doctor would pull on the leg the cry would be repeated, and quite distinct enough to be heard across the large room in which we were. I placed my ear on the abdomen of the patient, directly over the fundus, and the cries were repeated time and again while I listened. The legs and body were finally delivered, and I, making firm pressure on the head in the uterus (the child still crying), could feel the head gradually pass from the uterus into the vagina, where the crying ceased. Delivery followed quickly. The child seemed asphyxiated when born, but a few slaps on the buttocks, and resorting to the method recently described by Dr. Harvey Dew, of this city, promptly brought about a regular respiration. The child was a boy, well developed, with large head, and from his general appearance I should judge was fully ten days or two weeks over the allotted time of gestation.

The perineum was somewhat lacerated, but was at once

repaired, and healed very nicely. The patient made a good recovery, and is now none the worse for her remarkable experience. I have been unable to find any recent cases of vagitus uterinus recorded in this country, though I have heard that Dr. J. W. McLane did have such a case. A gentleman, whose name I do not now recall, reported a case in the New York Obstetrical Society when Dr. Grandin related the history of this case of mine at the same meeting. Zitterland reported, in the Edinboro Medical and Surgical Journal (1822, Vol. 18), an "extraordinary circumstance of a child crying in the womb forty-eight hours before it was born." He states that the patient was lying in bed eating supper, several persons being present. "All at once the company present was alarmed by the cry of a child. The cry seemed like that of a new born baby under the patient's bed cover. All thought the lady had had a sudden delivery. The company was requested to retire, and the doctor was much astonished when he found there was no change in the patient's condition, much less a new born child, yet the cries continued from within the womb. I heard them distinctly and repeatedly. Illusion was impossible, as no other child was in or near the house. After a time it desisted, aud the patient assured me she felt no unusual symptoms, though she, too, had heard the child cry. Delivery occurred 48 hours later, rather slowly, and without any rupture of the membranes having occurred before birth, though a considerable discharge of water came at the time of birth. The child was poorly nourished and died half an hour after birth.

Many cases of children crying while still in the womb have been related; but, to the best of my knowledge, most physicians believe it can only be during a lingering delivery, or during the birth of the child when the head has fallen deeper into the pelvis."

The above case seems to me so very remarkable that I have quoted it almost verbatim.

The Rev. W. Durham (of London), in the London Philos. Trans. 1709, relates a case in which the child cried in the uterus, at times, for nearly five weeks. The patient said that each time the child cried she had a violent pain, jnst like a labor pain, and scarcely a day passed in the five weeks but the child cried and the pain followed. Mr. Durham says in conclusion: "The evidence is so clear in this case that I am fully satisfied it was really the crying of the fœtus, and not the croaking of the guts or womb, or the effect of feminine imagination." Mr. Durham cites some other cases, and also instances of "pipping of chickens and ducks in the egg," somewhat similar to vagitus uterinus.

He also suggests that "pipping in the egg" is due to some uneasiness the young may find there, or is weary of its confinement, or else lies uneasily. Dr. J. Wood (Boston *Med. and Surg. Journal*, No. 11, 1834) records a case in which the child cried and breathed fifteen minutes before the head was delivered. It was a breech presentation. In this case the body had been delivered, and the face was lodged in the hollow of the sacrum.

Dr. W. H. Dean (Atlanta *Medical and Surgical Journal*, 1877) reported a case in which the child could be heard crying in utero, while the mother was standing up, and the head was distinctly felt high up, above the superior strait, and not engaged in the pelvis. The membranes had ruptured twenty minutes previously. The child was still-born, due to prolapse of cord and an entire absence of the expulsive pains after the membranes ruptured. Delivered with forceps.

Mr. Frost (Trans. Edin. Obstet. Soc., 1875) read a paper before the society entitled "Notes on Delivery in cases of breech presentation, on the occurrence of the vagitus uterinus in sucn cases," and cites four cases. In these cases the air had been purposely allowed to enter the uterus to establish independent existence after the natural supply of blood was cut off by compression of the funis.

Dr. Taylor (Guy's Hosp. Reports, 1840-51) reported a case of vagitus uterinus, where the finger was accidentally introduced into the mouth of the fœtus, while endeavoring to move it into a more favorable position, a loud and distinct cry was heard several times. The child was delivered alive by forceps.

I think that these cases about cover all that have been reported in this country and in England. I have heard of some being reported by French and German writers, but have not had sufficient time to go further into the subject.—*New York Polyclinic.*

LIGATION OF THE BASE OF THE BROAD LIGAMENTS PER VAGINAM INCLUDING THE UTERINE ARTERIES FOR FIBROIDS OF THE UTERUS.

Dr. Augustin H. Goelet, of New York, in a contribution to the *American Medico-Surgical Bulletin*, reports favorably upon this operation in his hands for the control of uterine hæmorrhage and reduction of fibroid growths. He believes it should be done in lieu of hysterectomy when that operation would involve too great a risk, and as a preliminary step in view of avoiding the necessity of a more hazardous operation.

When extensive attachments have not been formed which would afford additional nutrition considerable reduction has resulted even in growths of large size. When the operation has been done for smaller growths the result has been more satisfactory. In some instances complete atrophy has been reported. This result, as well as arrest of the uterine hæmorrhage, is accounted for by the diminished nutrition furnished the uterus and these growths by interference with the blood supply and the nerve supply, which are included by ligation of the base of the broad ligaments. It is estimated that the uterine arteries furnish the uterus with two-thirds of its blood supply, and it is reasonable to expect that a profound effect will be produced upon that organ and growths arising from the walls if this is suddenly cut off.

The sole danger in the operation is the risk of including the ureters in the ligatures, as they pass down behind the uterine arteries only half an inch from the cervix, and are consequently in the field of operation. Dr. Goelet suggests, as a preliminary step to eliminate this risk, that bougies be passed into the ureters through the bladder. He admits, however, that a careful operator accustomed to working in this region may easily avoid the ureters.

The technique of the operation as described by Dr. Goelet shows an important departure from the usual method followed. Instead of ligating each artery in only one place on a level with the internal os, he applies a second and often a third ligature to the artery on each side as it ascends along the side of the uterus, the result of which is to cut off the compensating blood supply from the ovarian artery to the lower part of the uterus.

Dr. Goelet gives all the credit of priority to Dr. Martin, of Chicago, who has recently suggested and popularized the operation and perfected its technique, but states that he first ligated the uterine artery *per vaginam* on one side in January, 1889, in the case of a large fibroid the size of a seven months' pregnancy, with a view of diminishing the size of the growth by reducing the blood supply. The artery on the other side was not ligated because the position of the tumor made it inaccessible. Six months later the tumor was one-third smaller, and was giving no inconvenience.

He quoted his last case operated upon to show how promptly uterine hæmorrhage may be controlled by this operation.

Book Reviews and Notices.

A System of Genito-Urinary Diseases, Syphilology and Dermatology. Edited by Prince A. Morrow, A. M., M. D. Vol. II, Syphilology. New York: D. Appleton & Co.

The vast accumulation of assorted literature on general and special subjects to-day finds recognition in the attempt to collaborate all that is best in a comprehensive system of selected articles from the pens of accepted authorities in special lines of investigation. Such seems to be the object aimed at in the system arranged by Prof. Morrow.

The second volume is made up of a series of articles written by some of the best of the American syphilographers.

The result is well worthy of the attempt, and the whole work is a finished representation of syphilis of to-day. The tenor of the work seems to be a fair presentation of the modern acceptance of the disease and its treatment, with but little attempt at the multitudinous theorization which is filling the journals devoted to the treatment of syphilis.

The subject is introduced with a characteristic article by Dr. J. N. Hyde, of Chicago. The history, evolution and pathological anatomy of the disease find discussion. Dr. Hyde repeats the stand taken in his recent text-book on the confusing classification of syphilis into stages, which is in use to-day. He defines syphilis into two general classes, benign and malignant, and between the two allows various subdivisions. The position taken is quite positive as to inherited syphilis, while the author censures the too frequent diagnosis of this condition in cases which are purely congenital. Dr. John A. Fordyce, under the caption "Etiology," gives a very interesting review of the pathology of the disease, with some attractive history of experimental pathology in the lower animals.

Dr. L. D. Bulkley's article on the modes of infection in syphilis is mostly statistical. Dr. Bulkley is emphatic in his recognition of the paternal infection, and speaks of syphilitic spermatozoa.

In his article on "Primary Syphilis," Dr. E. B. Bronson gives a clear definition of the term "induration" as applied to the chancre. This is one of the best sections of the system. The differentiation, the description of the varieties of the initial lesion, the distinction between primary and secondary adenitis, an historical sketch of the pathological anatomy of this period of syphilis, and the author's own theory of the early treatment of syphilis, are the chief lines of merit in the article.

Dr. Zeisler's scholarly exposition of constitutional syphilis deserves careful reading, and should be mentioned especially for the lines devoted to the condition of the vascular system in syphilis.

Much of the volume is occupied by a section on the syphiloderms, written by the editor of the work, Dr. P. A. Morrow. It is largely a reproduction of the same material employed in his "Atlas of Skin and Venereal Diseases" published a few years since. More attention, however, is devoted to the pathology, and the well selected plates add largely to the interest of an otherwise valuable contribution.

In a short article Dr. Samuel Alexander covers the essentials of the discussion of the morbid conditions of the appendages of the skin in syphilis. Dr. Chas. W. Allen's article on "Syphilis of the Mucous Membranes of the Mouth and Tongue" is especially notable for the timely consideration of the leukokeratoses of these organs. The differentiation of this condition is not made quite clear, but its distinct recognition merits remark.

Syphilis of the joints, etc.; syphilitic affections of the bones; visceral syphilis—all are found considered properly by men eminent as surgeons, viz.: Hartley, Townsend, etc.

Place is given to the syphilitic conditions in the nasal and air passages, of the eye, of the ear, of the genito-urinary system, etc. Dr. B. Sachs contributes to the section on the nervous system, and Dr. F. R. Sturgis to the division on hereditary syphilis.

The treatment of syphilis is ably handled by Dr. J. W. White, of Philadelphia. The synopsis given by the author seems worthy of quotation.

"The points which seem to me of chief importance in regard to this subject, are:

"1. That in syphilis, we are dealing with a bacterial disease of such demonstrable antiquity that it is evident that it has no tendency to become extinct; but, on the other hand, is likely to continue indefinitely.

"2. That this disease affects a large number of the population, and that, by means of its many forms of inoculation and transmission, it is constantly spreading still further.

"3. That the existing means for its treatment among the poorer classes is insufficient, and that the establishment of institutions for that purpose, or the endowment of special wards in general hospitals, is a measure eminently worthy of the attention of the public-spirited and benevolent.

"4. That its most common mode of propagation is by irreg-

ular or illicit sexual intercourse, and therefore the main effort at prevention should be made in this direction.

"5. That prostitution, arising in response to the demand for this illicit indulgence, has, like syphilis, existed from time immemorial, and is not likely to disappear.

"6. That prostitutes themselves need protection, and have claims on the humanity of the law.

"7. That by means of supervisory legislation and control of prostitution, the unlawful sexual commerce of the world may most readily be restricted, and the spread of this disease prevented.

"8. That there is sufficient evidence to prove that such control and restriction, though surrounded with difficulties, are yet possible, and that the advantages to be derived from them are definite and highly important."

The author condemns the cauterization of the chancre, except in a very fresh sore, occurring in an individual known to have had intercourse with a syphilitic. Here the author admits the advisability of excision in selected cases, under the same conditions. Excepting in cases of confrontation, and under stress of unusual conditions, the author believes the early treatment of syphilis—*i. e.*, before the eruptions appear—as unjustifiable. The various methods of treatment are reviewed in detail, while the writer adopts a systematic routine continued tonic method in his own practice. The iodides should begin at the end of the second year in uncomplicated cases, and should be given for about six months. Much stress is laid upon the hygiene of the syphilitic subject. In a brief subdivision the author discusses the local treatment of the syphilides, and offers many valuable suggestions.

The work is concluded with an article on "The Relation of Syphilis to the Public Health," by Dr. S. T. Armstrong, and articles on "Chancroid," by Drs. Edward Martin and James P. Tuttle.

ISADORE DYER.

Clinical Gynecology; being a Hand Book of Diseases Peculiar to Women. By Thos. More Madden, M. D., F. R. S., Philadelphia: J. B. Lippincott Co.

This book, of about 500 pages, was written by an English physician of twenty-five years' experience. The reviewer spent a deal of time reading the views advanced and suggestions made in the work, and is of the opinion that, with few exceptions, they will hardly receive the approval of those practising gynecology in this country. MICHINARD.

Transactions of the Southern Surgical and Gynecological Association. Volume VI. Sixth session, held at New Orleans, November, 1893. Published by the Association. Wm. E. B. Davis, M. D., Secretary, of Birmingham, Ala.

These transactions, together with the constitution and by-laws of the association, and a list of the members, are published in a book of nearly 400 pages.

A work of this kind is desirable because it contains numerous articles on various subjects by as many recognized authorities, and because it also embodies the opinions of those gentlemen who participated in the discussions at the meeting when such articles were read. The book is full of information of the greatest value. It is certainly a treat to read the various discussions so carefully noted by the stenographers detailed to do such work. Each and every article is a jewel of its own peculiar brilliancy. Among the many may be mentioned the following: "The Diagnosis of Pelvic Inflammatory Diseases," by Howard A. Kelly, M. D., of Baltimore; "Intra-Cranial Neurectomy and Removal of the Gasserian Ganglion for Intra-Cranial Neuralgia," Louis McL. Tiffany, M. D., of Baltimore; "Personal Experience in the Operative Treatment of Stone in the Bladder," W. T. Briggs, M. D., of Nashville. In this paper Dr. Briggs reports having performed the mediobilateral operation 171 times "on patients of all ages, from the infant at the breast to the octogenarian." He lost but four cases. In the discussion, Dr. McGuire, of Richmond, who "cut through the perineum for stone 150 times or more, and did the supra-pubic sixty-nine times," denied that limestone countries produce stone. He believes that stone "usually begins with bad digestion." "Amputation at the Hip-Joint by Wyeth's Bloodless Method," F. W. Parham, M. D., New Orleans. This volume should be read by every physician or surgeon who has any regard for himself, his profession or his patients.

MICHINARD.

The American Text-Book of Gynecology, Medical and Surgical, for Practitioners and Students. By Henry T. Byford, M. D.; J. M. Baldy, M. D.; Edwin B. Cragin, M. D.; J. H. Etheridge, M. D.; William Goodell, M. D.; Howard A. Kelly, M. D.; Florian Krug, M. D.; E. E. Montgomery, M. D.; William R. Pryor, M. D.; George M. Tuttle, M. D. Edited by J. M. Baldy, M. D. With 360 illustrations in text and thirty-seven colored and half-tone plates. Philadelphia: W. B. Saunders, 1894. Price,

cloth, $6; sheepskin, $7, half Russian, $8. By subscription only.

This is one of the latest American contributions to a branch of medicine which for a long time was left to specialists, but of late has become so popular with all general surgeons and many general practitioners.

From the array of its authors, both old and young, the majority of whom have already acquired almost universal reputation, the inference must be that the book is all that could be desired. Unfortunately the arrangement of the work is such that the reader is at a loss as to the authorship of the different chapters or sections into which it is divided.

The opening chapter deals, as it should, with the examination of the female pelvic organs. The various positions of the patient, dorsal, Sims', etc., are illustrated with photographs taken from life, both the faulty and correct position being given as best means of teaching that which is right and what is wrong. Plate IV (showing Sims') should have been labeled "faulty."

In the section of this chapter devoted to the use of the uterine sound it is held that the only danger attending the possible perforation of the uterine fundus with the instrument is introducing septic material into the peritoneal cavity—"not a very serious one if the proper antiseptic precautions have been taken." As nothing had been said about cleaning the uterine cavity, and only concerning the sound and vagina, one is left to doubt the reliability of the remark quoted.

It is claimed that a virgin should be examined *per rectum*, but "if this is found not to be satisfactory the patient should be first anæsthetized." If it is intended to imply that no *vaginal* examination of the virgin should be made without the use of an anæsthetic, then certainly under no other condition should a *rectal* examination be made, for both are painful and distressing to the virgin. But it is questionable whether the risks of an anæsthetic do not counterbalance the avoiding of a little physical and moral suffering.

Taken as a whole this chapter is well written. The next chapter, "The Technique of Gynecological Operations," is excellently written—in fact one of the best the reviewer has ever read on the subject, and deserves careful study not only by the general practitioner, but by some book writers. The illustrations themselves convey a great deal of information.

For the purpose of sterilizing the hands it is claimed that carbolic acid can not be used "in efficient strength without injury," preference being given to permanganate of potash and oxalic acid.

For abdominal drainage preference is given to the Miku-

licz drain or gauze bag over the glass tube, because the former "acts continuously and takes care of itself, while the tubes require constant attention and are liable to convey sepsis down into the pelvis. But the many friends of the tube contend that such danger is mythical. Certainly, the reviewer has never seen this dangerous effect. The Mikulicz drain is fully described. It is very correctly insisted that where the glass tube is used it should be of a small calibre. The reviewer has seen some long standing, difficult of closing, fistulous tracts follow the use of unnecessarily large tubes.

In the section devoted to Plastic Operation on the Vagina it is suggested that, to avoid the accidental escape of fecal matter on the hands of the operator, a temporary suture should be passed twice through the anus! This suggestion reminds the reviewer of a story he heard, when a boy, of a certain constipated parrot. But, seriously, a surgeon must be badly afflicted with the operating fever to apply such treatment, when one or two cotton or sponge plugs will answer every purpose, and not expose the patient to infection of the stitch wounds.

The directions given for the management of the sponges, instruments, dressings, etc., the dressing of the wounds, the arrangement of the sutures, etc., are simply excellent.

The chapter on "Menstruation and Its Anomalies" was surely not written by the author of the opening chapter. In the latter chapter iodoform gauze is praised as an intra-uterine packing and cervical dilator, while in the former the *sponge tent* is preferred. In severe hæmorrhage it is recommended to insert one or more sponge tents, which "should be removed within 24 or 48 hours," a rather indefinite direction! Rash, indeed, would be the man who should leave a sponge tent in a uterus anywhere between 24 and 48 hours! The following astonishing passage is quoted: "But in the sponge tents of today, impregnated with carbolic acid or other antiseptics and impermeably covered with gelatin, we have an agent superior to the iodoform gauze recommended for intra-uterine packing." And yet we find on page 120, same chapter, "sponge, laminaria and tupelo tents have been used in the past. Progressive gynecologists rarely resort to their use at present, because of the possibility of sepsis following. Forcible"—with metallic instruments must be meant—"dilatation has been found much preferable."

The treatment of chronic endometritis with stem pessaries, chloride of zinc pencil and nitric acid is condemned. It is recommended to introduce into the uterus, up to the fundus (but not to pack the cavity), a narrow strip of a 20 gr. iodoform gauze.

The entire chapter on inflammatory diseases of the uterus is well written and well illustrated.

The part of this chapter devoted to electrical treatment of endometritis closes as follows: "To-day, in the critical light of modern research and the generous distribution of knowledge, it exists, not because of true merit, but through the timidity of suffering womankind, who grasp at the hand offering relief 'without an operation.'"

In the chapter on laceration of the soft parts, which is practical and not too annoyingly long drawn, no mention is made of Tait's operation. Has it run out of fashion?

The chapter on Distortion and Malposition, in which are exhaustively discussed the many methods of treatment, is very interesting. Here we find a full description, with illustration, of flap-splitting operation, the field of whose influence is said to be "very limited indeed." Schucking's operation for treating retro-displacement is very properly condemned. The entire chapter deserves careful study. Page 285 contains this remarkable line: "We have seen conception follow within five days after a curettage!"

The subject of uterine neoplasms is fully considered, particular attention being paid to fibroid growths and their surgical treatment, the brilliant operation of Keely especially receiving attention in the way of clear description and beautiful and comprehensive illustrations.

Of the treatment of fibroids by electricity the comments are not flattering. The figures of Keith, Engelman and Gautier are given: 372 cases, nine cured, five died. "The percentage of cured about represents the possible percentage of errors in diagnosis."

Pelvic Inflammation is fully considered. Little encouragement, by other than surgical methods, is given in the treatment of chronic salpingitis.

Full directions, with illustrations, are given in the use of Kelly's instruments in the treatment and diagnosis of diseases of the bladder and ureters.

The book concludes with a very practical chapter on the after-treatment in gynecological operations.

To consider every chapter in a review of a work of this size, by so many authors, would require too much space; therefore the reviewer has called attention to only some of the most important. There are little inaccuracies scattered here and there about the work which will, no doubt, be rectified in a revised edition. To be best appreciated, the book must be read. It is particularly recommended to specialists and those who contemplate paying especial attention to gynecology.

MICHINARD.

State News and Medical Items.

Dr. W. J. Pickett, of Bonita, La., was married recently to Miss Eula Williams.

Dr. P. H. Aldrich, a recent graduate of Tulane, has located at Baton Rouge, La.

Dr. Sam Houston, son of Sam Houston, the Texas hero, died May 4, at Independence, Tex.

There is to be a section on Medical Journalism at the next International Medical Congress.

Dr. F. Loeber has removed from Baronne street to his new home, corner Coliseum and Euterpe, where he has his office.

Dr. John Gazzo, of Raceland, La., was elected president of the Louisiana Pharmaceutical Association at its last meeting.

The Journal has received announcements from the University College of Medicine, Richmond, Va.; Barnes Medical College of St. Louis, Mo., and the Northwestern University of Chicago, Ill.

Louisville Medical College.—There were 191 graduates at the commencement of the Louisville Medical College held March 6.

Dr. Van B. Thornton, of Hempstead, Tex., has moved to Galveston, and Dr. R. C. Hodges has moved from Galveston to Houston.

Dr. W. Oliver, of Caldwell, Texas, was here recently on his way home from a post-graduate course in the New York Polyclinic and Hospital.

Dr. A. J. Perkins, of Lake Charles, La., who has just recovered from a serious illness, has been appointed surgeon of the K. C., W. & G. R. R.

Pneumonia is most fatal at Valparaiso, where 1900 of every 10,000 deaths are caused by it. It is least to be dreaded at Bombay, where the ratio is 26 to 10,000.

Drs. A. W. de Roaldes and Edward Souchon represented Louisiana at the Congress of Physicians and Surgeons of America, held at Washington, D. C., June 1.

COMMENCING with the July issue the *Archives of Pediatrics* will be edited by Dillon Brown, M. D., adjunct professor of pediatrics at the New York Polyclinic.

AGUE is most fatal at Rome, there being 460 deaths in every 10,000 annually in that city from this cause. The ratio in the United States is 240 to 10,000, and in London only two.

THE twenty-ninth annual announcement of the Medical College of Alabama for 1894–95 has been received. It will be sent on application to Geo A. Ketchum, M. D., Dean, Mobile, Ala.

THE July *Journal of Nervous and Mental Diseases* contains the address of Dr. S. Weir Mitchell to the American Medico-Psychological Association, with appended letters from prominent neurologists.

A BILL to regulate the practice of medicine has failed to become a law in Georgia.

THE third annual announcement and catalogue of the University of Texas has been received. There were five graduates this session.

THE JOURNAL has received from Dr. A. L. Hummel, of Philadelphia, a programme of the annual banquet of the American Medical Editors' Association, held at San Francisco, June 4. The genial doctor gave a toast—"The Medical Purveyor, Handmaiden of the Physician."

THE *Railway Surgeon*, volume 1, number 1, has been received. It contains much of interest to all railway surgeons. One item says: "There were 405 Association buttons sold at the late Galveston meeting." This live publication is to be issued bi-weekly, from Chicago. Subscription price $5 per annum.

DR. GALEZOWSKI, the famous Paris oculist, will receive a fee of $25,000 for his visit to Persia to attend a son of the Shah. Larger sums than this have been declined by English practitioners. The late Sir Morel Mackenzie refused $30,000 to go on a professional trip to New York, and Anderson Critchett did not accept $35,000 to visit India to treat one of the native princes.

Dr. Wm. T. Briggs, of Nashville, Tenn., died suddenly June 13 of brain trouble, superinduced by abscess in the ear. Dr. Briggs was a native of Bowling Green, Ky., and sixty-five years of age. He was a distinguished surgeon and the author of many valuable publications on surgery. He was an ex-president of the American Medical Association; one of the

organizers and ex-president of the American Surgical Association; was president of the general surgery department of the International Medical Congress, held in Washington in 1887, and a delegate to the London meeting in 1890. He was recently elected a delegate to the International Medical Congress in Rome. He leaves three sons, all physicians, and one daughter.

The annual report of the Board of Health of Mobile, of which Dr. George A. Ketchum is president, and Dr. G. Owen, Dr. Rhett Goode, Dr. J. G. Thomas and Dr. Sam B. Olliphant are members; Dr. T. S. Scales, health officer; D. T. Rogers, clerk, shows the following: The total deaths for the year 1893 was 839, of which 188 were under 1 year. The next greatest number of deaths was between the ages of 20 and 30, which was 105. The comparative list for the several years shows the deaths by years as follows: 1892, 885; 1891, 787; 1890, 847; 1889, 854. From which it will be seen that the number for the past year is less than that for many years past. The largest number of deaths was in January and the smallest in April. The annual death rate was 26.99 for the past year. In the social relations of the dead 228 were married, 419 single, 105 widows and 28 widowers. Still births for the year 126, of which the seventh ward had 42. Births reported, 481 whites; 404 colored; 35 mulattoes. Illegitimate, white, 12; colored, 106; mulatto, 8, making a total number of births reported for the year 920. Birth rate 1893, 29.60; 1892, 30.40; 1891, 27.57; 1890, 21.92; 1889, 18.70.

Salophen in Acute Rheumatism.—Continued clinical experiments have shown that salophen exerts a specific influence in acute articular rheumatism, and deserves a preference over salol and the salicylates, because possessed of all the advantages and devoid of the disadvantages of these remedies, salophen will not irritate the stomach, weaken the heart, or produce the unpleasant nervous phenomena which so frequently attends the administration of the salicylates, while in promptness and certainty of effect it is fully equal to the latter. The following case which is reported by Dr. Holzschneider, of Cronenburg, illustrates well the therapeutic action of salophen in acute rheumatic affections; Mayor X., aged thirty- six, was attacked by a severe articular rheumatism involving all the joints and following several light attacks of influenza. The joints were swollen, red and painful, the pain being especially violent in the shoulder, wrist and ankle joints. A course of treatment with salicylate of soda was instituted, but in spite of the small size of the doses, the patient suffered from marked

prostration, ringing in the ears, headache, vertigo, epistaxis, and especially serious gastric disturbances and bilious vomiting. Owing to the irritating effects of the salicylates the patient had to be confined to a diet of milk and wine for fourteen days, and as he refused to continue this remedy the author was limited to the employment of massage and topical applications. Having had his attention directed to salophen he administered it in 1.0 gm. doses three to four times daily, and under its use observed rapid diminution of the pain and swelling of the joints, and improvement in the general condition of the patient. There was no unpleasant after-effects and the digestion was not impaired. It is noteworthy that considerable improvement ensued after the first 4.0 gms. of salophen. The powder was taken dry on the tongue and followed by a swallow of water. The patient was well wrapped in woolen blankets and given abundant quantities of peppermint and elder tea. Every dose was followed promptly by perspiration and a general feeling of comfort.

Cholera Deaths in Germany.—During the summer of 1893 569 cases of cholera, with 288 deaths, were registered in Germany; and the vibrio choleræ Asiaticæ was discovered in the fæces of ninety-two apparently healthy individuals. Between the 1st of January, 1892, and the 1st of March, 1893, 19,932 cases of cholera were notified, and 8679 deaths registered in the fatherland.

Memorial to Charcot.—At the Fifth Congress of French Alienists and Neurologists, to be held at Clermont-Ferrant from the 6th to the 11th of August this year, the following interesting themata will be discussed: "The Relation of Hysteria to Insanity," "Peripheral Neuritis," "Prohibitive Legislation and Alcoholism." It is also intended to take advantage of the congressional session to open a fund for the purpose of raising a snitable memorial to the late Prof. Charcot. Subscriptions for this purpose have already been promised by the Council Général de la Seine (fr. 500) and the Municipality of Paris (fr. 1000).

MORTUARY REPORT OF NEW ORLEANS.

FOR JUNE, 1894.

CAUSE.	*White*	*Colored*	*Male*	*Female*	*Adults*	*Children.*	*Total*
Fever, Yellow							
" Malarial (unclassified)	8	3	7	4	10	1	11
" Intermittent							
" Remittent	3	3	1	5	3	3	6
" Congestive	6		3	3	4	2	6
" Typho	6	2	3	5	6	2	8
" Typhoid or Enteric	3	2	3	2	4	1	5
" Puerperal	1	2		3	3		3
Leprosy	1		1		1		1
Small Pox							
Measles		1		1		1	1
Diphtheria	5	2	3	4		7	7
Whooping Cough	3	1	1	3		4	4
Meningitis	15	2	11	6	1	16	17
Pneumonia	12	5	7	10	10	7	17
Bronchitis	5	2	1	6	1	6	7
Consumption	37	37	37	37	67	7	74
Cancer	11	4	9	6	15		15
Congestion of Brain	10		4	6	2	8	10
Bright's Disease (Nephritis)	14	2	6	10	16		16
Diarrhœa (Enteritis)	35	17	23	29	13	39	52
Cholera Infantum	30	12	18	24		42	42
Dysentery	9		5	4	9		9
Debility, General	1	1		2	2		2
" Senile	14	8	6	16	22		22
" Infantile	5	5	2	8		10	10
All other causes	171	79	146	104	170	80	250
TOTAL	405	190	297	298	359	236	595

Still-born Children—White, 21; colored, 19; total, 40.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 26.34; colored, 32.80; total, 28.11.

L. F. FINNEY, M. D.,
Chief Sanitary Inspector.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

ONE YEAR IN A SOUTHERN SKIN CLINIC.*

BY ISADORE DYER, PH. B., M. D.

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In any large commercial centre, especially a seaport, the occurrence of skin diseases is much the same. There is always the constant factor of immigration and that of cosmopolitanism at work to increase the contagious diseases, while climatic influences favor the development of the constitutional and acute inflammatory types.

It would take too long to make an accurate analysis of the dermatological practice in New Orleans, so I mean only to review the general impressions which have the more saliently stood out in my own observations in public practice during the past year. At the beginning, the material was not large, owing to the newness of the clinic; but in the year, the clinic class has multiplied itself many times.

There is an unusual opportunity afforded here to observe race as a factor in the etiology of skin diseases. It is a noticeable fact that the negro enjoys a certain immunity from the acute inflammatory diseases of the skin, and those neurotic diseases due to reflex disturbance of the nervous system.

*Read before the Louisiana State Medical Society, May 31, 1894.

Contagious diseases, however, find a fit soil in this class. Diseases of hypertrophic tendency, in which there is excessive connective tissue development, are more common in the negro than in the white.

There are several points to be considered in discussing the negro as a subject of skin disease. When there is only disfigurement, and the disease needs treatment only from a cosmetic standpoint, the negro infrequently applies for treatment. When itching, or pain, or ulceration is evident—in other words, when the negro is much inconvenienced, there is a demand for remedial measures.

So it is that such cases as acne, ringworm, psoriasis, mild syphilides, and the like, go untreated in the negro, and therefore no true statistics can be kept of their occurrence in this race.

The later syphilides are quite frequent in the negro, far more frequent than the mild or early eruptions. This suggests the above remarked neglect, and the degree of resistance to severe early symptoms. The chancre is really the only thing which leads to the disclosure of the eruption on other regions of the body, always unrecognized by the negro, until his attention is called to it.

In 877 cases of skin diseases in the out-door clinic of the Charity Hospital, from January 1, 1893, to January 1, 1894, there were 137 of scabies, or about 15 per cent. The large majority of these cases occurred during the first six months of the year. The systematic treatment probably accounted for the subsequent diminution. Scabies is a disease of bad hygienic conditions, though directly due to a parasite. The disease is of rapid development, and is selective of communities, of trades, and of such public places as allow development. It is more frequent in negroes than whites, and seems more selective of cooks, washerwomen and domestics, than other. In the whites next, the tailors, shoemakers, porters and vagabonds, or "tourists" as the clinic book registers them, are the more frequently afflicted. Scabies is so readily curable that the large percentage of cases reported above seems unwarranted. There are certain elements at work, however, which might well be remarked.

The mistaken diagnosis is the first of these. One is so prone to follow habit in diagnosis that scabies is often looked at with an eczematous eye. The frequent pustular condition suggests syphilis, which diagnosis is not infrequently made. One case came to the hospital ward covered with an intense pustular eruption, crusted and ecthymatous in patches. For eighteen months he had been treated for syphilis, and had several times been salivated, without evident effect upon the disease. With baths and appropriate treatment the man was discharged in ten days, cured. The confusion with these diseases and others ought not to be so common, when the essentials are kept in mind.

Scabies is a disease of distinct localization. Beginning usually as a vesicle, between the fingers, just in the sulci, it spreads to the flexors of the wrists and elbows, and then into the axillæ. The classical points of location are the interdigital folds, the axillæ, the breasts and nipples in women, the navel, the penis in man, and last, but always, the folds of the buttocks.

I saw a saleswoman the other day, in a prominent dry-goods store, with scabies' pustules classically distributed on her hands, selling ladies' underwear. It is not surprising, then, that polite society should frequently be afflicted with the disease, at the hands of the cook, the chambermaid and the washerwoman. The treatment of scabies is so easy that it ought to be an infrequent rather than a common disease. Cleanliness of body, clothes, and bed linen, and the judicious use of antiparasitics are the indications. It can be cured in a week. A bath, a rub with stavesacre ointment, clean clothes, and this every day, will do the work.

Eczema holds its usual proportion here as elsewhere, viz.: 18 per cent. Mild and acute eczemas respond quickly to treatment. Contrary to popular opinion, this class of skin disease responds even more quickly to treatment here than in the North (judging from my own observation).

Seborrhœic eczema is no more common here, but classical cases are frequent. The disease is rarely confined to the scalp here. The face is commonly attacked, and often the body is impressed with the disease. The scaling beard, the

dandruffed head, and early baldness, all bear evidence of the frequency of this condition. We have begun a crusade against dandruff, in the hope that the next generation in this section may not be a hairless one. It is a popular fallacy that dandruff is essential to health, and that baldness is hereditary, or an evidence of early piety.

The brush at home and at the barber's, the promiscuous use of these, are the true explanation of the frequency of dandruff and of its spread by the contagion which Unna, of Hamburg, has made classical. Sterilized brushes, the individual use of them, the use of antiseptic and mildly stimulant lotions on the scalp, and the judicious application of oil (a thing despised and avoided without reason) are the indications for the treatment.

In the past year there were treated 128 cases of syphilis, or about 15 per cent. It is a congratulation to remark that only one of these died, and that a case of tubercular syphilide, complicated with cerebral hæmorrhage. Of all the 15 per cent. there were none of malignant syphilis, as defined by Hyde. The papular syphilides predominated, while the mild, ulcerating serpiginous tubercular syphilide came next in frequency. The tone of all these patients was high. We must conclude that either the general physical tone of the lower classes is high, or that (like 15 per cent. of the whole American people) they are syphilized, and the disease is no longer one of severity in our section. In our public practice we have adopted the mixed iodide and mercury treatment.

This method needs defence. It is accepted to-day that mercury alone is the specific treatment for syphilis until the third year, when iodide is justifiable, but not always necessary. With a public class, however, the demand is for the relief, at once, of the patent evidences. The occupation, the family, relatives, and the protection of the community compel a rapid treatment. The mixed treatment certainly removes the symptoms of syphilis the most rapidly. It is a fact that as soon as the evidences are gone the patient is content, and will abandon treatment until at some future time there is a new manifestation. The judgment in this is borne out by the fact that but one of the 128 cases treated persists in the treatment advised.

A colored woman, aged 40, has reported for treatment at regular appointed intervals since December, 1892. There stands out as unique one case of chancre of the tongue, a photograph of which I submit. As to the treatment of the local, primary sore, it has been our habit to prescribe only desiccant powders and lotions, with protection with absorbent cotton.

Of nine cases of leprosy treated, five were negroes. Leprosy is not an uncommon thing now in Louisiana. Its cropping out, independent of a history of contagion, in all localities of the city and State, in individuals of truly American parentage—in negroes, and in those of French and Spanish descent, all indicate the endemic nature of the disease. The occurrence of all types, tubercular, nervous and mixed, attest this fact.

Louisiana and California are the two States of the Union in which the disease is most prevalent. In Louisiana, no attempt is made to determine the number of lepers, and little effort is made at community protection.

But for active and radical measures in the twelfth to the fifteenth century, Europe would have been decimated by leprosy, while, instead, the disease was forced into widely separated sections, where it became mild and sporadic. Legislation of a humanitarian sort, with a view to the radical extinction of this dread, contagious disease, should be administered by competent individuals.

The treatment of leprosy in our clinic has been largely routine. Baths, with arsenic and strychnine as tonic agents, have been used, while ichthyol, hoang-nan and chaulmoogra oil have been given for their supposed specific effect. In one case, ichthyol produced a rapid response with amelioration of skin lesions and the anæsthetic symptoms in case of nervous leprosy.

There is certainly a wonderful opportunity for the study of leprosy in this State, and I believe it our duty to carry on this investigation. With a view to collaboration, I would say that the reports of any cases, or data sent me, would be gratefully received, and I would be pleased to send descriptive blanks to those physicians from the interior of the State who are disposed to further this object.

In the *Medical News* of December 4, 1893, Dr. J. C. Ballard, of Natchez, Mississippi, described a condition which he called "Indian Fires," and which he seemed to think a specific infectious disease confined to Louisiana, but cropping out occasionally in neighboring States. The term "Indian Fires," or "Feu Sauvage," was novel to me when I first came to New Orleans, but I have so frequently met with the term applied to a variety of conditions that I have thought it well to discuss the application of the term here.

Dr. Ballard describes the disease as beginning "as a bunch of tiny vesicles thickly studded over a reddened area." "There may be one or two, or more bunches, and the vesicles vary in size from that of a mustard seed to that of a bleb from one-fourth to five-eighths of an inch in diameter." The all-important question of location the doctor fails to mention. The condition described above corresponds in almost every particular to the "Impetigo Contagiosa" of the text-books, or to Ecthyma, which is only an exaggerated impetigo.

Foster defines the term "*feu sauvage*," or *feu volant* or *volage*, as synonymous with "*ignis silvaticus*," an "eruption that affects the face, especially of children, and indiscriminately applied to herpes, impetigo and porrigo."

It is the habit of the laity and of some physicians to make use of this term as applied to a number of conditions with pustular lesions. Eczema, scabies, erythema, multiforme, herpes, rhus poisoning, are some of the diseases presented at the clinic as Indian fire. Impetigo contagiosa, or Indian fire, is of frequent occurrence. It is not confined to children, although it occurs more frequently among them. It is contagious by pus infection, the staphylococcus pyogenes aureus being responsible. It occurs more especially in the badly nourished, and among those in bad hygienic environment. Negroes, strange to say, are not commonly attacked. The disease spreads rapidly, especially in schools, asylums and the like. It is not difficult of diagnosis. The extremities and the exposed parts of the body are the first attacked. I saw some fifteen children at the St. Joseph's Orphan Asylum the other day with this disease. All had a few discrete lesions on the hands, especially on the thumbs and first two fingers, and on

the backs of the hands. The face presented lesions at the corners of the mouth, on the cheeks, and around the nose and ears, and some of the children had lesions on the scalp. The lesions, beginning as a vesicle or bleb, or a group of vesicles, rapidly become pustular and crusty. Picking and scratching spread the disease to different parts of the body.

Antiseptic baths and the free use of ichthyol ointment usually and shortly suffices for a cure. The eruption confined almost to the face and hands at once prevents confusion with varicella, which it most resembles.

THE INFLUENCE OF DISEASES OF THE NOSE AND NASO-PHARYNX ON OTHER PARTS OF THE BODY.*

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In bringing to your attention the influence of diseases of the nose and naso-pharynx on other parts of the body I will present a subject which has received much consideration from rhinologists for many years. While deprecating the opinion of extremists who believe that almost all diseases originate from the nose, and, still more, of many practitioners who appear to think that no disease can originate from this organ, I will endeavor to present certain facts on this subject, which will enable us to judge in what affections it is our duty to examine the nose and naso-pharynx with a view of benefiting our patient.

The influence of pathological conditions in the nose and naso-pharynx may be either direct or indirect (reflex). In the former the causative association with other diseases is usually well defined; in reflex disturbances, however, the etiological relationship is not so clear, and can only be substantiated by the oft repeated clinical experience of many observers.

1. The organ most frequently affected by diseased conditions of the nose and naso-pharynx is the ear. The openings of the Eustachian tubes in the naso-pharynx make the ears especially liable to pathological processes from this source, whether due directly to the extension of the disease or to any

* Read betore the Louisiana State Medical Society, May 30, 1894.

condition that interferes with the function of ventilation of the middle ear.

With a view of showing the relationship between aural and nasal disease, Swinburn[1] gives a list of 1000 cases of catarrhal and purulent inflammations of the middle ear. In these cases there were present, either as an associate or causative condition, some disease of the nose or naso-pharynx in 914 cases. The causative or accompanying affections that were found were the various forms of rhinitis (771), post-nasal adenoids and enlarged tonsils (59), polypi (8), and deformities of the septum (76).

Turnbull[2] calls especial attention to the injurious influence of enlarged pharyngeal tonsils on the ears, and Goodwillie[3] shows the etiological influence of catarrhal conditions of the nose and naso-pharynx on deafness. Sexton,[4] in his work on "The Ear and its Diseases," states that the origin and continuance of aural disease are due to or intimately associated with catarrhal inflammation of the upper air-passages in the greater number of instances.

While scarlet fever, measles, diphtheria, meningitis, lues and other diseases frequently play a role as the causative factor of ear disease, still the consensus of opinion, based on oft observed facts, shows that the most common cause lies in the nose and naso-pharynx.

A very frequent cause of ear disease in children is the enlargement of the pharyngeal tonsil. While I concur with the opinion of Massei[5] and would deprecate indiscriminate adenotomy on all children in whom this tonsil is somewhat enlarged, still, where the hyperplasia interferes with free nasal breathing, or sets up congestion of the surrounding mucous membrane, it is undoubtedly our duty to remove it, especially if it has already caused injury to the middle ear.

The causal influence of nasal and post-nasal disease on the ears is so well recognized that I will not detain you by giving a history of cases to substantiate what I have said, but will now proceed to point out to you the association of diseases of the nose and naso-pharynx with pathological conditions of the eye.

2. The proximity of the eye to the nasal cavities and their

connection by means of the lachrymal duct, as well as by vascular and lymphatic circulation, would naturally suggest that the eye might be a frequent sufferer as a result of diseases of the upper respiratory tract, and that such is the case is a matter of common experience.

The manner in which the eye is affected may be by way of the lachrymal duct. This may either be through direct extension of the pathogenic process, or through interference with the free drainage of the duct from atresia at the nasal opening, compression from hypertrophies, polypi, foreign bodies or crusts.

The following case will exemplify the influence on the eye of a purulent process in the nose:

CASE 1.—Emily M., æt. 5, was kindly referred to me by Dr. C. A. Gaudet. The child had been suffering for some days with a purulent discharge from the nose, when suddenly a severe conjunctivitis of the left eye took place. Dr. Gaudet, correctly supposing that the disease of the eye was due to extension from the nose by way of the lachrymal duct, referred the child to me.

In a few days the purulent rhinitis was under control, and the conjunctivitis at once subsided. For some weeks afterward there was lachrymation due to congestion of the mucous membrane of the lachrymal duct, which, however, soon subsided.

De Schweinitz,[6] after reporting a number of cases of eye diseases, points out the importance of treating not only the lachrymal duct, but also radically treating the nasal chambers, which are frequently the cause of the trouble.

A not uncommon cause of eye symptoms is due to empyema of the accessory sinuses of the nose. Asthenopia is a common symptom of pus in the Antrum of Highmore and frontal or ethmoidal sinus, and I have observed this symptom even in empyema of the sphenoidal sinus. Pressure and pain about the eye are occasionally the only symptoms complained of in these affections.

Ziem[7] states that there may be an actual conveyance (Verschleppung) of the pus to the eye by means of the lymphatic or venous circulation, and reports three cases of iritis

which were treated with marked success by treatment of the nose and the maxillary sinus.

When we remember the anatomical situation of the eye, located as it is between the accessory sinuses of the nose, we can not be surprised that pain or pressure on the eye is one of the first symptoms complained of in disease of these cavities.

The following case will illustrate the importance of recognizing the influence on the eye of diseases of the accessory cavities of the nose.

CASE 2.—Miss Ella P., æt. 33, consulted me in the hope that the violent pain which she had in and over the right eye might be due to "catarrh" from which she thought she suffered. The following history was given me by the patient:

"About eleven years ago I had an occasional bleeding of the nose for several days, followed by a severe hæmorrhage from the right nostril. I called in a physician, who immediately sent for another for consultation. They placed an instrument through the nostril backward from the mouth, and after attaching a piece of sponge with a solution of iron, they plugged the right side, when immediately the blood flowed through the left nostril. Upon plugging this side, the blood flowed through the mouth. Ice and other remedies were applied, and the hæmorrhage was stopped after three hours. The physician removed the sponge on the second day, and replaced it after washing the nose with carbolic acid and water. After a week he removed the plugging and the bleeding stopped. Shortly after the hæmorrhage I suffered with occasional attacks of neuralgia on the right side, back of the right eye, leading to the temple.

"About eight years ago I suffered for about four months with acute neuralgia back of the right eye. The attending physician treated the entire system and nerves without any relief. Tried electric battery and blistering around the eye, and fly blister back of right ear, but I received no relief except from opiates. The doctor diagnosed the case as 'obstinate neuralgia.'

Until three years ago I was treated by the same physician. At that time I had such a severe attack of neuralgia back of the right eye that I called in another physician, but was con

fined to bed for three weeks. During that time I could not stand the light and suffered intensely. The only relief I obtained was from hypodermic injections of morphine. This physician diagnosed the case as 'neuralgia of the optic nerve.' After this attack I was left in a very nervous state. I was under the treatment of this physician until last summer.

"While in Louisville last summer I had another severe attack of neuralgia. The physician attending me there treated me locally, putting belladonna in the eyes, and four fly blisters (each following the other before the blister was healed) behind the right ear. After this I suffered with a severe pain between the brows. When bending my head forward I felt as though something moved, causing severe pain. The physician in Louisville advised me to consult a specialist, as, in his opinion, there was some cause for the neuralgia which his treatment did not relieve.

"During the past eleven years I have scarcely been a day without neuralgia, suffering more or less severely. Ever since the hæmorrhage I have had considerable discharge of pus and streaks of blood daily from the right nostril. Almost every morning there was a scaly discharge from this nostril. I had also an occasional nose-bleeding from the right side. I used daily a solution of salt and warm water as a nose wash. My eyes were very much swollen after lying down, but the swelling would pass off after being up awhile. The right eye always felt strained, especially after looking up or outward, and looking down to read or sew caused extreme nervousness."

A rhinoscopic examination showed the anterior part of the right middle turbinal covered with pus, and the opening of the frontal sinus (ductus naso-frontalis) blocked with polypi. The removal of these by means of the snare, followed by catherization and washing out of the frontal sinus at once gave marked relief.

The case proved to be one of empyema of the frontal and anterior ethmoidal cells, probably resulting from the plugging of the nostrils and the irritating solutions or decomposing blood setting up a pyogenic process in these cavities.

Attention has also been called to the etiological influence

of adenoid growths of the naso-pharynx on the eye. This influence is well shown in the following case:

Case 3.—Mary R., æt. 7, was referred to me by Dr. B. A. Pope, with the request that I make a rhinoscopic examination in order to learn if there were present any nasal trouble which could explain why the phlyctenular ulcer, which the child had on the right cornea, would not react to the usual treatment.

An examination showed post-nasal adenoids and congestion of the mucous membrane of the nose, the latter probably depending upon the former condition.

Dr. Pope has, at my request, kindly given me the following history of the case:

Mary R., 7 years. March 10th, 1894.

Central phlyctenular ulcers of right cornea. The largest of these is infected, the infiltrated area extending over nearly one-third of the cornea. Intense ciliary congestion, and the palpebral conjunctiva is both strongly congested and swollen.

Touched the infected ulcer with pure carbolic acid.

Gave a solution of cocaine, pilocarpine and boric acid to use locally, hot water applications, and dark glasses.

The carbolic acid was applied on three successive days and then discontinued, as the ulcer was no longer progressive.

13th—Ulcers improved, but more redness of conjunctiva, and more secretion.

Ordered a bandage to be worn constantly on the eye. Touched lids with ½ per cent. nitrate of silver solution.

17th—Above treatment has been continued.

Touched ulcers with 1 to 500 methyl-violet solution.

19th—Silver solution discontinued, and dusting in of English calomel tried. Eye about the same.

21st—Has been treated every day. Began using hypodermic injections of strychnine daily.

29th—Ulcer again slightly infected. Scraped it clean. Discontinued bandage.

April 3d—Requested Dr. Scheppegrell to remove adenoid growths of naso-pharynx. Stopped methyl-violet.

5th—Growth removed two days, and already much better.

6th—Very much better. Almost no ciliary or palpebral congestion. Blood vessels gone from cornea.

9th—Much better. To leave off dark glasses except in sunlight. Have been using hypodermics of strychnine and the local treatment.

10th—Discontinued use of hot water.

12th—Practically well.

14th—Discharged well.

It will be noted that the improvement after removing the adenoids was sudden and very marked.

B. A. POPE, M. D.

3. Nasal and post-nasal disease frequently has a marked influence on the development of the individual. In children whose nasal breathing is obstructed we have frequently a narrow chest, the so-called "adenoidean face," and the high-arched palate in which the alveolar process is without sufficient space for the proper development of the teeth.

Korner[8] has published an interesting monogram on the defective development and deformities of the upper maxilla as a result of obstructed nasal breathing. The obstructed breathing may be due to atresia of the nostrils or choanæ, post-nasal adenoids, tumors, etc. In figures 1 and 2 are shown the maxillæ of cases in which the normal development is retarded by large adenoid growths of the naso-pharynx. The influence of obstructed nasal breathing is well recognized by the leading dentists, and the subject was thoroughly discussed at an assembly of the First District Dental Society, State of New York (January 14-16, 1890), not less than ten speakers taking part in the discussion. Delavan,[9] in the *Dental Cosmos*, states that a diagnostic sign of an habitual mouth-breather is a high arched and narrow hard-palate, associated with deflection of the nasal septum.

Figure 3 represents a patient who has suffered since earliest infancy from obstructed nasal breathing due to immense adenoid growths. The expression of her face is characteristic of this form of obstruction.

Figure 4 illustrates the facial expression of a patient who is an habitual mouth-breather. In this case the obstruction is a fibroid tumor of the naso-pharynx.

There are other conditions of the nose besides obstruction, which may cause deformity of the face. Ozoena, in

advanced cases, has not only a characteristic odor, but also a well defined facies. Abscess of the nasal septum, as shown by Gougenheim,[10] is frequently responsible for the facial deformity due to the "saddle-back nose." The nose is such a prominent feature that any disease which materially changes its natural contour at once mars the appearance of the face. Fig. 5 represents the case which I recently reported before the Orleans Parish Medical Society,[14] in which I removed seventy-six polypi from the nostrils of the patient. The immensely distended alæ of the nose, resulting from the pressure of the myxomatous growths, are well shown.

In Fig. 6, the deformity is due to a sarcoma involving both nostrils and encroaching upon the orbits. In Fig. 7, the luetic process has destroyed the nasal septum, and the nose has sunk backward through loss of its natural support. In Fig. 8, the deformity is due to the loss of tissue resulting from a rodent ulcer.

The cases here shown are from the clinic of the Eye, Ear, Nose and Throat Hospital, the photographs having been taken for me by my esteemed colleague, Dr. Augustus McShane.

4. Disturbances of speech are a common result of nasal and naso-pharyngeal disease. We are all familiar with the nasal intonation due to an obstructed nose, and the difficulty of articulating certain sounds when suffering even from a severe coryza. Children with large adenoids have a muffled voice, and they will say *bay* for *may* and *day* for *nay*, from inability to articulate sounds which depend upon nasal expiration.

Besides these effects, we have certain cases of stuttering and stammering, which owe their origin to nasal affections. Winkler,[11] at the congress of the *Deutscher Naturforscher und Aerzte* in Bremen (1890), laid down the following propositions:

(1) Nasal disease may be the sole cause of stammering.

(2) By means of the treatment of the nasal conditions alone, the stammering may sometimes be cured.

(3) No treatment of the stammering can be permanently successful should existing pathological conditions in the nose not be radically removed.

Kafeman,[12] after giving some important statistics which

show the frequency of nasal and naso-pharyngeal disease in children who stammer, points out the importance of operating before the hesitancy of speech becomes inveterate and difficult to remedy.

5. When we consider the important function of the nose of warming, moistening and cleansing the air which passes into the lungs, we can easily understand how the impairment or loss of this function would develop irritation and inflammation of the mucous membrane of the pharynx, larynx and bronchial tubes. This function may be disturbed not only by hypertrophies, large septal ridges, tumors or enlarged tonsils, which necessitate mouth breathing, but also by atrophic conditions in which the nasal chambers are widely distended, and in which the destruction of the glandular elements and the crusts forming over the mucous membrane impair the respiratory function of the nose. It is in these atrophic cases that we frequently have the most chronic forms of pharyngeal, laryngeal, and bronchial inflammations. The following case will illustrate this:

CASE 4.—Rev. Mr. E., a sufferer from chronic bronchitis for 15 years, was sent to me by my friend, Dr. Wm. E Brickell, who concluded that the condition which resisted al. the usual remedies might be due to nasal disease.

A rhinoscopic examination at once revealed the cause of the bronchial irritation. Both nostrils were so atrophied and patulous that the pharynx, which was dry and glazed, could be plainly seen through them. The upper parts of the nostrils were covered with scabs, which still further handicapped the little capacity that was left in the mucous membrane to prepare the inspired air for the lungs. The nasal condition clearly explained the unsuccessful result of the therapeutic measures.

6. Affections of the nose may not only have their influence on the respiratory passages as shown above, but also in another manner—by their reflex disturbance of respiration. These reflexes consist of sneezing, coughing, snorting, asthmatic attacks, hay fever, and stridulismus.

The influence of certain conditions of the nose on sneezing, as irritation from a foreign body, or a coryza, is an every day experience, but cough, as a pure-nasal reflex, is also not

uncommon. In many persons, if the mucous membrane of the nose be irritated, there will follow a paroxysm of coughing instead of sneezing, as in the following case:

Case 5.—Daniel R., æt. 11, suffered from repeated attacks of coughing, which would immediately follow exposure to a slight draught. The parents, fearing tuberculosis, requested me to examine the case.

A physical examination of the chest revealed nothing abnormal, but as soon as the speculum was placed in the nostril the patient had a violent fit of coughing. The cough was repeated each time that the mucous membrane of the nose was touched, but ceased entirely as soon as the sensibility of the parts was destroyed by cocaine. Concluding that the cough was due to a special reflex together with congestion of the mucous membrane of the nose, I made an application of chromic acid to both nostrils, resulting in a cure of the cough.

In 1872, Voltolini[13] published a case of asthma in which the attacks at once disappeared on removal of nasal polypi, and called the attention of rhinologists to the possibility of asthma being due to a nasal reflex. Since then a large number of cases have been published showing the etiological influence of nasal irritation in many of these cases.

Recently I reported, before the Orleans Parish Medical Society, a case of asthma in a patient whose nostrils were occluded with polypi. The removal of these growths resulted in the disappearance of the asthmatic attacks for four months, but after this period of time the attacks reappeared. A rhinoscopic examination showed that a number of polypi had developed again, and the removal of these again resulted in a cessation of the asthmatic attacks. Since I reported this case, I have successfully treated another case of asthma by the removal of a sharp nasal spur, which, while not sufficiently large to materially obstruct nasal breathing, probably set up the reflex by irritation of the opposed mucous membrane.

Bosworth,[15] at the meeting of the American Laryngological Society, stated that there were three factors which were necessary to precipitate an asthmatic attack: 1. A special neurosis; 2. Certain external, probably atmospheric, irritations;

Fig. 1—Defective developement of Superior Maxilla from Post-Nasal Adenoids.

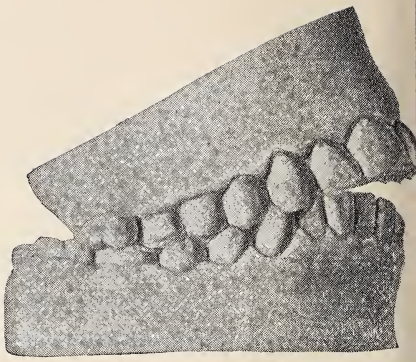

Fig. 2—Defective developement of Superior Max from large Post-Nasal Adenoids.

Fig. 3—Patient who has suffered since infancy from obstructed Nasal breathing, due to marked Hypertrophy of the Pharyngeal Tonsil.

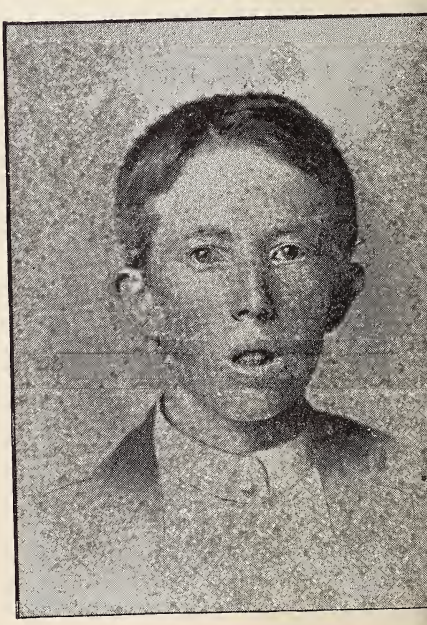

Fig. 4—Patient with large Fibroid Tumor of t Naso-Pharynx, causing mouth breathing.

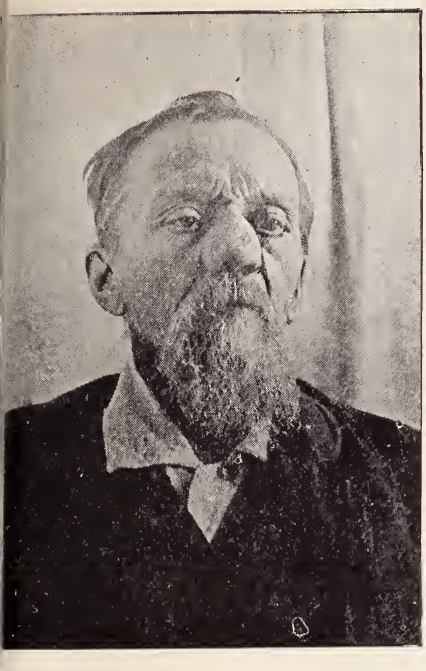

Fig. 5—Patient whose Nostrils are occluded and distended with excessive developement of Nasal ypi.

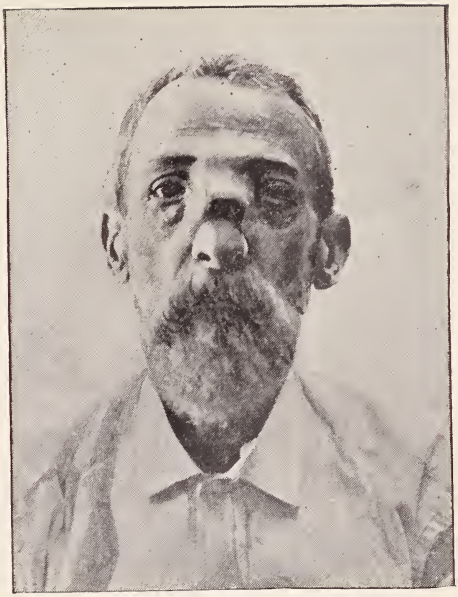

Fig. 6—Sarcoma of both Nostrils, originating from the Septum of the Nose.

Fig. 7—Collapse of Nose from Luetic Necrosis of he Septum Nasi.

Fig. 8—Destruction of Nose from Rodent Ulcer.

3. Frequently a local process in the nose to which the unusual susceptibility to certain irritations is due. Blair,[16] Tissier,[17] Bollinger,[18] (asthma due to rhinolith), Tortensson,[19] Schech,[20] and Bosworth,[21] have each published a number of cases in which the asthma was due to pathological conditions in the nose, and successfully treated by their removal.

Hay fever resembles asthma in requiring, as in asthma, three factors for its production, the external irritation, however, being probably the pollen of certain flowers. By sending such patients to certain localities we prevent the attacks by removal of one of the factors which is necessary for the development of the paroxysm—that is, the irritating pollen. By remedying, however, the pathological process which is usually formed in the nose in such cases, we frequently cure the disease by the removal of another essential factor in these attacks. The following case will illustrate this:

CASE 6.—Miss Hilda T., æt. 17, referred to me by Dr. Wm. E. Brickell, was a chronic sufferer from hay fever. She had been advised by a former physician to use cocaine, in the form of a spray, to relieve the unpleasantness of the attacks. The patient used the cocaine many times during the day, as its influence would last only a short time. Dr. Brickell, fearing that the patient was acquiring the cocaine habit, referred the case to me. The removal of a septal ridge, and the cauterization of the opposed irritable mucous membrane, controlled these attacks in a short time.

Laryngismus stridulus may also be due to nasal or naso-pharyngeal disease. Botey,[22] Duplay,[23] and others report cases resulting from enlargement of the pharyngeal tonsil, and Lennox Browne[24] claims that the majority of cases of laryngismus is found in children who are mouth-breathers.

7. Dyspepsia is sometimes due to nasal disease, especially in those cases in which there is a purulent process and the pus, which accumulates in the naso-pharynx, is swallowed, as often occurs. In many of these cases, as where the pus is discharged from one of the accessory sinuses of the nose, there is likewise an elevation of temperature, which also affects the appetite and the digestion of the patient.

CASE 7.—Mr. T. L. F. consulted me for a catarrhal dis-

charge from his throat, which he thought affected his stomach and system generally. He complained of dyspeptic troubles, and had a temperature of 99.6 Fahr. The laity recognize all pathological conditions of the nose as "catarrh," and Mr. F. placed the responsibility of all his complaints on the "catarrh." His conclusions were correct, but his "catarrh" proved to be an empyema of the antrum of Highmore on both sides. The drilling and disinfection of these cavities prevented the accumulation of pus in his naso-pharynx and brought the temperature to the normal. This treatment removed the dyspepsia which all the powders and waters had naturally failed to benefit.

8. S. Weir Mitchell[25] in his admirable paper before the Ophthalmologic Section of the College of Physicians of Philadelphia, March 26, 1894, states that "the general practitioner, when called to treat a neurosis, especially a headache, habitually refers the patient to an ophthalmologist." Now, while I do not question the wisdom of this procedure, I wish to call attention to the fact that many neuroses, and especially headache, form a common symptom of many diseases of the nose. In empyema of the accessory sinuses, in atrophic rhinitis, and in necrotic processes, it is rarely absent, while it is frequently present in nasal stenoses. I call to mind the following case:

Case 8. Capt. W. consulted me for ear trouble. A rhinoscopic examination showed marked hypertrophy of the turbinals on both sides, almost completely obstructing the nostrils.

Believing that the nasal obstruction was responsible for the ear disease (otitis media non supp.), I removed the nasal stenosis by means of the electro-cautery. Some months afterward, the patient informed me that he had been a sufferer from severe headaches for many years, a circumstance to which he had not previously called my attention; but since he had been able to breathe freely through his nostrils, he had had but one headache in three months, and this a very light attack.

9. There are a number of nasal reflexes which are not yet quite understood, and of which a wider experience is needed to give them their proper clinical value. Thus Dobberke[26] records a case of epilepsy in which the attacks did not return

after an operation for the removal of adenoids. An inability to fix the attention on a subject, and headache after mental exertion (aprosexia), are occasional but well recognized symptoms of an enlarged pharyngeal tonsil.

Enuresis nocturna is also occasionally due to adenoid growths of the naso-pharynx—a circumstance which is not surprising when one watches the restless tossing and efforts at respiration of a mouth-breathing child. Cases in which this affection has been cured by removal of adenoid growths are reported by Sokolowski,[27] Korner[28] and others.

The advisability of inspecting the nostrils in tic douloureux is exemplified by reports of cases made by B. Fraenkel,[29] Peltesohn[30] and Dunn,[31] in which this was cured by intra-nasal operations.

Jacobi,[32] of New York, claims ten cases of chorea due to nasal and naso-pharyngeal disease.

In conclusion, I would again call your attention to the importance of the nose and naso-pharynx in many pathological conditions, which, at first, may appear to have no connection with these parts. The human body is, however, made up of various distinct, and yet inter-dependent, organs, the derangement of any of which or of its function, can not but have an adverse influence on the corporate body.

If then I have impressed you sufficiently, so that, in examining a patient, after having auscultated the heart and lungs, and percussed the liver; after examining into the condition of the kidney, spleen and intestinal canal, you make some investigation as to the condition of the nose and naso-pharynx, my object in reading this paper will have been accomplished.

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A CASE OF TRAUMATIC TETANUS—RECOVERY.

By Dr. LOUIS E. MAYER, Thibodaux, La.

On May 25, 1894, I was called to see Isaac Johnson's boy, æt. 13. At that time I found him suffering and in great agony; his jaws were so closely locked that I could not introduce the tip of my little finger between his teeth. Was unable to question him, for when I did so it threw him into a tetanic spasm, and caused him to assume an opisthotonos position.

From ocular symptoms I at once suspected tetanus and immediately sought to determine the cause.

An examination of the foot revealed a small punctured wound situated in the sole of the left foot, about an inch below the junction of the great and first toe.

On questioning other members of the family, I elicited the fact that a few days previous the boy had called his mother's attention to the wound, which, he said, was caused by having

stepped on a nail, and which at the time appeared trivial, so that no further thought was given it until alarming symptoms suddenly developed.

My suspicion being confirmed as to the diagnosis, I first injected hypodermically one-third of a grain of morphia sulphate and then made a crucial incision through the puncture, evacuating a thimbleful of pus with about twice that quantity of a mixture of blood and pus.

I then prescribed a preparation containing morphia sulphate, bromide of potassium and chloral hydrate, to be given every two hours, with instructions not to wake the patient, and directed the nurse to paint the entire foot twice a day, and the sole of the foot to the edge of the incision every three hours, with tincture of iodine. Poultices of flaxseed meal and blatta orientalis were applied continuously.

The spasms continued during the four days following my first visit although not so violently, the entire muscular system remained very rigid, and there was complete inaction of the bowels. For the muscular rigidity the patient was frictioned with a liniment composed chiefly of chloroform, spirits of camphor and aqua ammonia, and an ointment of sulphate of quinine and lanoline. For the bowels, a saturated solution of sulphate of magnesia was given per orem, aided by enemata. Liquid nourishment and very little of that is what sustained the patient. At my second visit, May 25, on re-examining the foot I noticed the appearance of a bluish spot about two inches below the point of my first incision. Drawing my lancet through this spot there was a slight discharge of matter, and on probing I soon found that the two openings communicated. I thereupon introduced a grooved director and made a free and deep incision connecting the two openings.

The result was, to my surprise, the discharge of a splinter an inch and a half in length.

A continuation of the treatment outlined above was advised and followed. The patient at this writing is up and about, having called to see me at my office; his appearance does not show signs of the siege passed through.

CLINICAL NOTES.

By E. D. FENNER, M. D., Visiting Physician, Children's Wards, Charity Hospital, New Orleans, La.

I. A Case of Syphilitic Gumma of the Mouth in a Three-Year-Old Child.

Ione C., white, 3 years old. First seen Dec. 16, 1891. Diagnosis—Syphilitic Gumma of cheek and gums.

The patient, an unusually healthy looking child, with rosy cheeks, had for a year been troubled with a peculiar, dirty gray-brown membrane, which extended over the mucous membrane of the left cheek and gum, and along the floor of the mouth on both sides. The child had always been remarkably healthy, and had never had any eruption on the body. She had been treated continuously, but without success.

At first it was thought that the peculiar growth might be due to irritation from biting the cheek in eating. For some time nitrate of silver was applied in strong solution and in the solid stick, every other day, and an antiseptic mouth wash wa given. No improvement was noticed.

Careful questioning at length elicited the existence of pains in the bones, sometimes at night, and the employment of a suspicious servant in the past. This led to a suspicion of syphilis. Bichloride of mercury and iodide of potassium were then prescribed, and within ten days every trace of the disease was gone. The interesting point in the case was the absence of any marked constitutional symptoms, the robust health of the little patient, and the almost magical effect of the mercury and iodide, where every other recourse had been tried in vain.

II. A Case of Popliteal Aneurism, Cured by Hunterian Method of Ligation

St. Clair S., negro, aged 31; admitted September 12, 1893. He presented a fusiform, pulsating swelling in popliteal space, which had been slowly growing for about four months. On April 29, 1893, he fell off a step and hurt his hip. Eight or nine days later the foot and ankle became very much swollen, and he noticed a pulsation behind his knee. The foot and ankle soon regained their natural size, but the tumor in pop-

liteal space grew until, at the time he fell under my observation, it appeared somewhat larger than a good-sized egg.

He was at once put to bed, with the knee strongly flexed and a board splint bandaged to the back of the leg in such a manner that its upper end should press upon and partly interrupt the circulation of the femoral artery as it emerged from Hunter's canal. This treatment was kept up for twenty-two days in all, and to it may be ascribed the rapid establishment of collateral circulation after the operation of ligation.

On October 6, 1893, the femoral being exposed, a silk ligature was thrown about it at the apex of Scarpa's triangle. The limb was enveloped in cotton batting and surrounded with hot bottles. Within twenty-four hours the circulation in the foot was re-established, pulsation in the anuerism was entirely controlled by the ligature, the operation-wound healed by first intention, and on the 13th day the man was allowed to get up with a heavy glass bandage on the limb.

Four months after the operation the aneurismal tumor had shrunk to about half its size; it was hard, and gave no sign of returning.

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Editorial Articles.

CHOLERA AND THE PLAGUE.

"Eternal vigilance" is not only the "price of liberty," but also of public health. When the cholera scare of last year died out, it was fondly hoped that the nations of Northern Europe would succeed in stamping out the disease, and crowding it back upon its breeding places. The backward state of sanitation in certain parts of the immense Russian Empire has enabled the scourge to linger through the winter, and break out anew in the spring. For months the disease has been carrying off people in considerable numbers in Russia, and it is still unchecked.

From that country the disease has gained an entrance into some of the western towns of Germany and Austria. A few cases have developed in Holland, and even a case died in the shipping of an English seaport. That brings the disease dangerously near to this country. In England the sanitary forces are so thoroughly organized and equipped that the disease would not have a chance to spread very far; the experience of last year amply proves the ability of the authorities over there to cope with the scourge.

Our recent experience with cholera at the port of New York, while attended with some distressing and disgraceful scenes, served one good purpose in exposing the utterly inadequate means available at our greatest seaport to keep out the disease. That unpleasant experience has not been altogether fruitless; for, public attention having been directed to our deficiencies, Congress made such laws as were necessary to protect the country at the most exposed points. The powers of the Marine Hospital Service were considerably enlarged, and now we have efficient quarantine service at our chief ports and a number of medical men stationed abroad to send the earliest news of the outbreak of any dangerous disease in foreign cities. The tendency in health matters has for a long time been toward centralization, which is a bugbear to many people, but absolutely necessary to furnish adequate and uniform protection to all parts of the country.

The power wielded by the Marine Hospital Service is very great, and, when properly used, is a great protection; but if it should ever be used unwisely, it will be a great nuisance and will inevitably work injustice somewhere. Where States have exercised certain functions, it is almost impossible for the general government to undertake to exercise them without causing some friction. The State of Louisiana has very creditably acquitted herself in regard to quarantine affairs, and has, indeed, furnished a model which others might well copy. It is only a question of time, perhaps, when Louisiana will follow the example of Pennsylvania in virtually turning over to the Marine Hospital Service her entire quarantine outfit. Until that does take place, there will doubtless be more or less irritation resulting from a conflict of authority. This has already taken place. The time of detention of vessels coming here from non-infected ports to the south of us was reduced to three days during Dr. C. P. Wilkinson's presidency of the Board of Health. A recent order of the Secretary of the Treasury to the Collector of the Port to refuse entry to vessels that had not undergone five days' detention would, if carried out for any length of time, have a most disastrous effect upon the commerce of New Orleans. Any one who is at all familiar with the history of quarantine and commerce at this port must view with alarm

any movement or order that might succeed in wiping out the fruits of years of struggles on the part of our health authorities and business men. The obnoxious order has been rescinded, but it has left an unpleasant belief that there are more trials in store for New Orleans before her commerce can be freed from hasty or unwise interference. THE JOURNAL has advocated, and still advocates, that quarantine affairs be entrusted to a centralized national organization; but THE JOURNAL insists that the powers conferred on such a body shall not, through any cause whatever, be so exercised as to injure this port in favor of some other.

These instances of unavoidable friction are local and of no very great weight; and they do not disturb the important fact that our sanitary authorities are better informed and better prepared to fight against the importation of epidemic diseases than they have ever been before.

Toward the east we see cholera; to the west of us there is a revival of a plague that was thought to be extinct: the bubonic plague. The disease has existed for the last fifteen years in the Yun-nan district of Southern China, sometimes sporadic, sometimes epidemic. Last February it broke out in Canton and Bakhoi; the latter being a port not much frequented by Europeans. The epidemic grew at a frightful rate in Canton during March and April, but the authorities of Hong Kong, only half a day's journey from Canton, paid no attention to the disease that was carrying off about a hundred people a day in a neighboring city. Communication between the two cities is very free, and the only thing that could have happened did happen: the disease was introduced into Hong Kong, and it is there to stay, we presume.

The cholera and the resurrection of this mediæval horror calls to mind two papers that were read at the meeting of the American Medical Association at Milwaukee, 1893. Mr. Ernest Hart, the well known sanitarian, and editor of the *British Medical Journal*, read on the role played by water in spreading cholera; and Surgeon General Walter Wyman, M. H. S., expressed the hope of extinguishing certain races of pathogenic bacteria, just as certain races of men and animals had become extinct.

Mr. Hart confessed with shame and mortification that the home of cholera, and the perennial source of danger to the rest of the world, was India, a dependency of Great Britain, the country that had spent fabulous sums to protect itself against cholera, but did not seem to care a snap whether other nations suffered or not. To carry out Dr. Wyman's Utopian scheme, half of the energies of the world would have to be directed to purifying China and India; and the realization hence seems to be rather far off. The difficulties in dealing with the six hundred millions or more of what we complacently call heathens may be inferred from those met with in one of the most highly civilized cities on the globe. Last May a few cases of what was euphemiously called cholerine died in Paris. When cholera appeared in Paris before, the epidemic was ushered in by a number of cases—not of *cholera*—but of *cholerine*. The authorities made light of the subject until the danger was too great to be ignored. The Paris *Figaro* of June 5, 1894, said:

"A new alarm has occurred in Paris. The appearance of cholera is announced. The statement is inexact. Here are the facts: A stable groom, living on the bank of the Seine, at Puteaux, was on Sunday taken to the Beaujon hospital. There it was declared to be an attack of cholera, and the patient was transferred to the Necker hospital. There he died during the day. At 9 o'clock in the morning a young woman, twenty-nine years of age, Mme. Noirot, living at 29 rue Alphonse, Grenelle, died also at the Necker hospital of same disease. A young man named Adolphe Aerni, living at 29 rue Tiquetonne, was on May 28 admitted to the Hotel Dieu. Next day he was transferred to the Necker hospital. He is dead. Also they speak of a fourth person who lived in the rue Dianmale, dead also of the same disease. That is what is said. We are certain that it is much exaggerated. In order, however, to reassure Parisians and strangers as well, whom this news has so frightened, we went with several of our confreres to the Necker hospital. There, in reply to our inquiries, we were told that they had orders to give no information whatever. Who has been so foolish as to give such an idiotic order as this? If there were in Paris 4, 5, 10, 20 cases of cholera, it would be nothing in a population such as ours. But when they keep silence, when they hide what passes at the Necker hospital, which has been designed in advance for the segregation of cholera cases, it causes actual terror, for the public is apt to say that which is hidden is apt to be much worse

than is said, and a panic follows. It will be more than a fault to continue this pretension to mystery; it will be a crime."

Fear, selfishness and ignorance will always operate against attempts to stamp out a disease. But the colossal dimensions of the task should not deter us from undertaking it. We need not just now waste any time on Utopian dreams; the present duty is to guard against a danger threatening from the east, and, if the plague should ever get a foothold in Japan, against a danger from the west. The new order of things is on trial, and a severe one it will be. If the epidemics raging in Europe shall subside and leave us free, the Marine Hospital Service will strengthen itself in the esteem of the nation, and will demonstrate that the confidence reposed in it has not been misplaced.

Abstracts, Extracts and Annotations.

MEDICINE.

TYPHOID FEVER, WITH SPECIAL REFERENCE TO TREATMENT BY ANTISEPTICS.

By Adolph Kœnig M., D., Pittsburg.

To bring before this society a subject so time-worn as that of typhoid fever might, at first sight, appear, a waste of valuable time. To justify myself, I have had recourse to the vital statistics of the cities of Pittsburg and Allegheny, and am, consequently, in a position to present the following data: The estimated population of the two cities for 1893 is 380,000, of which a little over two-thirds should be apportioned to the former, and a little less than one-third to the latter city. During the twelve months, beginning with January and ending with December, 1893, 2,146 cases of typhoid fever were reported in Pittsburg. During twelve months, beginning March, 1893, and ending with February, 1894, 1,476 cases, with 161 deaths, were reported in Allegheny. When we consider that persons attacked with this disease are, as a rule, in the prime of life, endowed with strong powers of resistance against ordinary causes of premature death, the need of more light on this subject becomes obvious.

The one method of combating this disease is doubtless to be sought in prevention; and that may be accomplished with almost absolute certainty through an uncontaminated supply of drinking water, as has been abundantly proven in a number of European cities. In a comparatively new conntry, such as ours, where municipal governments lose sight of the common good in the struggle for personal gain and ambition, scientific sanitary measures will, for years to come, be a secondary consideration, and we, as physicians, are called upon to apply our remedies and prevent, as much as possible, the growth and lethal action of the bacillus typhosus after it has found lodgment in its human host.

That the disease depends on a specific germ can no longer be denied, though its presence may often be difficult to establish. In order to arrive at legitimate conclusions concerning treatment, the life-history of the bacillus should be studied. The causes that exert favorable and unfavorable influences upon the parasite must be investigated, and the facts taken as a basis of treatment when infection is established. The pathological changes that take place in typical cases in the intestines are first a general congestion of the mucous membrane and mesenteric glands, followed by a marrow-like infiltration of the intestinal glands and surrounding tissue. At about the middle of the second week necrosis of patches of mucous membrane and Peyer's glands results. A period of about a week then elapses, during which the dead tissue becomes separated from the living, leaving ulcers of variable size and depth. We thus have, for a period of from two to three weeks, what is equivalent to a traumatic condition of the intestinal canal. As it is impossible to apply aseptic treatment in the healing of these wounds, the best procedure that would suggest itself is to render the intestinal tract as uninhabitable for micro-organisms as it is possible to do with antiseptics. Where is the surgeon who at this day dares ignore asepsis and antiseptics in an amputation of a leg or thigh? No member of this society, in practice for fifteen years, but who remembers the typhoid condition due to toxicogenic bacteria or probably one-half of the cases of amputation, two or three weeks after operation, before asepsis and antisepsis were properly carried out. The activity and life of the bacillus typhosus within the human body apparently terminates at about the end of the second week of the disease, after the initial symptoms have appeared, and it is doubtless true that the later manifestations characteristic of typhoid fever are due to the putrefactive bacteria, and especially to the bacillus coli communis, which is known to assume extraordinary virulence in the latter stages of this disease. The treatment, therefore, that is indicated,

contrary to the statements found in most recent text-books, is one that inhibits the growth of intestinal micro-organisms. It may, perhaps, be asserted that remedies ingested for that purpose are absorbed before the seat of disease in the small intestines is reached; but when it is remembered that the digestive processes are practically abolished, and absorption interfered with, it is not unreasonable to suppose that much of the ingested material reaches the lesions, besides the clinical history of cases so treated amply proves the antifermentative action of antiseptics in the intestines.

With these facts in mind I began, several years ago, the use of antiseptic remedies in the treatment of typhoid fever.

Creosote was first chosen as the remedy, but as it is often difficult to obtain a good article of this drug, and as it possesses a stronger and more disagreeable empryreumatic odor than guaiacol, it was soon displaced by the latter, the main and most valuable constituent of creosote.

During the year of 1893 thirty-three cases of typhoid fever were treated by me with this remedy. In no case was there intestinal hæmorrhage, and none died. I am aware of the fact that upon this number of cases no absolute conclusions can be based; but it is nevertheless true, that the epidemic during which they occurred was not wanting in virulency, as the 473 fatal cases, a per cent. of thirteen and a fraction, of the entire number reported, indicates.

The method pursued in administering the remedy was according to the following prescription:

R Guaiacolis ..... f ℥ii
Glycerini ..... f ℥ii
Alcoholis ..... f ℥iu
M. Sig. Five drops in whiskey and water every two hours.

In was my custom to vary the dose of the remedy according to the age of the patient, or according to the tolerance manifested toward the drug. Occasionally not more than two drops were given, while not infrequently six drops was the dose. To insure perfect solution in the water with which it was given, it was directed that a teaspoonful of whiskey be placed in a small drinking glass; into this the guaiacol was dropped, and from two to four tablespoonfuls of water added. In about three cases the drug was not well borne; in one it was necessary to discontinue its use entirely. This case—one of the four in the same family—was strong evidence, to my mind, of the value of the guaiacol. While the three other members of the family attacked with the fever were practically well after the fourth week, the one in whom the remedy produced gastric disturbances necessitating its discontinuance passed through a six

weeks course, and was even then in more than ordinarily debiliated condition for a month or two.

In addition to the guaiacol, I as a rule administered small doses of calomel, one-twentieth to one-tenth of a grain, three or four times a day until a slight purgative action was induced, when it was discontinued for the time being. During the latter part of the diseased, when constipation is the rule, the same remedy was again employed, and always with excellent result. One teaspoonful of whiskey was given with every dose of medicine, and when the vital forces became weakened larger amonnts were resorted to.

High temperature was controlled by frequent cold sponging. One case treated in Allegheny General Hospital, received antipyretics of the coal–tar class from the resident physician. The antipyretic action of this drug was very prompt and decided, but was followed by a condition of great prostration, bordering on collapse. After this experience the temperature was reduced by sponging, which calmed and quieted the patient at the same time that the fever was reduced and without prostration.

The diet was liquid and consisted of meat broths, beef-tea and milk, the latter usually diluted by one-half with barley water. During the height of the disease, when no desire for food was mamifested, very little nourishment was given. Under this antiseptic treatment the time to begin administration of solid food becomes a matter of great importance. The observation was made a number of times that when the temperature dropped to the normal point, during the latter part of the third week, though the tongue still remained coated, it solid food was given a relapse, indicated by a return of the morning and evening elevation of temperature, occurred. This can doubtless be referred to the disturbing influence that solid matter, in considerable amounts, would exert while passing over the unhealed ulcers and the greater difficulty experienced in keeping such intestinal contents in an aseptic condition. I am of the opinion that the name of the celebrated Englishman who desired the inscription, "He fed fevers," as an epitaph, should have been joined to that inscription by the word *and*, provided he included typhoid fever in his list.

The result of these cases treated after this plan during the past year warrant me in believing the following conclusions justified.

First. The antiseptic treatment is the rational treatment of typhoid fever.

Second. Under its use the course of the disease is greatly modified; typanitis is prevented; the tongue remains moist.

throughout; delirium is rare and the intestinal tract is placed in the best possible condition for the healing of wounds.

Third. Small quantities of alcohol often repeated sustain the vital forces better, during the height of the fever, than albuminous or starchy food.

Fourth. In private practice cold sponging is the best antipyretic and nerve sedative.

Fifth. As the temperature under this method of treatment often becomes normal before the ulcers are healed, care must be observed in the administration of solid food. A perfectly clean tongue, rather than absence of fever, is the indication for solid food.

Sixth. The cost of the medicine and whiskey used during the entire course of the disease rarely exceeds five dollars, which is a factor of no little importance with many patients.

Seventh. Guaiacol exerts no disturbing influences on any organ, except in rare cases when a very irritable stomach may reject it.

Eighth. It should be given day and night, and, in the form of the prescription before mentioned, may be gradually increased to seven or eight drops every second hour.

Ninth. Guaiacol prevents the later toxine poisoning, doubtless due to the action of the bacillus coli communis and other putrefactive germs in the intestines.

Tenth. Guaiacol is non-poisonous in ordinary doses.

LEPROSY IN SAN FRANCISCO.

By Douglas W. Montgomery, San Francisco.

In all ages and in all countries the mass of mankind has believed in the contagiousness of leprosy, and even now, when exposed to the sharpened criticism of scientific inquiry, contagion is still the only basis on which we can explain the facts. It is not known how the contagium is carried or how inoculated. We do not know what manifestation it makes at the seat of inoculation, or whether it makes any capable of being clinically appreciated. It is not understood why one person may become infected from what seems a short exposure, while another may dwell most intimately and for long stretches of time with lepers, and never contract the disease. We are not in a position to explain these nor a host of other facts, but we do know that when we find a leper, we immediately inquire for other lepers with whom he has been in contact and we find them. The fact of lepers being aggregated in localities is so notorious, and so within the ken of every medical

man or even layman that it does not need the citation of examples.

If the disease be contagious, and in no other way can we understand its propagation, and if it have a tendency to become fixed in a locality because of the continued residence of lepers, or as it might be put, if a locality become saturated with the germs of this disease, then the question before the citizens of San Francisco and of the United States becomes a grave one, for, instead of passively receiving lepers we may assume the active role of a distributing point, and give out abundantly what we have received so thoughtlessly. All the factors going to the formation of a leper focus seem to be present in the San Francisco Chinatown. The Chinese here all come from the Province of Kwang Tung, where leprosy is abundantly endemic; most of the lepers here are Chinamen most of the Chinamen in San Francisco live in the Chinese quarter, and under unhygienic, overcrowded filthy conditions. Under such circumstances, from what we know of the germ diseases, everything seems favorable to room after room in Chinatown becoming impregnated with lepra bacilli from the occasional sojourn of leprous Chinese. On the other hand, I must say that although I have seen quite a number of Chinese lepers here, I have never run across one who was born in this country. This may be due to the circumstance that very few of them are native here, as a Chinaman seldom brings his wife with him. They are all married prior to emigrating, and they leave their wives at home. But the failure to find Chinese lepers of American birth might be brought forward as an argument by those who consider the fear of San Francisco becoming a leper centre trivial. From the length of time some of the Chinese lepers have been in this country before showing any signs of the affection, one might infer the posssbility of having acquired it here. It is not wished to put it any stronger than a possibility, because in leprosy the time that elapses between an inoculation and the first manifestations of the disease seem to vary within wide limits. The following is a list of some Chinese lepers, with the date of their arrival in this country, and the length of time after that before they noticed the first symptoms of their disease. These figures in either case are just as they were given to me, either directly from the patient or through the intermediary of an interpreter, and make no pretensions to being scientifically accurate:

Lee Yen, 33 years of age, laundryman and cigarmaker, came to America in 1873, and went back to China for a short visit about eleven years afterward. A leprous patch appeared on the right buttock three years ago.

Chan Muy, female, 31 years of age, came to America in 1868, and a small tubercle appeared on the nose in 1888, twenty years afterward.

Dang Hung Kuen, male, 50 years of age, came first to America in 1881, and about five years afterward noticed half dollar sized patches on the right side of his forehead.

Ngo Wong, male, 25 years of age, ragpicker, came to America in 1878, and three years afterward noticed the left ear became swollen.

Chang Kim, male, 25 years of age, farm laborer, came to America in 1884, and five and a half years afterward tubercles appeared on the anterior surfaces of the knees.

Chung Kan Foke, male, 31 years of age, miner in a silver mine, came to America in 1876, and lumps appeared on the face sixteen years afterward.

Ma Ying, male 25 years of age, farm laborer, came to America in 1881, his right hand withered and a white patch appeared on the left side of the face seven years ago.

They might say that leprosy introduced by the Chinese into California would probably take a course similar to the same disease brought to Minnesota, Wisconsin and Iowa by the Norwegian immigrants, not one of whose descendants, according to both Hansen and Gronwald, are lepers.*

But one of these observers, Armauer Hansen, thinks the failure of the disease to propagate itself in the case of the Norwegians is due to the improved social conditions in this country. The isolation of separate beds, clean toilet articles, distinct food receptacles, plenty of water, is enough to prevent the spread of the disease. And this brings me to a point which ought to be accentuated; the difference in social conservatism between the Aryans and the Mongolians as we see them in this city.

The European, of whatever nation, comes here to form a home, and the more prosperous he is, the more comfortable the home becomes. The Chinaman, no matter how prosperous he may be, lives under mean conditions and saves his money that he may realize his ideal of living in splendor on returning to China. And besides this he has a conservatism of which the restless, dissatisfied Anglo-Saxon can only form an imperfect conception. Look at their colossal conservatism in regard to food. The Italian will give up his polenta, and the Irishman is only too glad to add good juicy beef to his potato diet, but a walk down Dupont street shows not only shop after shop

*Die Ætiologie der Lepra von G. Armauer Hansen. Rudolf Virchow's Festschrift, Bd. III, page 63.

Leprosy in Minnesota, U. S. A., by Chr. Gronwald, M. D. *The London Lancet*, March 26, 1892.

filled exclusively with imported Chinese food stuffs, but fresh meat stores filled so predominantly with pork that it is difficult to find beef, and apparently never a piece of mutton, in a land where both beef and mutton are cheap.

The Chinese in California live practically the same way they do in China, and, as far as social conditions are concerned, leprosy would have an equal chance of propagating itself among them here as there.

We might look upon the presence of leprosy in Chinatown with indifference, thinking of it as simply confined to an alien population, but the possibility of their afflictions being transmitted to us should make us alive to the importance of warding off the danger. Some Americans are necessarily employed in Chinatown, and many Chinese domestics in American houses. In fact we are intermingled in a thousand ways and unavoidably. And moreover on a former occasion I have shown that an American who was never out of the United States acquired leprosy on this coast, probably in a Chinese camp in Nevada, so that there is no doubt of the possibility of Americans becoming lepers in this country.

On Feb. 29, 1892, there died at the San Francisco pesthouse a leper with the following history:

B., aged 43; an American; was born of American parents in Massachusetts, and never was out of the United States excepting a few hours in passing from Buffalo to Detroit over the Canada Southern Railway. About twenty years ago he acquired a sore on the penis after connection with a white woman in Nevada; no history of secondary symptoms could be elicited. He did not deny that previous to this he might have had frequent connection both with Chinese and Indians, but he said that if so, it was a long time before, and had no connection with the sore. Shortly after the acquisition of the sore, and while still in Nevada, he had charge of a gang of Chinamen on the railroad. There were several Chinese prostitutes in the camp with whom he had frequent connection. He did not remember that any of the Chinese showed any of the symptoms of leprosy, but admitted that they might have had the disease and escaped his notice, as he did not know anything about leprosy at the time. About seven years ago he noticed areas of brown discoloration on the body and limbs, which were diagnosed and treated as syphilis by the doctors whom he consulted. His malady was first correctly interpreted by Dr. Geo. L. Fitch, of San Francisco, about five years ago, and about six months later he entered the San Francisco pesthouse, where he remained for two years. He again entered on Feb. 17, 1890, and remained till his death.

The patient was above the medium height, with a well developed bony skeleton. He was bald on the vertex, the remaining hair was brown, and rather dry looking as if not well brushed, but otherwise healthy. The scalp was in good condition. He had neither eyebrows, eyelashes, nor moustache, and the beard was very sparse. The disease was situated in the face, hands and forearms, and feet and legs. There were large nodules on the site of the eyebrows, and from there the disease shaded off upward into the clear scalp above. The eyelids moved a little stiffly from the filtration, but there was no lagophthalmos, as is so frequently the case in leprosy. The skin of the nose, and the whole of the lower part of the face was very much thickened, especially the lower lip, which stood out stiff and useless. The patient originally had a light complexion, but when I saw him the skin of the face, hands, and lower part of the leg, and of the feet was a dark coppery color. The skin upon the lesions of the face had the silky soft appearance so often seen in patients suffering from tubercular leprosy. On the skin of the arms and hands, and of the legs and feet there were excoriations, the seat of previously existing pemphigus blebs, which appeared from time to time. The last joint of the ring finger of the left hand was enlarged and stiff; the movements of the hands were not nearly so deft as formerly, but there was no paralysis, and no wasting of the muscles. He had lost appreciation of touch, and on being handled felt as if a substance were between the fingers of the person and his skin. His extremities were analgesic, and he had recently burnt his fingers in picking up something hot without experiencing any pain. His appreciation of the sensations of heat and cold was not tested. There was a discoloration, such as he said constituted the first symptoms of his malady, on the inside of the left leg. It was an irregular, fairly well circumscribed, brown patch about the size of a silver dollar, joined by a narrow isthmus to a similar patch. At the edge of this discoloration there was a lepra nodule, well raised above the level of the skin, and very dark in color. It might have been mistaken for a melanotic sarcoma. This nodule was cut out, lepra bacilli were found in scrapings from its cut surface. Sections prepared for the microscope showed that its black surface was owing to an extraordinary amount of lepra pigment.

The eyeballs were clear and moved normally, and the sight was good. The skin covering the auricles was normal, a remarkable circumstance considering their liability to be affected, and the advanced stage of the disease. The hearing was good. Both nares were almost completely blocked so that he could scarcely breathe through them. The epithelium

of the dorsum of the tongue was a glittering white, and the surface was marked off by deep furrows running in all directions, but principally longitudinally and transversely. This condition of the tongue is usually found associated with syphilis, and it was the only symptom I could find at all indicative of that disease. He complained he could not eat fish, because of the difficulty in detecting the bones with his tongue, so that the sense of touch was evidently obtunded. The voice was husky and the breathing was difficult; in speaking he frequently had to pause to take breath, and at times the hospital attendants were afraid he would smother to death. He said he had not had any sexual desire since commencement of the disease seven years before, and he blamed, as this class of people frequently do, the mercurial treatment for its extinguishment. The skin of the penis and scrotum was absolutely normal, but there was a small solid swelling in the left cord, and the left epididymis was slightly enlarged but of normal consistency. His mind was clear and his answers terse and to the point.—Reported in the *Pacific Medical Journal*, April, 1892.

San Francisco, is a young city, only a little over fifty years old, and leprosy can not yet be said to be endemic here, for it has not had the time to become so. It is therefore not a leper city in the full sense of the term, and we should see to it that the misfortune does not happen. There will always be some lepers coming in from surrounding countries, but the disease ought not to be allowed to gain a foothold.

As an example of a city where leprosy has become firmly seated, Constantinople is instructive. Von Durhing says† that leprosy in that city is only endemic among the Spanish Jews, and that all other cases he has seen came in from the neighboring towns. These Jews were driven out of Spain in 1492 by Ferdinand and Isabella, settled in a quarter of Constantinople set apart for them, where they yet dwell. They still, after the lapse of four hundred years, speak Spanish, wear a peculiar garb, live poorly, and are very filthy, in all of which respects they form a striking and instructive parallel to the Chinese in our city.

A paper drawing attention to the contagiousness of leprosy, especially when even the laity believe it to be far more virulently contagious than it really is, would seem to be superfluous, but allow me to give you an example of civic carelessness in this very particular:

Until lately our lazaretto was also our smallpox hospital, and the lepers had the free run of the wards, which were liable

† Lepra und die Frage ihrer Kontagiosticat nach Beobachtungen in Konstantinopel von Dr. med. E. von Duhring. Monatschrift führ Praktische Dermatologie, 15. Maenz, 1893.

at any time to be occupied by smallpox patients. The bed occupied by a variola patient might have been used as a lounging place by a leper a few minutes before. The variola patient was forced into the hospital, and he might be a very decent fellow—as a matter of fact a physician enjoying a good practice died there a few years ago—and it is not fair play to put a man in a bed on which a leper had been taking his noonday nap, thereby exposing him, because of the temporary disease to the possibility of contracting a malady that would make him an outcast from society for life. This matter is mentioned rather by way of example than as a complaint, as the management has been changed lately and the discipline is better, but even now we ought to be on the lookout for a lapse of city morals in that direction, for, in the case of a smallpox epidemic it is to be feared the main building would again be used as a smallpox hospital.—*Journal of American Medical Association.*

SOME REMARKS CONCERNING THE MANAGEMENT OF SO-CALLED DYSPEPSIA.

By J. B. Marvin, M. D., Professor of Principles and Practice of Medicine in the Kentucky School of Medicine.

I recognize that the subject I have chosen is a very old and broad one, yet I believe there is much we have not dreamed of in regard to the management of so-called dyspepsia. I do not know whether my experience has been anomalous, but certainly I have been materially worried by cases of so-called nervous dyspepsia, and I thought the subject of sufficient importance to bring before you to-night.

Since Czerny's experiment of removing the stomach of the dog and proving that the animal could survive and digest food after the removal of that viscus, some authorities have gone so far as to claim that it is an unnecessary organ, that it was some mechanical sort of contrivance which we really did not need. Kussmaul and his followers, however, I think have given the death-blow to that idea, and the introduction of the stomach tube, the withdrawal of the contents of the stomach, and the submission of these contents to chemical tests, have put some of the lesions of this organ on a more scientific basis. If I have read literature aright, however, the introduction of the stomach tube has been abused in Germany, but it certainly has not been used sufficiently in this country. All of you, I think, will agree with me that you often see cases where you have tried powders and tonics, the pepsins, panopepton, acids, alkalies, and everything generally recommended in books for the

treatment of dypepsia so-called, without benefit. It seems to me that the condition in such cases is largely a neurosis dependent upon overwork or anæmia. The overwork may be mental or physical; you find it in women, although I have seen just as bad cases, if not worse, in men. I am thoroughly convinced that the nervous manifestation of indigestion is just as liable to occur in men as in women. Women may be a little more liable to it because of frequent pregnancies, lactation, etc.

First, we realize that the stomach is a hollow organ coated with mucous membrane and certain glandular structures acting on the whole as if it were a gland, secreting and emptying into this cavity certain fluids, pepsin, muriatic acid, etc. Next, a muscular coat, which by contracting and relaxing produces a churning or mixing of substances taken into the stomach with the gastric juice; next, and just as important, if not more so, in my estimation, it must have the motor power to propel that mixture through the pylorus into the duodenum; then to have healthy digestion you must have good motor power. Next, the stomach must be able to secrete muriatic acid and pepsin; there must not be any abnormal conditions that will interfere with this process. Now, by the method of Kussmaul, introduction of the tube and certain other means, you can test very accurately in a given case the motor power of the stomach. In this way we can ascertain the cause of most of these distressing troubles. You can test certainly whether any acid is present or not, and whether in sufficient quantities; also whether pepsin is present in quantity necessary for proper digestion; tests may also be applied for other ingredients which abuormally are secreted by the stomach.

I have found it a very easy matter to introduce the tube. I use the ordinary flexible tube with a bulb in the centre and a funnel at the end. If I wish to watch the flow I generally cut the tube in two and put a glass tube in between the two ends. I do not grease the tube ; I simply wet it with water. I generally make the first introduction and teach the patient to make the next one himself. If a man is suffering, and he usually is, he is very willing to submit to it. As to position, I have the patient sit up in a chair, throw the head back, and then with care introduce the tube; at the first trial he will probably cough, and perhaps vomit, but after a little while in it goes, and the next time it is very much easier. It is not necessary in my experience to use cocaine, grease the tube, or make any local application.

The typical way of obtaining a sample of the contents of the stomach for testing purposes is to take an empty stomach and then give a test breakfast or a test supper. I generally

have the patient take in the morning a cup of tea and a warm roll, or a couple of rolls. In an hour or an hour and a half afterward I introduce the tube. Then by making him cough and squeezing the abdomen, especially if he makes an effort to cough, you can get a teaspoonful or more of fluid from the stomach; but by the squeezing process and making the patient cough a quantity sufficient for all practical purposes can be obtained.

After a sample of the fluid has been withdrawn, the first thing is to test it for acid, which is a very simple process by means of litmus paper.

If it is alkaline or neutral, it is abnormal; then you can see what acid is present. In healthy digestion at first it is lactic acid, which hardly lasts more than half to three-quarters of an hour, then it is muriatic acid for an hour to an hour and a half, when it changes again to butyric or lactic acid. To make the test is very simple, First I use litmus paper to see whether there is acid or not; next the best means I think is Gunzburg's reagent, which is composed of phloroglucin, 2 parts; vanillin, 1 part; alcohol, 30 parts.

It is desirable to have a fresh solution; I make up a small quantity of this for each patient. If you will take five or six drops of this solution and add three or four drops of the withdrawn contents of the stomach and heat on a porcelain capsule, if muriatic acid is present the result will be a beautiful crimson color around the margin. The resorcin solution is more stable, but not so delicate. If lactic acid is present you use a mixture of carbolic acid and perchloride of iron; that gives you nearly an amethyst reddish color. If you will add to that a few drops of the contents of the stomach in the lactic acid period you will change it into a yellow color, which is a sign of abnormality under these conditions. Then you want to go a step further and determine if the stomach is capable of properly digesting food. You can test starch by means of Lugol's solution blue or blackish blue color if starch is present. You can go a step further and test for sugar with Fehling's solution. The last test for albuminoids is the most complicated and perhaps the least reliable.

I have taken some of the contents of the stomach after I had applied these tests as I have intimated, and then added a little coagulated egg albumen to see how it would digest it. The stomach has to convert the natural albuminoid bodies into assimilable albumen and peptones, and this must be done through something that is contained in the muriatic acid or pepsin secretion. Some authorities advise that we go on and test some of the filtered contents to see if albuminoids are pres-

ent; this is done by heating—a precipitate means albumen or syntonin; filter and add nitric acid—a precipitate means propeptone; then, after that has filtered off, add a small quantity of solution of tannin, which will throw down a precipitate and means peptone. Now there is one other test which is just as important as the foregoing, that is to give us some idea of the motor power of the stomach. This test is based upon the idea that salol will not be decomposed by acid gastric juice, but passes through the stomach, then into the alimentary tract and there is decomposed into salicylic and carbolic acid. and is directly eliminated through the urine. In order to make this test I would give a patient ten or fifteen grains of salol either in a capsule or coated pill; then, following this about forty minutes, I would test the urine for carbolic or salicylic acid. If it does not show in the urine in about three-quarters of an hour then it is evident that the stomach is sluggish and does not propel its contents promptly into the duodenum. Sometimes you will find that the salol is eliminated through the kidneys for quite a number of hours, lasting as long as twenty-four or thirty hours. Certainly in cases where salol is being eliminated by the action of the kidneys for thirty hours after administration it is evident that the stomach is not only in a sluggish condition, but is also wanting in motor power.

As I have already said, these tests are all easy enough, only requiring a little patience and care, but by them we can separate a vast number of cases and see which belongs to this or that class, and can keep our therapeutics on a rational basis.

Now, take the last class of cases—loss of motor power. We find troubles of various kinds may interfere with the motor power of the stomach through the nervous system; functional inactivity of the stomach may give rise to many symptoms. Some underlying cause might produce increased hyperacidity of the stomach; or it may act in another way, diminishing the secretions, which we often see in cases of chronic gastric catarrh, especially in drinkers and old people. Prolonged loss of motor power of the stomach leads to atony; this would give rise to pain, flatulence, and certain dyspeptic symptoms which we call eructations, as well as nervous manifestations, palpitation, vertigo, etc. If there is hyperacidity there is very apt to be vomiting, which is not a marked symptom in atony. In some cases atony simply produces inconvenience of the stomach, pain after the ingestion of food, or flatulence. eructations, vertigo, and other symptoms known to all; if allowed to continue its action will result in something more serious. Atony or loss of power of any viscus or muscle carried one step

further is paresis, which is followed by ectasis or dilated stomach; this is still more disagreeable than other forms of the trouble. This may be suspected in every case that has lasted a certain length of time. A man or woman comes to me with history of constipation, so-called biliousness, and with gastric symptoms which are denominated dyspepsia and which we know covers a large quantity of questionable cases, with a condition of eructation of gas, palpitation, etc. There may also be very decided pain after the ingestion of food, or pain on pressure over the stomach; then vomiting, especially some time after food has been taken, a day, or possibly two, which can be determined by the fermented character of food vomited, always indicates dilated stomach. This condition exists much oftener than is supposed. The way to detect it is simple enough. I would not advise any of you to try the method advocated by some authorities, that is with seidlitz powders, letting them mix in the stomach, generating gas there. This method is attended with some danger. A simpler but a crude way is to first percuss over the stomach with the patient in a standing posture, then let him drink water, a half a pint at first, and percuss, allowing the patient to continue drinking, and continue percussing, to see how low down the stomach can be mapped out. The stomach may extend as low as the umbilicus. A better way than the above is to pump air into the stomach. After you have inserted a stomach-tube attach an air-pump, and in this way you can dilate the stomach until its outlines can be distinctly made out. This is very easily done, especially if the patient is emaciated.

It the condition is one of anæmia; in other words, if the atonic state is allowed to proceed, you have malnutrition as one of the sequelæ, or you may have by interference with the secretions of the stomach atrophy of the glandular structures of that organ; you may have then ulceration of the stomach; subacute gastritis may set up, which is also a more serious condition.

In regard to the management of these cases, I have narrowed it down to a few simple things. In a majority of the cases I see of gastric troubles in men or women, I find the best results are obtained from the mercurials. Those cases of biliousness, so-called, which are nearly alway dependent upon indigestion, are benefited more markedly in my experience by either small doses of calomel, or calomel and ipecac, or the old-fashioned blue pill. How mercury acts, whether by exciting the flow of bile, whether by stimulating the mucous or glandular structures, whether by toning up, as it were, and increasing the motor powers of the stomach, in this way hasten-

ing or aiding digestion, or whether acting as an antiseptic and purgative, I do not know. It is as old as the history of medicine, and in my experience has given better results than any other agent. In some cases I have given five grains of blue mass on alternate nights, keeping it up for quite a while; in some cases only one grain was given. In some cases I have found it necessary to give a little colocynth. I have employed this treatment extensively and have never had occasion to regret it. I have had one or two cases that I have had opportunity to watch for a period of ten years treated by use of calomel; they would keep a record of the amount of calomel taken from day to day and week to week.

On general principles you might say that iron was indicated in these cases. I think the class in which iron is indicated from the start is rather small. Iron has proven rather an inefficient and unsatisfactory remedy with me. I generally give the mercurials first, relieving constipation and stimulating glandular secretion.

Now there is another class of cases in which you would not use the mercurials; cases where you want some mild cathartic action, cases in which salines in hot water before meals wash out the stomach and empty the bowel. In such cases I have found that Rubinat water acts more satisfactorily than any of the natural saline waters, is less griping and more pleasant. The next and more important in a certain proportion of cases is rest. Given a woman that is nervous and hysterical, suffering from a great many of the symptoms already detailed, I believe the best results can be obtained by putting her to bed, getting her to sleep twenty-four or even thirty hours. Great benefit is sometimes obtained in this way, by giving the patient absolute rest. I know most authorities recommend exercise rather than rest; of course a certain amount of exercise is advisable, but these patients also need rest and sleep, and plenty of it. I am satisfied that another important thing in the treatment of these cases is isolation. I have in mind now the case of a lady that had emesis a number of times a day, which had lasted for a long time despite any means of treatment that had been adopted. Under a few weeks' management, such as I have described, she entirely recovered and is perfectly healthy to-day. Another case of a similar character occurred in the person of a little boy. I gave very small doses of bichromate of potassium, $\frac{1}{10}$ or $\frac{1}{12}$ of a grain in solution pretty well diluted, taken on an empty stomach, repeating this dose two or three times daily. In some cases this drug seems to have a very marked effect, and it is certainly worth a trial. My experience with this old remedy is

limited. It has been in use extensively by our homœopathic friends.

Next, in those cases where there is a deficiency in secretion, I do not give pepsin, pancreatin, bismuth, and all such agents which have long since been so popular, but give instead muriatic acid in large doses, following Ewald's method. Some patients have the idea that they can not take acid; that the stomach is already sour; that they suffer from belching, etc. I have found that some of these are the very ones that need acid.

In that class of cases where you have a hyperesthesia and other neurotic symptoms I have been using for the last fifteen years a stock formula varied to suit the individual case, bromide of ammonium in simple composition: Bromide of ammonium, 5 to 10 grains; camphor-water, ½ drachm; glycerine, ½ drachm. To this formula I sometimes add a drop or two of Fowler's solution. I have had very good results from this simple mixture.

I have recently had under my care the case of a bank cashier who suffered so much distress from indigestion that he had tried on several occasions to throw himself out of a second-story window; he tried once to jump from a moving train, and would have done so had not his friends restrained him. Upon investigating the case I found that he was dieting himself to the extreme, and that the distressing symptoms were most manifest shortly after the ingestion of food. I came to the conclusion that the extreme dieting was increasing his anæmia, which was the cause of all this nervous manifestation, and administered the injunction to him to eat more, not to diet himself, encouraged him to eat everything that was wholesome and rational, to eat if necessary five or six times a day at short intervals. This, in connection with the simple mixture above referred to, worked a revolution in his case.—*American Practitioner and News.*

THE ERADICATION OF CONTAGIOUS DISEASES.

By G. H. Sherman, M. D., Detroit, Michigan.

When man is confronted with a visible enemy every available force is applied to dispel the intruder, and positive indications as to where to direct the blow are patent. But when the foe is a subtle, invisible poison, which is communicated from friend to friend, from father to child, from sister to brother, from one community to another, unaware to the communicants, then the mode of attack becomes a difficult one and re

quires careful consideration. For thousands of years superstition enslaved mankind with the idea that disease is due to the visitation of a vengeful deity, but the light of reason, aided by the microscope and the test-tube, has brushed away this cloud of darkness, and now we recognize the fact that many diseases are communicable, and may be prevented if proper methods are pursued. When the communicability of a given disease is once established the idea of isolating the diseased from the healthy at once suggested itself. This principle of isolation, however, should not be applied with the idea of simply mitigating the ravages of the disease, but with a positive determination to eradicate it, if auch a thing is possible.

What can be accomplished in preventing communicable diseases history and the reports of the various boards of health show us. Leprosy, which was probably the earliest recognized communicable disease, has been eradicated over a large portion of the world where it was prevalent, by isolation. The ancients regarded Egypt as the home of leprosy. It became established in Greece aud Italy about the first century B. C. The disease soon made its appearance in Spain, Gaul and Britain. During the movements of the crusade in the eleventh century it became epidemic in western Europe. Laws requiring the isolation of lepers became general in Europe, and leper houses were built in every considerable town. According to the "Encyclopedia Britannica," "lepers were strictly isolated and the practice was supported by public sentiment. They wore a special costume, usually a long gray gown, with hood drawn over the face, and carried a wooden clapper to give warning of their approach. They were forbidden to enter inns, churches, mills or bake houses, to touch healthy persons or eat with them, to wash in the same stream, or to walk in narrow paths." The disease began to decline in the fifteenth century, and disappeared in the middle of the seventeenth century, in western Europe.

Venice, in 1348, appointed three guardians of public health to prevent the spread of plague, and in 1403 founded a lazaretto on an island near the city. In 1467 a lazaretto to isolate cases of plague was established at Genoa and one at Marseilles in 1476. Plague is now extinct in Europe, and will probably never gain a foothold there again. Quarantine lazarettos to prevent the introduction of cholera were established on the western coast of Europe in 1831. The feasibility of preventing cholera-infected persons from entering a non-infected community has been established by all civilized nations, and it is not necessary to repeat here what has been accomplished in preventing the spread of cholera during the last few years by isolation.

A profitable illustration of what can be accomplished in eradicating communicable diseases is offered us by the United States Agricultural Department in the prevention of contagious pleuro-pneumonia among cattle. In 1887 the disease had spread in alarming proportions over the States of New York, New Jersey, Maryland, Pennsylvania and Illinois. The practice of extermination consisted of isolation and disinfection. Diseased cattle were destroyed and exposed ones isolated. The following figures taken from the "Annual Report of the Bureau of Animal Industry, ending June 30, 1892," show how the disease began to disappear from the time the practice of extermination was undertaken. The number of diseased cattle purchased by the department were: in 1887, 1,974; in 1888, 2,604; in 1889, 1,242; in 1890, 471; in 1891, 73; in 1892, 40; and in the latter part of 1892 there was not a case left in any of the States. Thus in the short time of five years a dangerous communicable disease among our cattle was eradicated, which had spread over five States. It cost $1,500,000 to accomplish this, but no one will say that this money was not well spent. The foregoing brief sketch shows that communicable diseases can be eradicated if isolation and disinfection are strictly enforced.

The directly communicable diseases which most particularly interest us at this time are diphtheria and scarlet fever, because they are very fatal and prevalent in an epidemic form over almost the entire country. The actual number of cases of scarlet fever and diphtheria that occur in Michigan can not be ascertained, because they are not all reported to the State Department. Dr. Baker, secretary of the State Board of Health, wrote me in answer to a letter of inquiry, that according to the best estimate the number of reported cases should be increased about 40 per cent., and the number of reported deaths a little more than 40 per cent. During the year 1889 there were reported to the State Board of Health 3157 cases of diphtheria, resulting in 683 deaths. In 1890 there were 4206 cases reported. The number of reported cases of diphtheria for the years 1891, 1892 and 1893 were not compiled at the writing of this paper, but were reported to the superintendent of vital statistics during 1890, 1266 deaths; during 1891, 1060 deaths; and during 1892, 1020 deaths as having occurred from diphtheria. There were reported to the State Department, during 1889, 3536 cases of scarlet fever, resulting in 166 deaths; during 1890, 3836 cases, resulting in 222 deaths; and during 1891, 6212 cases, resulting in 400 deaths. These figures show that the number of deaths resulting from scarlet fever and diphtheria do not diminish in Michigan, notwithstanding our quarantine laws, which

require strict isolation and impose $500 fine or imprisonment for disobedience. That strict isolation prevents the spread of diphtheria and scarlet fever is shown by the report of the State Board of Health for 1890. According to that report 72 outbreaks of scarlet fever, where isolation and disinfection were neglected, resulted in 1208 cases and 48 deaths, or 16.78 cases for each outbreak; and 52 outbreaks, where isolation and disinfection were enforced, resulted in 140 cases and 10 deaths, or but 2.69 cases for each outbreak. The same report shows that 41 outbreaks of diphtheria, where isolation and disinfection were neglected, resulted in 478 cases and 108 deaths, or 11.66 cases for each outbreak; and 63 outbreaks, where isolation and disinfection were enforced, resulted in but 98 cases and 14 deaths, or only 1.58 cases for each outbreak. These figures show that diphtheria and scarlet fever are preventable, and if preventable, susceptible of eradication, if every case is strictly isolated and disinfection thoroughly done.

To isolate every case of diphtheria and scarlet fever with our present method is a difficult matter. Simply passing a law and fixing a penalty does not isolate. The health authorities must find the cases before they can enforce isolation, and to find every case is where the great difficulty lies. It has many times been suggested that all scarlet fever and diphtheria cases should be taken to a hospital, thus keeping them absolutely isolated. That would not be practicable because many people would rather take the chances of their children recovering without a physician than to have them taken to a hospital, and the public would then have no protection. Almost everybody is in favor of our quarantine laws as long as they affect some one else, but when it comes to the question of having their houses placarded and requiring them to stay at home or close their place of business, then objection is made. The opposition to having their houses placarded is the greatest when cases occur in families where retail groceries, butcher shops, confectioneries, bakeries, ice cream parlors, et cetera, are in connection with their residence. Every available influence is brought to bear on the attending physician to prevent him from reporting the case. Every assurance is given him that the nature of the disease will be kept from the neighbors. The opposition is often so great that the attending physician will comply with their wishes, and this is especially so if the case happens to be a mild one. Many people are so opposed to having their houses placarded that they will not call a physician when contagious disease enters their family. If the case should be a mild one, a few domestic remedies are all that are required until it recovers. During all this time other members of the family attend school or go out to work, while often neighbor

children play with the sick ones in the house. Probably the greatest source of danger in spreading communicable diseases is the mild case. This is especially true of scarlet fever, because in scarlet fever mild cases are very common, and the contagiousness continues for several weeks after an apparent recovery. The careless, good-natured neighbors are another source of danger in spreading disease. They say they are not afraid of "catching the disease," and go in and out of quarantined places at will. If we intend to eradicate scarlet fever and diphtheria, we must make it possible to find every case and positively isolate them. This is not possible by our present method. If we make the laws more stringent we defeat our purpose by making the people unwilling to have their cases reported. If we make the laws less stringent they will take advantage of the situation, and in either case the disease will continue to spread.

Why all this opposition to being quarantined? Does not a large majority of our people recognize the necessity of isolating those having contagious diseases? Certainly, but this is usually so when it affects some one else. The members of an average family who are already burdened with disease are not willing to stay at home from work or close their places of business, thereby sustaining a financial loss to themselves, for the protection and benefit of the public, unless the public gives them something in return; nor is it reasonable or just to expect them to do so. If isolating cases of contagious diseases is intended for the benefit of the public, and not for the benefit of the ones isolated, then the public certainly should be willing to pay liberally for the protection that is obtained. As long as we subject those who are isolated to a pecuniary loss in consequence of such isolation, enough cases will evade the law and remain undetected by the health authorities to keep these contagious diseases indefinitely with us in spite of all our laws, fines, penalties and sanitary inspectors. Eradication should be the objective point in view, and this can only be accomplished when every case is promptly reported, and when the attending physician and the afflicted families co-operate with the health authorities. To obtain this co-operation some inducement must be given to the people to have their cases reported. The objection to being quarantined among the average people at best is only a question of dollars and cents. If the State would pay $25 per week to every family that is quarantined there would be no objection to having their houses placarded. A physician would be called at the first appearance of the disease and a hearty co-operation would be established with the health authorities at once. This would also bring out the mild and doubtful

cases which are a great factor in spreading disease now. It would also make it financially possible for the families to isolate the sick from the healthy ones, and absolute isolation could be reasonably insisted upon.

The only objections that can be brought against this method are the possibilities of fraud and expense to the State. As to the first objection the health authorities certainly could make inspection often enough to protect the State against fraud. The expense certainly would be great at the start, but that does not alter the situation. Time is money, and when any one is quarantined he serves the State for the protection of the public. Has it come to this, that the great State of Michigan, with all her wealth, expects her afflicted citizens to serve the State without giving a fair compensation for the time served? It appears so from the irrational laws on our statute books regarding contagious diseases, which can only find a fitting parallel in the arbitrary rules of a czar, and have no place in the laws of a republic. And, aside from the justice of the case, a thing well done once is infinitely better than to be half doing all the time and never get finished. There undoubtedly has been more money spent in Michigan to combat scarlet fever and diphtheria than it would have required to eradicate them if the money had been properly applied, and yet we have the disease with us in as alarming proportions as ever.

The amount of money in proportion to the population which would be required would not be as large, however, as might be expected. Estimating the expense on the number of cases reported to the State Board of Health during the year 1890, allowing two weeks of quarantine for each case of diphtheria and four weeks for scarlet fever, at $25 per week, would amount to $531,450. It is reasonable to suppose that the number of cases would diminish one-half the first year, which would make the expense $265,725. This, according to the population of the census of 1890, would make a per capita tax for Michigan of 12.7 cents, and I think there is not a tax collected to-day that the people would be more willing to pay. With this method it would only require a few years to have diphtheria and scarlet fever eradicated, when the expense to the State would amount to almost nothing, and other less dangerous diseases could be similarly treated.

The raising of the necessary money should not be left to the county and township boards, because the members of those boards are often ignorant and have an erroneous idea of practising judicious economy. The State should make an appropriation and place it in the hands of the State Board of

Health, so that the work could be carried on systematically over the entire State.

It is to be hoped that contagious diseases will be eradicated, not only in Michigan, but everywhere; then the happy time will have come when parents can look upon their children without fear of having them swept into an untimely grave by an invisible foe.—*Physician and Surgeon.*

COCCYGODYNIA—ETHER SPRAY.

By E. Macfarlan, M. D.

By the term coccygodynia is conveyed to the mind of the practitioner and the student the misleading inference that in every such case there will be found a pathological condition of the coccyx, whereas observation teaches us that in the majority of cases the affection is but a reflex neuralgia due to disease of adjacent parts; therefore the term coccygodynia can only be accepted in a nosological sense.

The literature of this disease is rather scant, and only recently has it received much attention. As far back, however, as 1844 the eminent Dr. Nott gave a good description of the disease, and in 1861 Simpson, of Scotland, and Scanzoni, of Germany, wrote about it; and more recently Dr. T. G. Thomas devotes several pages to the description and treatment of this affection in his work on "Diseases of Women;" Dr. J. Mathews Duncan in his published "Clinical Letters on Disease of Women" speaks of it under the head of "Painful Sitting."

But the foregoing remarks I have only intended as prefatory to the following report of a case of coccygodynia of eight months' duration that came under my care about one year ago.

Mrs. M. R., widow, age 42, large and fleshy, had suffered intensely from persistent pain in the lower part of the back for eight months; she could neither sit, stand nor walk without suffering severe pain, and for two weeks prior to seeking professional advice had been compelled to keep in bed, but could lie only on her right side. Having made thorough inquiry into the history of the case and questioning Mrs. R. as to whether the sacrum or coccyx had been injured at any time, and her answer being in the negative, I proceeded to make a thorough physical examination to ascertain the real condition of the parts at seat of pain. I could not find any indication of the parts being in a diseased condition; there was only that sensitive condition always found in cases of coccygodynia on making firm pressure, even when there is no pathological

condition. Not finding here any explanation of the severe and persistent pain experienced by the patient I next made a careful exploration of the uterine and ovarian regions and here discovered a sensitive uterus and a highly sensitive and congested right ovary; thus I was enabled to trace the coccygodynia as a reflex neuralgia.

In my treatment I of course proceeded to remove the diseased condition of the ovary; this I succeeded in effecting within five days; but notwithstanding the removal of the apparent cause the coccygodynia persistently remained. This I conceived to be due to the long continued morbid reflex upon the tissues and nerves connected with the sacro-coccygeal parts.

In beginning my treatment of the coccygodynia, I first gave attention to the organs of digestion and corrected a sluggish condition of the liver; then began the use of the present anti-neuralgics, such as phenacetin, antikamnia, phenocoll, etc., but these only afforded slight relief. I next tried morphine sulph. hypodermatically, and also ergotole, but only with temporary relief. The ergotole, however, given internally in doses of five drops every three hours had a beneficial therapeutic action on the affected ovary. All of the above mentioned anti-neuralgics having failed, I now put on my thinking cap, and in a short time succeeded in capturing an idea.

It occurred to me that ether sulph. spray had been used with marked success in several obstinate cases of facial neuralgia; and *ergo*, as a corrollary, I argued, if remedial as a local application in such cases, on a fair trial in other forms of neuralgia, like, for instance, the case I had in hand, it might prove equally beneficial, or, in other words, ether spray might prove an effective therapeutic agent in coccygodynia of reflex origin; and I at once determined to make a practical test at my visit next morning.

Before making my first trial of the spray, I thought it proper to explain to my patient what I was about to do, and at the same time spoke confidently of the benefit I thought and hoped she would obtain by applying the ether spray directly to the seat of pain. She at once gave her consent and I immediately sprayed the entire sacrum and coccyx, keeping at it for about five minutes. This first trial seemed to intensify the neuralgic pain, but within an hour this effect passed off and then came relief lasting through that day and night, enabling the patient to enjoy several hours of refreshing sleep, and when the pain did return it was much lessened in severity.

My first trial of the spray was made at 10 A. M., and the next morning at the same hour I made the second application,

and with the happy result of almost immediate relief from pain; in fact, the pain ceased before I had finished spraying, and the patient enjoyed a comfortable day and all-night sleep for the first night in eight months. I now felt my victory had begun, and the next morning, after the third application, it was made complete. I continued the daily use of the ether for a week, and the coccygodynia was conquered.

And now at this writing, many months since my professional visit to Mrs. R. has elapsed, and as I have been called at various times to other members of her family, I know she has not had any return of the disease.—*American Therapeutist.*

CAUSES AND CURE OF CONSTIPATION.

The causes of this exceedingly common condition are very numerous; some of the most common may be enumerated as follows:

1. Prolapse of the bowels, a condition in which the stomach is usually involved, is the cause of chronic inactivity of the bowels in a very large number of cases, especially among elderly people. The proper causes of prolapsed bowels are two:

(1.) Tight lacing from corset wearing or the pressure of tight bands, in women; or from wearing belts, a practice not uncommon among soldiers and certain classes of laborers, in men.

(2.) Relaxed condition of the abdominal muscles, common in both sexes, is the most frequent in women; the result either of improper dress or sedentary life and inattention to proper attitudes in sitting, standing, and walking. When the large intestine becomes prolapsed, it is not infrequently enfolded upon itself, so as to produce a sort of pseudo-stricture, so that the fecal matters detained in their passage along the intestine, become hardened and accumulate.

2. Dilatation of the large intestine results usually from over-accumulation of fecal matters, but is sometimes the result of abnormal fermentations. This condition may be the result of the preceding, as the pressure of vigorous abdominal muscle is necessary to prevent over-accumulation of gas, and to support the thin walls of the intestines. It is quite likely, however, to result from neglect to empty the bowels regularly. When over-accumulation has been allowed to exist habitually for some months or years, the walls of the intestines may be permanently stretched so that their natural muscular activity is gone and can never be recovered, although some improvement may be secured by proper treatment. This condition is com-

mon in both sexes, but is more frequent in women, and is the direct result of improper dress and sedentary habits.

3. Dilatation of the stomach, a condition exceedingly common in persons suffering from dyspepsia, existing in fully one-half of all cases of this sort; sometimes becomes a cause of constipation by provoking intestinal catarrh through the irritating influence of fermented and improperly digested substances, which, after a long delay, escape from the stomach into the intestine.

4. General weakness and relaxation of the muscular system of the body may induce a similar condition of the intestinal muscles, resulting in constipation from deficient peristaltic activity; hence, exhausting labor, or in fact anything which exhausts the nerve centres, may give rise to intestinal sluggishness.

5. A torpid liver, by which is meant a liver which does not secrete a sufficient quantity of bile, may be the cause of constipation. Bile is a natural laxative, serving to stimulate the muscular contraction of the intestinal walls. When deficient in quantity, deficient intestinal activity is a natual result. Anything which clogs the liver, or renders it inactive, may be a cause of constipation. The excessive use of sweets, fats, and the use of animal food, condiments, tea, and coffee, must all be considered as productive of constipation, through their influence upon the liver.

6. Hemorrhoids may be a cause of intestinal inactivity, acting mechanically to prevent complete evacuation of the bowels, and to cause a retention and hardening of fecal matter. The number of persons who carry about with them constantly, considerable quantities of hardened fecal matter in the large intestine, must be very great, as we may judge from the results of treatment in dislodging old accumulations of this sort in cases which have come under our care. In some cases, great quantities of black and decomposing matter have been discharged after two or three weeks, during which time the patient's bowels had been daily washed out with two or three quarts of warm water applied in the most thorough manner possible.

7. Rectal ulcer, catarrh of the rectum, and irritable rectum resulting in spasmodic contractions of the muscles which close the lower end of the bowel, sometimes induce constipation by presenting too great resistance to the expulsive effort by which the fecal matters are discharged from the body, so that the bowel is never completely emptied, and the accumulations thus begun are gradually increased.

8. A loss of natural sensibility in the mucous membrane of

the rectum is doubtless a frequent cause of constipation. This semi-paralyzed condition is usually due to neglect to evacuate the bowels at a regular time. After long neglect of this sort, the natural reflex activities by which the bowels are stimulated to expulsive action are no longer awakened by the presence of fecal matters in the rectum, and constipation is the result.

9. Another cause of constipation should be mentioned: excessive dryness of the fecal matters, which prevents their ready movement along the large intestine. This is usually the result of too long retention within the large bowel, but may result from other causes, as a feverish condition, or from a deficient secretion of the mucus which acts as a lubricant.

10. Many persons are suffering from chronic constipation as the result of "orificial surgery." The rectum not only contains pockets in which a quantity of mucus is formed for the purpose of lubricating the fecal mass from the body, but a fringe of papillæ is also found in the healthy rectum just within the anal orifice. These papillæ are connected with nerves, the function of which is to bring forcibly and involuntarily into action at just the right moment the strong muscles of the abdominal walls, so as to accomplish complete evacuation of the bowels. These pockets and papillæ were discovered, not by Dr. Pratt, of Chicago, but by Prof. Horner, the eminent anatomist of Philadelphia, who described and pictured them in his Anatomical Atlas nearly half a century ago. The orificial surgeon industriously trims off every papillæ, and slits up every pocket, for no other reason, that we have been able to discover, except the lining of his own pockets, but certainly to the great disadvantage of the patient, who, with his rectum thus maimed, has lost two important links in the chain of automatic activities by which nature secures daily evacuation of the bowels.

Treatment.—Any course of treatment, to be curative of this condition, must take into consideration all the various possible causes which may have brought about the intestinal inactivity in any particular individual case. It is necessary also, not only to remove these causes, but to repair, so far as possible, by the application of efficient means, the damage which has been wrought by wrong habits and morbid influences.

The matter of first importance in the treatment of constipation is the diet. The abundant use of fruit is one of the most excellent means of preventing and curing this disease. One or two oranges before breakfast, a couple of apples at breakfast, the free use of steamed figs, stewed prunes, and all other fruits, are means to be recommended in nearly all cases of chronic constipation. There are, of course, some

cases in which fruits must be avoided. In these cases coarse grains serve a useful purpose—cracked wheat, oatmeal, Graham or bran bread, bran cakes, peas, beans lentils, asparagus, green peas, string beans, and similar vegetables which are easy of digestion, but which contain a considerable amount of woody or indigestible substance, may also be advantageously used. Coarse vegetables, however, must be avoided in cases where there is a marked dilatation of the stomach. Granola, gofio, and other excellent health foods manufactured by the Battle Creek Sanitarium Health Food Company, Battle Creek, Mich., have proved of very great value to thousands of persons suffering from this condition. A glass of cold water before breakfast is a prescription which has cured many cases of constipation. The free use of water, either hot or cold, taken one or two hours before each meal, is a means of value.

Exercises of various kinds, particularly such as bring into active play the muscles of the lower part of the trunk, are essential in the treatment of many cases of intestinal inactivity. Walking three to five miles a day, especially a brisk walk before breakfast, is sufficient to secure regularity of the bowels in many persons.

The exercises of the Ling system, known as Swedish gymnastics, we have found of special value in the treatment of this class of cases at the Battle Creek Sanitarium during many years. Horseback riding and bicycle riding are also of very great value.

Various passive exercises are indispensable in cases of feeble persons, such as massage of the bowels. This is best taken lying upon the back with the shoulders raised and the knees drawn up. Pains should be taken to knead the bowels in the direction of the colon, beginning low down on the right side. Kneading may be done with the hands placed flat upon the abdomen or with closed fists. The movement should be begun at the lower right side of the abdomen, passing up the right side, then across just beneath the ribs, then down to the left groin, one hand following the other in such a way as to force the contents of the colon along. A cannon ball weighing five or six pounds covered with leather rolled along the course of the colon from right to left, is of service in many cases. Weighted compresses, consisting of a quilted compress containing shot, of sufficient size to cover the whole abdomen, are very useful. The patient should lie with the compress upon the abdomen for half an hour; kneading of the compress may be practised at the same time, or the cannon ball may be used outside the compress. Shot bags may be used in much the same way as the cannon ball, and with

equally good effect. The bag should contain five to ten pounds of rather fine shot. Such exercises as raising the limbs when lying upon the back, first one and then the other, then both together, are of special value. Exercises of raising the hips are also useful. Raising the head and legs may be practised at the same time, making a very vigorous exercise which is of great value. Breathing exercises, which bring into full play the diaphragm and abdominal muscles, are a most excellent means of restoring intestinal activity.

Measures of treatment of a hygienic character are of far greater utility in these cases than drugs of any sort, for the reason that they do not, like drugs, lose their efficiency in a short time, requiring larger and larger doses and finally failing to act.

One of the most valuable measures of treatment in cases of constipation is the moist abdominal bandage. This consists of a towel wrung as dry as possible out of cold water and wrapped around the trunk, and covered with several thicknesses of dry flannel to keep it warm, and if necessary, to prevent chilling, a covering of oil muslin may be placed outside of the flannel wrapping. This bandage should be worn over night, being removed in the morning, and the trunk and the rest of the body rubbed with a towel or sponge dipped in cold water. A dry bandage may be worn with advantage during the day, especially in cases in which there is prolapse of the bowels, as shown by protrusion of the lower abdomen. In prolapse of the bowels the bandage should be placed around the lower abdomen and drawn tight so as to form a support for the bowels. In many cases of constipation, prolapse of the colon constitutes a mechanical cause of bowel obstruction.

Application of electricity to the abdomen, or to the abdomen and rectum, especially the use of the sinusoidal current, is of great value in obstinate cases. In some cases, especially those in which there is great tenderness of the abdomen, galvanism applied to the spine and abdomen is of special value. A sitz bath taken two or three times a week; a daily spinal douche of cold water, which may be taken by sitting upon the edge of a tub while water is poured upon the spine from dipper; also the cold douche to the abdomen, taken in much the same way, are measures of great value in obstinate cases. In cases in which the bowels can not be made to move otherwise, an enema should be administered. Care should be taken, however, not to become dependent upon the enema.

Introduction into the rectum of a small quantity of cold water, half a pint or a pint, before breakfast, to be retained

until after breakfast, is a measure of value. A small, cold enema taken at the regular time for the bowels to move, is better than a large warm enema, as it is a more powerful stimulant of intestinal activity. A small amount of cold water introduced into the rectum at night upon retiring, is a useful measure in cases where the intestinal contents are dry and hard; half a pint or a pint is a sufficient amount. In some cases in which the stools are large and the rectum irritable, an ounce or two of olive or almond oil introduced at night or before breakfast is a useful measure. Camphor water, consisting of three or four ounces of water with half a teaspoonful of spirits of camphor, may be introduced into the rectum before breakfast with advantage in many cases. Some cases are relieved by the introduction of a small quantity of glycerine, two or three teaspoonfuls with as many tablespoonfuls of water; in some cases a larger amount of glycerine is necessary. Suppositories made of glycerine or glycerine and camphor, are also valuable for the same purpose; they may be introduced either at night or before breakfast, or at both times.

When the rectum is the seat of catarrh, a mixture consisting of equal parts of starch and boracic acid, introduced by means of a proper instrument, is a very valuable measure. Equal parts of boracic acid and sub-carbonate of bismuth, or sub-carbonate of bismuth alone, is preferable when there is an extreme degree of irritation.

It must not be forgotten that regularity in attending to the demands of nature is a matter of the utmost consequence in these cases, both as a preventive and a curative measure. In some cases the inability to evacuate the bowels is due to weakness of the abdominal muscles, it being sometimes necessary to aid the bowels by pressure of the hands. We have had several cases in which there was inability to evacuate the bowels when sitting in the usual position, but no difficulty when a crouching position was assumed; this is doubtless due to the increased pressure which is brought to bear upon the abdominal contents when sitting in a crouched position.

Some cases of constipation tax the skill and ingenuity of the physician to the utmost, and can not be relieved by such simple measures as can be undertaken at home. There is now and then a case, like that of the notorious Dr. Hall, of New York, in which extreme dilatation of the colon exists, so that this organ has entirely lost its power to contract upon itself, and has become little more than a lifeless sac. In such cases the constant use of the enema or coloclyster is the only means by which the bowels can be relieved, and this means must be employed habitually.—*Modern Medicine.*

CINNAMIC ACID IN TUBERCULOSIS.

The discoverer of the therapeutic value of cinnamic acid in tuberculosis, Professor Landerer, of Leipzig, has issued a small work in which he gives the methods of administering the drug, which he has found after two and a half years' employment in his clinic to give the best results. The treatment is neither complicated nor dangerous. The cinnamic acid used by him is prepared from storax. It is a perfectly colorless, coarsely crystalline powder. It is feebly soluble in cold water, but freely soluble in hot water, alcohol, and warm oil. It dissolves without color. A cinnamic acid which is not absolutely colorless in hot water or alcohol forms a poor emulsion, because after a short time it deposits a gritty sediment. The emulsion employed by Landerer is as follows: R. Acidi cinnamylici subtil. pulverisati, 5 gm.; olei amygdal, 10 gm.; vitelli ovi, num. 1; sol. natr. chlor. (0.7 per cent.) q. s.; ut fiat emulsio, 100 gm. The preparation of this emulsion is important. The acid should be ground fine in a mortar. A little almond oil is then added, and the trituration continued. The rest of the oil is then rubbed in, and the yolk of one egg added, and the whole mass thoroughly triturated. The 7 per cent. sodium chloride solution is then added drop by drop, while the mixture is constantly stirred, until a weight of 100 grammes has been reached. The whole process should consume at least ten minutes. This mixture after standing a few days should remain homogeneous, and should deposit no crystals of cinnamic acid. If the emulsion does separate in the course of time it is still good. In the acid emulsion the crystals can still be seen under the microscope. They should not be larger than four times the diameter of a white blood-corpuscle. Larger fat drops should not be present. For alkalizing the emulsion a 7-5 per cent. solution of sodium hydrate is used. About five drops of this are added to the cubic centimetre of emulsion. It is important that the emulsion be made alkaline. A slight excess of alkali does no harm. The microscope should reveal no crystals in the alkaline solution. The emulsion should be kept in a cool place, and a new lot prepared weekly, though it will keep two weeks or longer. It can not be sterilized. The acid emulsion will keep for a long time, but the alkaline quickly spoils; it is best, therefore, to add the soda only to as much emulsion as is required at the time. The technique of the injection is simple. A perfectly sterile Pravaz syringe is necessary. The needle should be fine and very sharp. Before using it should lie fifteen minutes in alcohol, and then be washed with salt solution. An elastic band is placed about the upper arm as in venesection. The

skin overlying the cephalic vein is cleansed with ether. The alkalinity of the emulsion should now be tested. The vein being made to stand out prominently, the needle should be introduced as nearly parallel to it as possible, till the lumen of the vessel is penetrated. When the needle has entered the vein it will be felt that it is freely movable in a cavity; and the emulsion can now be slowly injected. No pain, or nothing more than a slight burning sensation, which disappears on removing the band, follows the intravenous injection. If the fluid does not enter the vein a swelling will be observed. No symptoms should appear immediately after the injection. Depression is a sign of too large a dose. Allowance must, of course, be made for nervous persons. Injections into the gluteal muscles are made, the same as mercurial injections, into the upper and posterior gluteal region, avoiding the ischiadic nerve and gluteal vessels. A very sharp needle is not necessary. In the very acute pulmonary tuberculosis of young people, Landerer has found that little is to be hoped for in the use of cinnamic acid. Cases of chronic tuberculosis without pulmonary cavities give almost an absolutely good prognosis. He has succeeded in improving 66⅔ per cent. of cases with pulmonary excavation when there was no considerable degree of fever. After the fifth or sixth injection the patient begins to have the subjective feeling of improvement. After the first few injections, many patients feel tired and depressed. This feeling should disappear at least by the third week. Sweating gradually diminishes, and the appetite improves. Expectoration gradually diminishes after the fifth or sixth week. When no cavities are present, the bacilli in the sputa begin to disappear by the fourth or sixth week. The size of the dose must be regulated by the strength of the patient. The weaker the patient, and the more extensive the disease in the lung, so much smaller should the dose be. Under any circumstances the treatment should be begun with small doses. The dose should never be rapidly increased. It is best to begin with less than 0.1 ccm., and slowly increase the dose up to 0.25 or 0.4 ccm. Especially strong patients may be given 0.8 or 0.9 ccm. In advance cases the dose should be held at 0.1 or 0.15 ccm. If the patient complains of uneasiness, pain in the head or chest, the dose should be diminished. Landerer usually gives two injections weekly; but the best results are obtained when 0.1 or 0.2 ccm. are given every second day. This treatment should be continued in cases of pulmonary tuberculosis not less than three months, or at least a month after the bacili have disappeared from the sputum. Very advanced cases have to be treated with small doses for nine months or longer —*Annals of Surgery, January, 1894.*

ON THE NEUROSIS FOLLOWING ENTERIC FEVER KNOWN AS "THE TYPHOID SPINE."

By WILLIAM OSLER, M. D., Professor of Medicine in Johns Hopkins University.

In 1889 Dr. Gibney, of New York, described at the American Orthopedic Association a sequela of enteric fever which he called "the typhoid spine," and which he regarded as a perispondylitis—"meaning an acute inflammation of the periosteum and the fibrous structures which hold the spinal columns together." He stated that his reason for the use of the word was "the production of acute pain on the slightest movement, whether lateral or forward, and the absence of any marked febrile disturbance or neuralgia."

In 1890, in a discussion at the Association of American Physicians following the reading of a paper "On Some Points in the Natural History of Enteric Fever," by Dr. James E. Reeves, Dr. Loomis, Sr., referred to Dr. Gibney's observations and to one of the cases he had asked Dr. Gibney to see. Dr. Loomis knew of no reference in literature to a similar condition. Dr. Jacobi at the same meeting, besides protesting against the introduction of a new name, such as "typhoid spine," suggested that, in the absence of temperature, it might be one of two things, either a neurosis or a spondylitis, remarking that mild forms of spondylitis are not so uncommon as they are believed to be.

In the "American Text-book of Medicine" (page 90) Dr. Pepper remarks in the article on typhoid fever that he has observed in a series of cases "obstinate periostitis of the sternum or of the crests of the ilia, or in two instances, judging from the location of the pain and from the effect of movement of the trunk, of the front of the spinal column." Eskridge has also described a case.

I have not been able to find any other references in text-books or monographs on typhoid fever, either in English, French or German. My attention had not been called to the condition until recently, unless perhaps a case which I saw several years ago with Dr. Grassett in Toronto was an illustration—a young officer, invalided from India after a prolonged fever, who had for many months attacks of the most severe pain in the back on the slightest movement, which incapacitated him completely; though when seen by me he looked strong and robust and had a good appetite. He subsequently got quite well.

Cases II and III in Dr. Gibney's paper are very much like my cases, particularly in the fact that the symptoms developed after convalescence. and in both instances there was a

slight trauma—in one a fall while playing tennis and in another a slight fall on the left hip while skating. In the case reported here the patient also lays a great deal of stress on the jar which he received by the sudden jerking of the cable-car. In both the prominent symptom was pain on movement, and there was an absence of all signs of organic disease.

An explanation of the symptoms in these cases is by no means easy. As already mentioned, Dr. Gibney regards the lesion as a perispondylitis, an acute inflammation of the periosteum and fibrous structures holding the spinal column together; and with this view, judging from the quotation made, Dr. Pepper seems to agree.

Joint and periosteal troubles are by no means rare sequences of typhoid fever, but the symptoms do not usually develop (as in three or four of the cases here described) at so long a time after convalescence has been well established. The periostitis, seen oftenest about the sternum and the ribs, proceeds, as a rule, but not necessarily, to suppuration. I have on several instances seen a periosteal swelling disappear without suppuration. We do not have, so far as I know, protracted periosteal thickening, lasting for weeks or months, without suppuration; and it is difficult to conceive of the attacks of pain, such as are described in the second and third cases of Dr. Gibney's and in the second case which I here report, lasting for months, due to a simple perispondylitis, which in none of the cases passed on to suppuration. The general impression given by the patients whom I saw was that they were neurasthenic, and while, of course, it would be very illogical to assume that all of the instances are due to the same cause, yet I can not help feeling that many of them are examples simply of a painful neurosis, an exaggerated condition of what was formerly known as "spinal irritation," and analogous to the condition of "hysterical spine" and "railway spine," in which the patients suffer on the slightest movement of the back or of the legs. In the second case reported the whole behavior during the examination was that of an hysterical patient; thus, he could not think of lifting a leg—even the idea was enough to give him agonizing pain—and yet in a few minutes he lifted it himself as he got out of bed. So also the slightest pressure in the lumbar or iliac regions would cause him to scream out; but while his attention was diverted pressure could be made with the greatest facility. The rapid recovery in a few days, with disappearance of all the symptoms, is quite inconsistent with any chronic perispondylitis.

I have recently seen a case presenting somewhat different features, but which I think may also be reasonably classed as a post-typhoid neurosis, in which after a protracted and severe

attack of typhoid fever with delirium and severe nervous symptoms and tardy convalescence, the patient had disturbed sensations in the feet and legs, aggravated shortly after, but diminishing somewhat within five or six months, never entirely disappearing, and recurring with some intensity during the period characterized by pronounced neurotic manifestations. Unlike the cases before described, there were no pains in the back abdomen, only a sensation of weakness. The symptoms suggest (1) central (spinal) lesion, (2) neuritis, or (3) a neurosis. From his statements it was evident that the doctor in attendance feared a central affection; but the patient's condition two years from the date of the fever would speak very strongly against any such view; nor does the case conform in its clinical history to a neuritis. The man insists that the feelings which he has now in the feet were also present during the convalescence and some months subsequently. There did not appear to have been any very special muscular weakness, such as sometimes develops after an attack of typhoid fever without any evidence of peripheral neuritis. In the paper by Dr. George Ross, "On Paralysis after Typhoid Fever," he refers to those cases in the following words: "It is not unusual after typhoid fever of considerable severity to find a definitely enfeebled condition of the lower extremities persisting for some time, and sometimes a person never entirely recovers his capacity for walking long distances. Such paretic cases have never been specially studied, but it is probable they would if any should fall under the head of defective innervation from prolonged exhaustion of the nervous centres." On the other hand, in the case under discussion the history and the general appearance of the patient suggest a neurosis following typhoid fever. The paræthesiæ such as described are not uncommon symptoms of neurasthenia, in which also exaggerated reflexes are not at all infrequent.

It is not unlikely that under the designation of "typhoid spine" Dr. Gibney has described several distinct affections, and I would not be understood as holding that there may not be a perispondylitis. Nor are all of the painful backs following typhoid fever neurotic.—*American Journal of the Medical Sciences, January.—Braithwaite's Retrospect.*

SURGERY.

PIPERAZINE AS A URIC ACID SOLVENT.

By H. Helbing, F. C. S., Analytical Chemist, and F. W. Passmore, M. D.

The remarkable solvent powers of piperazine on uric acid renders it very desirable to know positively whether it is really

available in practical medicine in the treatment of uric acid deposits in joints, kidneys and bladder. We therefore with pleasure abstract from *Helbing's Pathological Record* some positive information on the subject.

Piperazine belongs to a class of bodies which, owing to their complex organic nature, are not so easily dealt with as many other substances employed in the treatment of diseases. It has therefore been thought advisable to make a detailed study of the chemico-physiological relations of piperazine to uric acid under various conditions, and thus to furnish a guide which will enable the physician and even the physiologist, who can not be expected to have an exact detailed knowledge of the physical and chemical properties of the base, to judiciously apply and use piperazine, and to clearly understand the results obtained.

Piperazine marks a new departure both in a chemical and a therapeutical sense. As a chemical substance it is the representative of an entirely new series of organic bases, and as a medicinal product it is the first organic bases that has been employed, not to modify the course of the metabolic changes undergone in the system, but to aid in the removal and prevent the undue accumulation of one of the most important products of those changes, namely, uric acid.

Whatever may be the primary cause of gout, stone, renal colic, and other diseases associated with the uric acid diathesis, the abnormal deposition of uric acid in insoluble form in the various organs and tissues is the evident and direct cause of the pain and trouble. To remove these concretions and prevent their formation has been one of the most constant and difficult problems that has confronted the physician in all ages. It is a subject of discussion in the earliest therapeutical literature, and has remained unsolved down to the present generation.

Apart from the endeavor to minimize the production of uric acid in the system as far as possible by careful regulation of diet and of bodily habits, the most feasible method of procedure would appear to consist in the exhibition of a solvent which shall keep the uric acid in a soluble form, so that it can be eliminated from the system in a normal manner. In this sense the question becomes a chemical one, or one in which the chemist can materially aid the physiologist in studying the chemical relations and physical properties of the various uric acid compounds.

The field for the selection of a solvent for uric acid is necessarily limited by the condition that the solvent must be able to penetrate into all tissues and organs in search of uric acid. Consequently the solvent itself must be soluble under

all conditions and in all the combinations that may occur in the organism. Most important of all, it must be free from any disturbing influence upon the normal chemical changes progressing in the various parts of the body.

Chemical investigation of uric acid demonstrates that bases are specially indicated as solvents. Salts of the alkali metals appear to fulfil some of the conditions imposed. The carbonates or citrates are soluble enough to allow them to penetrate the most deep-seated tissues, and their presence in reasonable quantities does not materially affect the vital processes. But do they act as solvents? Under some conditions undoubtedly yes, in others equally certainly no. The cause is not far to seek. There are two classes of urates or uric acid salts of the alkali metals.

The neutral urates, especially lithium urates, are comparatively soluble salts which are formed in the presence of excess of alkali, and so long as the uric acid exists in this form there would be no difficulty in its elimination from the system. But the most feeble acids, even carbonic acids, are capable of decomposing these neutral urates, converting the neutral into acid urates.

Acid urates of the alkali metals are almost if not quite as insoluble as free uric acid. As a consequence the uric acid dissolved in neutral or faintly alkaline liquids, like the blood, tends to separate as an insoluble acid urate as soon as it encounters an acid secretion. From such an acid liquid, as the urine, surcharged with acid urates, deposition takes place either in the form of loose granular crystals, or as concretions on a suitable surface. The alkaline treatment is powerless to arrest such deposition or to remove the deposits so formed, and frequently by facilitating the concentration of the uric acid in certain secretions may aggravate the disease and increase the growth of calculi. If alkali be administered in such quantities as to render the urine itself alkaline, precipitation of phosphates and other complications present themselves.

A solvent is required that shall not only dissolve uric acid concretions wherever met with, but shall maintain the uric acid in a soluble combination under any condition that may obtain in the organism. Hitherto only inorganic bases have been employed, and these fail to answer all requirements.

Piperazine is an organic base, with the constitution represented by the formula $C_4 H_{10} N_2$. In some respects, therefore, the constitution of piperazine is analogous to that of benzene, and, like the latter, there is no doubt that the chemical stability of the compound and its indifference to change is due to its symmetrical molecular structure.

Piperazine crystallizes from water in white lustrous tablets, and in the form of various hydrates. When anhydrous it melts at 104–107 deg. C., and boils at 145 deg. C. Exposed to the air it rapidly attracts water as well as carbonic acid, and deliquesces to a colorless liquid. It is excessively soluble in water, and the aqueous solution has a strong alkaline reaction, but is at the same time free from any corrosive property, and is practically tasteless. Piperazine volatilizes with the aqueous vapor from boiling solutions, and by addition of salt to the solution can be completely driven over on distillation with steam.

Pharmacological experiments by von Mering and by Kobert have demonstrated that piperazine is absolutely non-poisonous.

Piperazine forms definite well-crystallized salts with acids. The hydrochloride, $C_4\ H_{10}\ N_2\ 2HCl$, is also very soluble in water, less so in alcohol. It crystallizes in long silky needles.

In consequence of the soluble character of piperazine urate, piperazine dissolves uric acid very readily even at low temperatures. The following experiments were all carried out at blood temperature (38 deg. C.):

Uric acid calculi of diverse composition were divided and suspended in 1 per cent., 0.1 per cent., and 0.025 per cent. aqueous solutions of piperazine. Even in the most dilute solution the solvent effect of the piperazine was discernible, eating into the layers of the stone which consisted of uric acid, so as to leave distinct furrows. After a time the action was continued so far that the stone disintegrated. Taken out, dried, and weighed at different intervals a distinct loss in weight was ascertained, and uric acid was found in solution. Owing, however, to the complex nature of the stones no consistency in the rate of solution could be ascertained, the amount dissolved varying irregularly at different times. These experiments were therefore continued on compressed lumps of uric acid, and also of acid urate of soda.

In normal urine, to which the corresponding quantities of piperazine had been added, scarcely any solvent effect upon the stones was developed. Even when the urine was neutralized with alkali previous to the addition of piperazine, the solvent action was very slight, showing that the loss of activity was not due to the acidity of the urine. No urates were, however, deposited as in control experiments, and no doubt part of the energy of the piperazine was absorbed in this direction. These experiments were also continued upon compressed uric acid and acid urate of soda.

The uric acid employed was prepared from serpents' excrement, which consists almost entirely of ammonium urate,

by pulverizing and boiling with excess of caustic soda solution in an open porcelain dish until ammonia ceased to be driven off. The solution was then filtered, and the uric acid precipitated from the filtrate with excess of hydrochloric acid. The precipitate was brought upon a calico strainer, washed with water, and pressed into a hard cake beneath a hydraulic press. Any adherent water was driven off at 100 deg. C., the hard mass removed from the calico and cut up into cubes of convenient size.

As an example, a 1 per cent. solution will dissolve a concretion weighing about 30 grains in 1.3 hours.

It appears also that in the kidney itself by the administration internally of piperazine the calculus may be dissolved. Schott describes a case of severe renal colic, in which hypodermic injections, potash and lithia salts, failed to afford any relief, but when an operation appeared unavoidable, after eight days, administration of piperazine in aqueous solution, a stone half the size of a bean in a state of disintegration was passed, and completely disintegrated when left in the water.

The proper dose to give is about 15 grains twice a day, dissolved in some mineral or effervescing water. The alkalinity of the blood is favorable to its action, and the drug is not oxidized or destroyed in the organism.

The following are the general conclusions arrived at: (1) Piperazine is the solvent of uric acid and insoluble urates, for even in very dilute solutions it is capable of dissolving and disintegrating uric acid concretions, and its employment is therefore indicated in diseases of the uric acid diathesis. (2) Neutral piperazine urate is seven times more soluble than lithium urate. Its solubility at 17 deg. C. is 1 in 50, and that of lithium urate only 1 in 368. (3) The neutral and soluble urate of piperazine is the salt always formed under normal conditions even in excess of uric acid, and in this piperazine possesses a further advantage over other uric acid solvents, such as lithium, which frequently forms insoluble acid urates in the body. (4) Piperazine is not oxidized or destroyed in the organism, but is able to exert its full solvent effect throughout the circulatory system, for, as is proved by actual experiment, piperazine is excreted by the urine undecomposed and combined with uric acid.—*Braithwaite's Retrospect.*

THE TREATMENT AND CURE OF CHANCRE WITH PEROXIDE OF HYDROGEN.

The subject of the best treatment of the primary sore of syphilis has occupied the minds of investigators of late years to such an extent that almost every surgeon has a different

method, and the general practitioner is somewhat at a loss to know which is the best treatment to employ as the most expeditious means of relieving the anxiety of the patient and curing the lesion. The special purpose of this paper is to draw attention to a particular method of treatment, which not only relieves the anxiety of the patient and places him in a delightful buoyancy of mind, *but cures the chancre in the shortest possible time*, without pain or detention from business, and with less scar and less destruction of tissue than any other method.

The chancres of the following cases, selected from a good many recorded, were of the large Hunterian variety, embracing the worst forms of sloughing and phagedena.

Case 1.—Mr. K., aged 38 years, came to me January 29, 1891, with a large sloughing single chancre, situated on the right side and at the base of the glans penis, at the junction of the prepuce and very deep; incubation about thirty days; penis large and soft. Sprayed it with full strength solution (fifteen volumes) of peroxide of hydrogen medicinal (Marchand's) at sixty pounds pressure, and dressed with iodol powder, and continued the same treatment every morning at 7 o'clock.

February 20: Sprayed it as above; sore now only skin deep, and continued till February 23; sore healed; duration of treatment, twenty-five days.

Case 2.—Mr. W. B. came to me September 6, 1892, with a single sloughing chancre on left glans penis, and corresponding ulceration on prepuce; incubation about thirty days; sprayed peroxide of hydrogen, full strength, sixty pounds pressure, and dressed with iodol; continued same treatment every evening at 7:30 o'clock, for sixteen days.

September 23: Sore almost healed.

September 25: Sprayed for last time to-day; duration of treatment, nineteen days.

Case 3.—Mr. L., aged 28 years, came to me August 23, 1893, with a phagedenic chancre, thirty-five days incubation, situated immediately at meatus urinarius, and sloughing its way very rapidly into the urethra. Sprayed it with peroxide of hydrogen, full strength, sixty pounds pressure, and dressed with iodol powder. Continued the same treatment every evening at 7:30 o'clock.

August 30: Sore almost healed up, only some granulations left. Continued the same treatment every evening till September 4. Sprayed it to-day for the last time; there being only the surface of the sore about the size of a pin's head. Considered himself cured, and said he would not come again. Duration of treatment, eleven days.

The above cases, selected from many recorded cases on

account of their possessing the worst features of the initial lesion, serve as good examples of the treatment by the peroxide of hydrogen method.

I treated Mr. K., of Case 1, on two different occasions for the same disease, in exactly the same manner, and the two cases are about identical in regard to length of time of treatment and as to details, and he got well in about the same manner.

The case of Mr. L. presented the worst features of phagedena, which was so virulent that I think he would have lost the greater part of the glans penis if he had been treated by the nitric acid or caustic method, and, as it was, the ulcer healed with a very small scar, scarcely noticeable.

The pressure of the spray (sixty pounds), which is one of the most important factors in the whole method, not only cleanses and produces thorough asepsis of it, killing the germs of the disease at the very bottom of the ulcer, but the oxygen of the peroxide aerates the blood through the capillaries, and arrests the progress of the disease at the nearest possible point, allowing the process of repair to commence as soon as possible, according to the severity of the disease, with the least loss and destruction of tissue and consequent scar. It must be particularly understood that in using this treatment, all instruments, spraying tubes and bottles, must be made of either glass or hard rubber, for the reason that metals, with one or two exceptions, coming in contact with the peroxide, will destroy its component parts and render it useless, and I have found also a great difference in the results if the peroxide is fresh or otherwise. The first effect of a spray of peroxide upon the ulcer is to deposit upon it a thick film of albumen; this should be allowed to remain for about half a minute or less; then continue the spraying till a large tubeful has been used (one ounce); as the sore progresses the spraying causes a good flow of rich arterial blood upon it, which merely shows returning healthy conditions.

The treatment is entirely painless, and the patients do not experience any annoyance or inconvenience whatever while carrying the disease, and freely express themselves as well pleased with its effect.

No internal medication during this stage is given. The iodol powder is used only as an antiseptic, to protect the sore from external influences until it is sprayed again the next day, keeping the sore in as good a condition as it is left by the spraying, which must be done once every day until the ulcer is healed.

This method of the treatment of chancre has been, in my

hands, the most successful of all methods that I have heretofore adopted.—*Willard Parker Worster, M. D., of New York, in the Journal of Cutaneous and Genito-Urinary Diseases for February, 1894.—Physician and Surgeon.*

GYNECOLOGY AND OBSTETRICS.

THE DANGERS OF GLYCERINE INJECTIONS INTO THE UTERUS FOR THE PURPOSE OF INDUCING PREMATURE LABOR.

By Oscar Embden, M. D., Brooklyn, N. Y.

T. Pfannensteil publishes in the *Centralblatt fur Gynœcologie*, No. 4, 1894, an article concerning the dangers connected with intra-uterine injections of glycerine for the purpose of inducing premature labor—a method of late frequently used in this country—and gives the history of two cases treated by him with the new method, in the Gynecological Clinic of Breslau.

As I have had the opportunity to observe one case with a very similar history, showing evidently the dangers of these injections, I take the liberty to give in the following an extract of the above article, together with my case and some observations of my own. I consider myself the more justified in so doing, as Pfannenstiel's first case is not free from objections, leaving only one of his cases indisputable.

In the beginning of his article, the author states that injections of different liquids into the uterus (for instance, the injection of tar-water: Cohen's method) have been frequently recommended, but generally very soon rejected by the profession, on account of the dangers connected with these methods. Most of them, especially Cohen's mode of procedure, are said to have one great advantage; that is prompt and sure action even in cases where the ordinary methods have failed to act.

Following this idea, Pelzer recommended the injection of glycerine between the uterus and the fœtal sac, two years ago, publishing four cases treated by him successfully in this manner. Since that time we have read very favorable reports of the new method, written by different distinguished authors, none of whom mention any dangers connected with this treatment.

Pfannenstiel tries to demonstrate these dangers with the following two cases:

Case 1.—Primipara, twenty-two years of age, enters the Clinic on September 5, 1892, in the ninth month of her pregnancy, suffering from a very bad nephritis. Her legs and face were œdematous, she has no appetite, has headache and feels

very weak. In the past seven days she suffered from dyspnœa. She is anæmic, badly nourished; has a hyposcoliosis, but no narrowness of the pelvis; cyanosis in a slight degree. Respiration, 44; temperature, 97.7 deg. F.; pulse, 130 to 166, small. The urine contains eight per cent. albumen (Esbach's method), many casts and epithelial cells, no red blood-corpuscles, a few white ones; quantity 200 c.c in twenty-four hours.

September 7, 6 P. M.—Injection of 80 cc. chemically pure glycerine between the uterus and the fœtal sac with every possible precaution. The patient stood the little operation very badly on account of orthopnœa. She had a slight collapse before the injection and a second one immediately after it, so that she required stimulants. Soon after the injection, it was evident that it had been performed too late. The breathing became more and more difficult, the pulse became weaker. Temperature, 95.9 deg. F. She never had a single pain. She died September 8th at 2 A. M.

The *post-mortem* examination showed that she had died of nephritis. Omitting the full report of this examination, I only mention that there was one tablespoonful of blood-colored urine in the bladder. The vesical membrane was of a red color. The fœtal sac was separated from the uterus over an area of about three inches square. No glycerine was noticeable at this point.

CASE 2.—This is a III. para with a narrow pelvis; artificial labor four weeks before term. Pfannenstiel first tried, without success, Krause's method for some days: he pushed in three bougies between the uterus and the fœtal sac.

September 26, 5 P. M.—Injection of 100 cc. concentrated glycerine. The patient had immediately after the injection very strong and very painful contractions. These subsided after some time, the uterus remaining exceedingly sensitive. There was not any effect on the cervix. One hour after the injection the woman became drowsy and cyanotic, the temperature rose to 102.2 deg. F., the pulse became slower, 68 per minute. On the previous day it ranged between 84 and 92. This condition continued for three hours. Then the temperature became normal, the pulse a little more frequent. After that the temperature remained normal. The urine, drawn off with the catheter, one hour after the injection, quantity 1 oz., was of a blood-red color. The woman was catheterized every two hours: the urine remaining as in the beginning until ten hours after the injection, when the color began to become lighter, and twenty-four hours after it was normal. The urine contained large quantities of albumen until forty-eight hours after the injection; it contained nearly no morphotic elements,

except some particles of hyaline casts, no red blood-corpuscles. The spectrum-analysis showed that there was methæmoglobin and hæmoglobin in the urine. The general feeling of the patient was not disturbed after the operation, but the appetite was poor for three days.

Premature labor was successfully brought on by means of the colpeurynter. The delivery of a living child took place September 28, at 4:30 P. M. Puerperium without complications.

The case observed by myself is as follows: Primipara, aged 24, in the ninth month of her pregnancy. She has had albumen in the urine for three weeks, the amount of which is rapidly increasing in the last few days, in spite of a very strict milk diet (seven per cent., Esbach's method). The quantity of the urine is about one quart in twenty-four hours. The sediment contains a few white blood-corpuscles, no red ones, a few renal epithelial cells, and a few hyaline casts. The patient has a headache, feels sick to her stomach, and very tired. She has slight œdema of the feet and hands. Under these circumstances, it seems best to induce premature labor as soon as possible.

March 19, 1893, 1 P. M.—Injection of 90 cc. pure glycerine between the uterus and fœtal sac (Dr. Charles Jewett). This had to be done in chloroform narcosis, as the patient was very nervous. Soon after she recovered from the narcosis she had slight pains at longer or shorter intervals until 7 P. M. At that time the uterus was very sensitive, but there were no real contractions.

At 7:30 P. M. the patient had a very severe eclampsic convulsion of about three minutes' duration. As it was very desirable to terminate labor as soon as possible, and the cervix barely admitting the little finger, manual dilatation was very skilfully performed by Dr. Jewett, at 9 P. M., and a living child extracted with his own axiotraction forceps. The temperature was normal all the time, but the pulse-rate was very slow, ranging between 50 and 55 per minute; before the injection it was 78. The urine was not drawn off before delivery. The first urine after delivery—drawn with the catheter—was of a dark red color. It contained no red blood-corpuscles, but a large quantity of hæmoglobin. After twelve hours the water was only slightly colored, and twenty-four hours after delivery the color was normal. The albumen disappeared gradually. The next day after delivery a severe icterus set in, and the patient fell in a semi-comatose condition which continued for six days. By this time the icterus and the coma had disappeared, and the patient recovered gradually.

In the first place, it is demonstrated by these three cases that the glycerine injections do not act as quickly as we should expect, Pfannenstiel concedes himself that this first case is of little value in this respect, as it was too far advanced for any treatment; but his second one illustrates clearly that the injections of glycerine were of no more use than Krause's method (introduction of bougies). My case shows that there was, about seven hours after the injection, only a very slight dilatation of the cervix, although the patient had constant pains from the beginning.

Pfannenstiel is perfectly right in considering much more important than this the fact that Pelzer's method is liable to occasion indisputable symptoms of glycerine poisoning. This will be—as he says—a death-blow to the method.

Concerning the first case, he does not, of course, consider the glycerine as the cause of the woman's death, but the nephritis. He deems it remarkable, nevertheless, that there was found a small quantity of blood-colored water in the bladder, the urine being entirely free from blood in the last days before the injection was performed, as shown by freqnent examinations. Pfannenstiel tries to find the cause of this in the injected glycerine.

The second case was undoubtedly a case of glycerine poisoning, and although it did not damage the future health of the woman, it kept her in danger for some time. The woman was in perfect health up to the time of the injection; the urine was normal. One hour afterward she had the symptoms above mentioned.

In my case there is a woman with nephritis, but there was not noticed at any time before the injection any trace of blood in the urine. After the delivery there was a good quantity of a dark red urine in the bladder. In examining the same, I failed to find any red blood-corpuscles, but there was a large amount of hæmoglobin. Therefore the cause of this could not have been an acute congestion of the kidneys, as we at first thought—for there was no hæmaturia, but a hæmoglobinuria—and the only explanation we could find for this was a decomposition of the blood, brought on by the injected glycerine.

This does not seem so very strange, as we know—according to Pfannenstiel—that glycerine is liable to occasion a decomposition of the blood, as Luchsinger,* Schwan,† Filehne,‡ Lèbèdeff § and Wiener‖ have demonstrated and Afanassiew¶ has shown, experimenting with dogs and rabbits, that the

*Pflueger's Archiv, 1875, p. 503.
†Eckhard, Beitrage zur Anatomie of Physiologie, 1879, vol. viii., p. 167.
‡Virchow's Archiv, vol. cxvii., p. 413.
§Virchow's Archiv, 1883, vol. xci., p. 303.
‖Archiv fuer Gynæcologie, 1884, vol. xxiii.
¶Verhandlungen des Kongresses fuer innere Medicin, 1883, p. 216, ff.
*Virchow's Archiv, vol. 14.

hæmoglobinuria, caused by glycerine, brings on a glomerulo-nephritis which is followed, after the injection of more glycerine, by interstitial nephritis as well as by interstitial hepatitis.

It is, of course, strange that neither Pelzer nor others met with a similar accident after injections of glycerine.

Pfannenstiel finds an explanation of this in the fact that Schwan, Lébédeff, and Filehne have shown that in rabbits, when the glycerine is brought under the skin, hæmoglobin always occurred, but that it did not occur, or in a slight degree only, when it was injected directly into the veins. Without giving an explanation of this remarkable fact, Pfannenstiel deems it possible that, in Pelzer's cases, the glycerine was very rapidly absorbed by the circulatory system, while in his cases it acted in the decidua uteri as if it had been injected by the hypodermic method.

There is another thing about which I would like to say a few words, that is the icterus which, in my case, followed the hæmoglobinuria. On this account it seems to me especially interesting.

It is not very important whether this was, according to Kuehne's* theory, a real hæmatogenic icterus, that is, an icterus directly caused by the pigment of the decomposed red blood-corpuscles, or a so-called hæmo-hepatogenic icterus, which is said by Afanassiew, who denies the existence of a real hæmatogenic icterus, to be an indirect result of this decomposition only. This author thinks that the pigment of the destroyed red blood-corpuscles is deposited in the liver, where the gall pigment is normally formed out of the blood pigment, and the icterus occurs, in his opinion, on account of an overplus of gall-pigment in the liver, a part of which re-flows into the blood.

Leaving this question undecided, one thing seems to be indisputable, and that is, the icterus was caused, in my case, either directly or indirectly, by the decomposition of the blood poisoned by glycerine.

I would not dare to say that the semi-comatose condition of my patient, which disappeared with the icterus, was brought on by the same cause. It did not look like a uræmic coma, and we were unable to account for its origin. It might possibly have been one of the indirect effects of the decomposition of the blood, but it is better to leave this an open question.

Pfannenstiel also points out another danger of the injection of concentrated glycerine, and that is according to the authors above cited, the possibility of a thrombosis, which concentrated glycerine, when brought into the circulatory system, may produce.

In addition to all these objections, there has still to be mentioned another danger connected with the new method as well as with the injection of any kind of fluid between the uterus and the fœtal sac, namely, the possibility of air entering into the circulatory system. This can not be absolutely avoided, even with every possible precaution.

All this together seems sufficiently to show the great dangers connected with Pelzer's mode of procedure. It ought not to be used at all for the purpose of inducing premature labor, but especially not, in my opinion, in cases of nephritis, as we have seen that the glycerine is very liable, on account of its irritating effects on the kidneys, to make the existing nephritis worse.

If, in calling the attention of the profession to the dangers of Pelzer's method, I shall have convinced them that it is not a method for indiscriminate use, I will have attained my object. —*N. Y. Medical Record.*

HYDRASTININE IN UTERINE HÆMORRHAGE.

Gottschalk, (*Brooklyn Med. Jour.*), says hydrastinine may be employed:

1. First of all, in those uterine hæmorrhages which are traceable to a pronounced congestion of the uterus. To these belong, above all, the often very profuse menorrhagias of spinsters, in whom there is no pathological change in the condition of the genitals. In some of these cases it is possible to obtain a permanent result, so that even after discontinuing the remedy the menstrual flow remains smaller.

2. Also in hæmorrhages which have their pathological and anatomical cause in endometritis, hydrastinine will lessen the quantity of blood, but here, according to Gottschalk's experience, the action is only palliative, not being sufficient alone to cure the local cause of the trouble.

3. For prophylactic or intermenstrual use, hydrastinine is useful before or during the first returning profuse menstruation after all abrasion of the uterine mucosa. It is well known that this menstruation, occurring after six weeks, is often very profuse. In the very cases where there was a great loss of blood before the operation, it is of great importance to prevent further profuse hæmorrhage. This is possible if the treatment with hydrastinine is begun several days before the expected menstruation, and, if necessary, continued during the duration of the menstruation.

4. Menorrhagias caused by retroflexio uteri are best

treated by correction of the malposition; but for cases of fixed retroflexion, where the reposition is not yet possible, hydrastinine is a commendable remedy.

5. Secondly, uterine hæmorrhages—*i. e.*, those caused by the changes of the adnexa and their surroundings—offer a large field for the successful use of hydrastinine. To these belong the menorrhagia and metrorrhagia with pyosalpinx, oophoritis, ovarian tumors and exudations. Of course the cause of the trouble is not influenced by the remedy.

6. Climacteric menorrhagias are much diminished by a faithfully carried out hydrastinine treatment.—*Canada Lancet.*

THE TOXÆMIA OF PREGNANCY: ITS DIAGNOSIS AND TREATMENT.

By Edward P. Davis, M. D., Visiting Obstetric Physician to the Philadelphia Hospital.

By the term toxæmia of pregnancy we understand a condition occurring in the pregnant woman in which toxic material is present in the body in excess. There can be no nutrition without the production of waste, and when the dual existence in the body of the pregnant patient is considered, it is not strange that an additional quantity of waste products is present. The excretion of this material is effected largely through the agency of the kidneys, and hence attention was first attracted by those cases where kidney failure was the first and prominent symptom; but as our knowledge of pathology is increased, we see that the kidneys are but partially involved, and that we must look farther in order to understand the condition.

The mode of production of the toxins, or poisonous waste, which threatens the pregnant woman, is not clearly explained. The usual metabolic processes account for a portion of the material present, while a certain number of cases point strongly to an acute intoxication with the products of bacteria. While the chain of evidence in the latter is not complete, they offer a most suggestive explanation for conditions not hitherto understood. It is the purpose of the present paper to consider methods of clinical investigation which have been found useful in the diagnosis of toxæmia, to mention agencies proven efficient in treatment, and to report illustrative cases.

The clinical investigation of the action of the kidneys during pregnancy has received so much attention that we omit reference to methods of examination commonly in use. It is especially important that the amount of urine secreted be carefully estimated. The value of microscopic examination of urinary sediment can scarcely be overestimated in the study of

pregnant patients. In the cases furnishing a basis for this paper we have examined the urine to ascertain its specific gravity, color, reaction, the presence or absence of albumen, of glucose, lactose, and urea. The two constituents especially important I consider to be urea and sugar or acetone.

The literature of the subject furnishes abundant proof that solutions of urea may be injected into animals without causing convulsions; it is also true that a patient may endure a temporary suppression of urine which is almost complete, may escape convulsions, and recover; but the fact remains that the percentage of urea in the urine of the pregnant woman is a valuable indication of the efficiency of her excretion by means of the kidneys. It has been my custom to estimate the percentage of urea before and after labor, and wherever the percentage of urea has fallen below 1.5 we have found occasion to stimulate the patient's excretory processes, with a distinctly favorable result in all cases where symptoms of toxæmia were present.

In eighty-four cases in which a total of 664 examinations was made (*i. e.*, 331 before labor and 233 after parturition) the average percentage of urea was found to be 1.4 per cent. before labor. It was noticed that in the majority of cases the amount of urea increased after the delivery of the patient, the average being 1.9 per cent. On the other hand, marked diminution in the quantity of urea occurred only in cases either having or threatened with eclampsia, or manifesting symptoms of marked toxæmia.

Symptoms of toxæmia which called for active treatment were a gradual diminution in the excretions of the patient, both solid and liquid; diminution in appetite, with complaint of slight nausea or gastric distress; headache, a clammy skin, or, in some instances, a dry skin with deficient perspiration, and lassitude, mental and physical. The patients under observation were all expected to do light housework up to the time of labor, and hence a good opportunity was afforded to judge of the occurrence of lassitude.

In the study of these cases we have not regarded the presence or absence of serum albumen as indicating toxæmia. Where a microscopic examination of the urine showed the presence of casts and epithelium, the concurrent presence of albumen was, of course, significant; but where the microscope failed to find pathological elements, and albumen was present, it was not regarded of importance. In about one-half of the patients, sugar was present at irregular intervals during pregnancy and the puerperal state. It was found in a small quantity, and usually in the form of lactose, or glucose. The

presence of glucose and lactose bore no direct relation, so far as we could observe, to a toxic condition of the patient. Lactose was frequently more abundant as the secretion of milk became established. In cases of toxæmia, however, glucose was present, and possibly acetone would have developed had excretion not been freely stimulated.

Of especial interest in considering the question of toxæmia in the pregnant and puerperal state is the relation which bacteria and their products may bear to the pathological condition present.

The fact that the toxæmia of pregnancy results in a condition of marked anæmia after the puerperal period is illustrated by the case of a patient who suffered from persistently defective excretion during her pregnancy and after labor. Her child perished from pulmonary catarrh, and she herself was transferred to the medical wards of a hospital, where her condition of anæmia and kidney failure could receive more extended treatment.

It is quite possible for a condition of marked toxæmia to be present in which the examination of the urine fails to reveal either casts, albumen or marked deficiency in urea.

The treatment of the toxæmia of pregnancy must be instituted with reference to promoting the action of five excretory organs—namely, the kidney, liver, intestine, skin and lungs. The usual precaution of limiting the patient's diet largely to milk is of course indicated, but when nutrition suffers from the monotony and distastefulness of milk, there should be no hesitation in giving a more liberal diet to preserve the patient's strength. Fish and oysters, the white meat of fowls, fruits in abundance, and the more digestible sorts of bread, fresh and nutritious, form a usually acceptable diet. Pure water must be taken, but not in excess, as it is possible to seriously embarrass the kidneys by a sudden increase in the amount of fluid taken. Tea had better be omitted, while the diuretic effect of coffee is sometimes of value.

The literature of the subject affords abundant evidence that the liver has an important part in the production of this condition. However theory may dictate regarding treatment, I have no doubt of the practical advantages following the occasional use of calomel and soda to promote the action of the liver and kidneys as well. This should be followed by a purgative producing free and liquid stools. Salts of potassium should be avoided because of the irritant properties possessed by potassium when introduced into the fluids of the body. Colocynth is a convenient drug for this purpose. The bath and pack are the only efficient remedies which experience suggests in

promoting the excretory action of the skin. Where hot water bath is depressing, the warm bath, accompanied by the ingestion of a small quantity of hot water, is of decided value. This may well be taken just before retiring, thus avoiding the danger of exposure to cold following the bath. Light woollen should be worn next the skin in summer or winter. In addition to the bath, in severe cases the pack in sheets wrung out of hot water, or hot-air bath, is of the utmost value. Further, where a condition of moderate toxæmia exists, or continues a long time, yielding to treatment with difficulty, great benefit will be found from gentle massage; this should include the limbs and back, avoiding the abdomen. It may be given at night, followed by the bath, and often secures for the patient a refreshing sleep.

The importance of fresh air in abundance for these cases is sometimes overlooked; in summer, conditions for obtaining good air are very commonly present; but in winter it is necessary to attend to this point.

Especial attention is called to the diagnosis of toxæmia from the general condition of the patient's nervous system; a careful and experienced observer can detect a very different condition in the toxæmic patient from the simple nervousness and apprehension of the pregnant woman; the condition is that of intoxication varying in degree; thus we recall the case of a woman admitted to hospital and soon after taken with severe eclampsia; after a dangerous illness of several days she recovered, having been utterly oblivious of her coming to the hospital, and of her illness, until she was virtually convalescent. She had been as completely intoxicated as if drugged with alcohol or opium. An interesting manifestation of this condition is afforded by the peculiar mania often seen in eclamptic cases.

The clinical picture afforded by the toxæmic condition must impress itself upon the careful observer as one of an intoxication showing itself by a disordered nervous system. We regard as cardinal symptoms of this condition the nervous phenomena already described, and diminished excretion. Upon these a diagnosis is to be made and the treatment of the case conducted. As regards the cardinal principles of treatment, we are opposed to the use of sedatives and narcotics; the patient's need is for elimination, and that must be secured as promptly as possible. The sedative effect of eliminative treatment is often remarkable; thus in the case of a physician's wife already described, she asserted that the most enjoyable features, physically, of her life during the last weeks of her pregnancy, were the warm bath taken at evening

and the few hours of refreshing sleep which followed. She also recognized the distinct benefit obtained by free purgation.

In the face of threatened eclampsia, our duty lies in prompt emptying of the uterus. Here an anæsthetic is often requisite at the time of labor, and my preference is for chloroform. The danger of delay in emptying the uterus is too familiar to mention, and when the patient's symptoms are not relieved by thorough elimination from the intestines, skin, liver, and lungs, the time for delay is certainly past, and we shall not be faithful to our duty if we allow a patient to go further in this dangerous condition. The recent literature of eclampsia contains a striking evidence of the value of terminating the pregnancy by dilating the uterus and removing the fœtus. If this be done under anæsthesia and with antiseptic precautions, the results are sufficiently good to command a careful attention for this method of treatment. In my experience, it is a mistake to employ drugs which tend to depress the patient and favor the occurrence of œdema; such is pilocarpine. When stimulation is needed, I have seen benefit from alcohol, digitalis, and in cases of eclampsia when labor had terminated and exhaustion threatened, in the hypodermatic use of strychnia.—*The American Journal of the Medical Sciences.—Braithwaite's Retrospect.*

Don't Need It.—The following interesting reply was returned to a circular letter soliciting subscriptions to a certain medical journal:

Faribault, Minn., Feb. 22, 1894.

Your copy of the ———— Journal come, and the letter to ————, askin' me to send fifty cens and git it for a year. I don't nead no jurnals. When I git a tuff case I go off inter sum secrit plase and tell the lord all about it and wate for him ter put inter my minde what ter do. That's bettern jurnals and skylopedes and such. If we hed more lord trusting doctors and less colleges weed fare better. The lord noes morn all the doctors and if we go to him for our noledge it will be bettern jurnals.

Fraternally in the lord,

A Christian Doctor.

P. S.—I have practist medisen morn fifty years. Yore ken publish this letter ef you wanter.—*Northwestern Lancet.—Courier-Record of Medicine.*

MORTUARY REPORT OF NEW ORLEANS.

FOR JULY, 1894.

CAUSE.	*White.....*	*Colored..*	*Male.....*	*Female....*	*Adults ....*	*Children.*	*Total .....*
Fever, Yellow							
" Malarial (unclassified)	5	4	5	4	5	4	9
" Intermittent	1		1		1		1
" Remittent		3	2	1	3		3
" Congestive	6	1	2	5	6	1	7
" Typho	3	2	1	4	2	3	5
" Typhoid or Enteric	4	1	1	4	5		5
" Puerperal							
Leprosy							
Small Pox							
Measles							
Diphtheria	3	1	2	2		4	4
Whooping Cough	1	1	1	1		2	2
Meningitis	7	3	6	4		10	10
Pneumonia	7	7	7	7	11	3	14
Bronchitis	5	3	4	4	5	3	8
Consumption	23	32	30	25	53	2	55
Cancer	11	2	3	10	13		13
Congestion of Brain	10		3	7	5	5	10
Bright's Disease (Nephritis)	11	10	12	9	21		21
Diarrhœa (Enteritis)	24	8	21	11	8	24	32
Cholera Infantum	7	12	5	14		19	19
Dysentery	3	1	3	1	4		4
Debility, General	1			1	1		1
" Senile	12	6	8	10	18		18
" Infantile	3	2	2	3		5	5
All other causes	175	104	168	111	171	108	276
TOTAL	322	203	287	238	332	193	525

Still-born Children—White, 22; colored, 20; total, 42.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 20.94; colored, 33.61; total, 24.80.

L. F. FINNEY, M. D.,
Chief Sanitary Inspector.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

HYSTERICAL DEAFNESS AND OTALGIA CURED BY HYPNOTIC SUGGESTION.

BY DR. WILL H. WOODS, NEW ORLEANS.

Hypno-thearpy has of late years made very rapid advances, with the most flattering results, in the treatment of those symptoms of pseudo-pathological conditions of purely psychical origin. It is well worth trying in any case complaining of those vague symptoms for which no cause can be found.

The chief difficulty and objection to its use lies in our ignorance of its production and rationale.

To my mind, it is only a matter of a few years before it will take its proper place in our treatment of all mental and allied diseases.

According to Richer there are four main varieties of hypnotism, which merge very closely one into the other in various ways.

1. The condition where the limbs retain the position they are given passively.

2. The condition of suggestion—that state in which hallucinations may be artificially produced. Subjects in this state eat and drink bitter stuffs, asserting they are sweet; saw wood or murder friends with pleasure, at the suggestion of the operator.

3. Lethargy—that condition in which the muscles and

nerves are completely relaxed, but extremely sensitive; very often the slightest touch upon a nerve will cause long and violent spasm of all the muscles supplied in its distribution.

4. The sonambulistic condition, which may be produced by rubbing the patient's scalp, blowing gently upon his forehead and closed eye-lids, and in various other ways, at the option of the operator. The patient in the hypnotic state answers the questions and does the bidding of the operator automatically as the operator wills.

According to Dr. H. C. Wood, of Philadelphia, the only unpleasant effects from the hypnotic state occur in those patients in which the hysteria is deeply situated in an original lack in the nervous system. He further recommends it more especially in accidental hysterical manifestations. Dr. Wood seems to think the cure in these cases is due more to the mental impressions than to any suggestion made to the patient while in the hypnotic state.

In May last I was consulted by Mr. N., a young man nineteen years old, for deafness in his right ear, which he said was getting worse every day.

I examined the ear very thoroughly, but could find no cause for the deafness. The membrana tympani was in perfect condition, and while he suffered from a slight attack of naso-pharyngeal catarrh, there were no symptoms of its involving the middle ear, except the increasing deafness. The eustachian tube seemed freely open.

As I have already stated, on the most careful and thorough examination, I could find no organic changes to account for the deafness.

I asked him very particularly if he had the slightest pain in or around the ear, entirely ignorant of even the slightest suspicion of hysteria, and he replied that he had not experienced the slightest pain in the parts.

On close questioning, I elicited the following history: Nineteen years of age; both parents living and healthy; but the father has a melancholic, unsettled temperament, with an insatiable desire to move from one place to another.

Both he and the father are deep brunettes of the Italian type, though the father is French.

The mother is an American by birth so far as he knows.

When the patient, who is the oldest of three sons, was 14 years old he broke his leg, and for nearly a year was confined to his bed. During his confinement he says he grew to manhood. He is very irritable, and though desirous to be considered very self-willed and full of determination, is on the contrary very weak.

He has tried several kinds of business, but in all failed to give satisfaction either to himself or his employers. Appetite ordinarily good—keeps regular hours; takes a drink occasionally, but not to excess; bowels inclined to constipation; and has never abused himself since a man or indulged in sexual intercourse to excess. Never had gonorrhœa or syphilis.

Says his only bad habit was smoking; some days smoking as many as fifty cigarettes, with an occasional cigar.

I examined his heart, which, excepting some slight irregularity, due to the nicotine in his system, was all right.

On his first visit I syringed his ear with a weak warm boric acid solution, and after drying the parts well with absorbent cotton, I politzerized him very thoroughly, and requested his return in two days.

At the expiration of two days he returned with not only no improvement in his deafness, but furthermore complained of severe pains in and around the ear.

On this time as before I made a very careful examination, but could find nothing to account for either the deafness or the pains. Finding no cause for his trouble, and after becoming better acquainted with my patient, I began to suspect hysteria.

I again politzerized him, and also applied the faradic current over his ear, the back and side of his neck and head, and ordered a mixture of bromide of potash, tinct. of valerian and arsenic, to be taken internally, with instructions to return in two or three days. The next day I made a point to meet his brother and inquire more particularly into the character and habits of my patient. He informed me that no one could sleep with him on account of his extreme restlessness and mumblings; that his moroseness had of late made him very disagreeable both to his friends, of whom he had very few, and his relations.

I could obtain no further information than is already told

in these pages. On the next visit my patient greeted me with the not very encouraging remark that he was not only no better, but, if anything, he was worse. By this time I had fully made up my mind as to the trouble being purely a hysterical manifestation, and resolved to treat it as such. I determined to hypnotize him if possible without further delay. After explaining very thoroughly what I intended doing, and impressing upon him that the absolute requisite to my success would be his perfect willingness to be hypnotized, and all resignation of any inhibitory volition, he argeed to the conditions very willingly, saying he would rather die than suffer any longer. I placed him my in large operating chair, and instructed him to fix and keep his gaze upon the section-board in the centre of my window shutter; which direction was at an angle of 45 degrees from the horizontal. I now took up my position in front and a little to the right of my patient, and instructed him if his eyes burned on long gazing to gently close them for a second and relieve the unpleasant effects of the dryness due to exposure.

After maintaining this position for about eight minutes, and speaking to him occasionally in very gentle tones, I now began making passes with both hands before his eyes. In about eighteen minutes his gaze assumed a vacant stare; at this stage I ceased my talking, but kept up the movements in front of his face, using only one hand at a time as one or the other became tired. In about twenty-three minutes he closed his eyes. I then discontinued my passes in front of his eyes, but quietly kept my position at his side. In twenty-five minutes, I noticed a slight twitching of his muscles, accompanied by very shallow respiration, He next straightened out, took a deep inspiration and settled back in the chair, breathing perfectly natural twenty-eight minutes after I began the operation.

I now saw that from all appearances my patient was thoroughly hypnotized, for his limbs would retain any position I would give them—first condition of Richer. I then began talking to him again, telling him that I was going to operate on his ear, and cure his trouble; that after the operation he would suffer no more from deafness or pain in the ear—that when he recovered consciousness he would be perfectly well. This I repeated to him several times very gently. He remained per-

fectly quiet, with occasional twitchings of the facial muscles. I now asked this question, which answers itself. "*You hear* me and *believe* what *I* say to be *true*, that I will cure you, that you are already much improved."

Although there was not the slightest sign of consciousness, yet I could see that his sensorium was receiving the impressions of my suggestions. This I was anxious to produce, for I believe with Dr. Wood that the result is due not to the suggestion, but to the mental impression received while in the hypnotic state.

I kept him in this condition for ten minutes, when I brought him to consciousness by wiping his face with a cold wet towel and commanding him to wake up; that he had slept long enough. In a few minutes he was himself again. I then said to him: "You have no more pain or deafness, have you?" With a hearty exclamation he asserted that he had not the vestige of his old trouble left. He was very profuse in his thanks and wanted to know what sort of an operation I had performed that could relieve him so readily. After a few moments' conversation I dismissed him with orders to return in a week and let me see how he was doing; but if he had the slightest feeling of uneasiness in the ear, to return immediately. This remark I afterward repented for as a mistake; for it implied a possible return of the trouble.

On the third day after the operation he returned, complaining of his same old trouble, but considerably modified. I told him that in order to assure perfect success the operation would have to be repeated once or twice more. This was another mistake, implying a recurrence. He readily consented to a second trial, saying that he had the utmost confidence in my treatment, as thus far I had afforded him so much relief. This time I repeated the operation as before, but it required only sixteen minutes to thoroughly hypnotize him. After return of consciousness he remarked, as at the first sitting, that he felt perfectly well. In two days after the second operation he was back again, with the same symptoms as before.

I now recalled my previous instructions, and saw in them the suggestion of the possibility of a return. Having been thus twice confronted with the result of my errors, I determined not

to make another mistake. On this occasion I produced the hypnotic state as before, except that, instead of passes before the eyes, I practised gentle massage over the brow and temples. In eleven minutes my patient was thoroughly unconscious. While in this state I suggested the utter impossibility of a return of the ear symptoms—that henceforth he would be perfectly healthy, and that this was positively the last operation.

On return to consciousness, I had quite a long talk with him, and advised a country residence and plenty of out-door exercise for at least two months. I examined the ear again, and told him that there was now not the slightest chance of the disease returning, that I had removed the cause, and that it would be impossible to have a renewal of the trouble, since the cause was gone. He left under the impression that the third time was the charm. The patient is at this writing, nearly three months later, enjoying the very best of health without ever having had the slightest return of his ear trouble.

From a close study of this case I note the following interesting facts: 1. That the time required to produce the hypnotic state in the same patient becomes less after each successive operation; more especially after the first sitting; in other words, the ability to resign one's will becomes easier with practice. 2. That on his first visit he evinced no symptoms of the otalgia; which manifestation showed itself on his next visit, after my questioning him in regard to such a condition. 3. That my failure to effect a cure after the first and second operation was due entirely to my error in intimating a possible return; which error was plainly proven after the third trial, for at that time I emphasized the absolute impossibility of a return, with the most beautiful consequent success. Therefore, in treating these cases we must be very guarded in our instructions, weighing carefully every expression before uttering for any possible misconstruction; and by all means in no manner intimate otherwise than success as a result; else our work and pains will be for naught.

PROGRESS OF SURGERY.*

BY R. S. HILL, M. D., MONTGOMERY, ALABAMA.

Mr. President and Gentlemen—Realizing the almost unparalleled rapidity with which surgery has advanced, it was with diffidence that I entered upon the preparation of this article. If I were inclined to undertake the task, the time at our disposal would forbid a discussion of the many recent advancements in the art of surgery. I have therefore concluded to confine my remarks to a review of the progress of some of its fundamental principles. By pursuing this course I believe I will be carrying out the intent of the appointment, if not its wording.

I have availed myself of the privilege allowed every one who undertakes a review, and have drawn largely on many of the articles written on the different divisions of the subject.

The growth of animals is due to the formation of cells being greater than their decay, and for the maintenance of their full development, both anatomically and physiologically, it is essential that the regeneration of the varieties of cells should be at least equivalent to the deaths. It is therefore evident that at no time in life is there an absence of physiological cell activity, and that cells exist naturally in every tissue at all times in four states: 1st, Growth; 2d, Reproduction; 3d, Impair; and 4th, Death.

In which conditions they are also present in perfectly aseptic wounds, where repair takes place, in almost if not identically the same manner, by the fixed cells, in which normal physiological growth occurs, though the process is necessarily more active. This being true I think we are justifiable, from a scientific standpoint, in applying the term simple regeneration or repair to the changes occurring in these lesions—leaving inflammatory regeneration or repair to those injuries invaded by pathogenic micro-organisms.

John Hunter, more than a century ago, said "primary adhesion takes place without inflammation," and the "American Text Book of Surgery" says "bacteria are found in all kinds of true inflammation." To inflammatory wounds I invite your

*Read before the Alabama Medical Association.

attention, and as pathogenic organisms here play a secondary part only to the tissue it is very appropriate for us, first, briefly to consider them.

In 1675 Antony van Leeuwenhoek, a linen draper and lens grinder, "perfected a lens" with which he discovered the presence of these minute organisms. Spallanzani, in 1769, endeavored to prove by experiment that bacteria were the cause, and not, as was generally supposed, the result of fermentation, but scientists refused to accept his conclusions. Guy Lussac (1777) maintained that oxygen was the causative agent, as the presence of air was thought necessary for its occurrence. Here the question rested until Schulz, in 1836, and Schwann, in 1837, independent of each other, demonstrated beyond a doubt that oxygen was not responsible for these phenomena, and at the same time revived the theory of bacterial origin, which was verified, in 1857, by Pasteur, who went farther and showed that the different varieties of fermentation and putrefaction had their specific germs.

Pathogenic germs are minute "vegetable organisms" or cells composed principally of myco-protein (Nencki), an "albuminoid substance," and are classified in three varieties—the cocci, bacilli and spirillia.

The cocci are generally believed to multiply by fission, the bacilli usually by spores, but sometimes by fission. The credit of having first demonstrated the presence of spores is due to Ferdinand Cohn, which he did in the present half of this century, though in 1762 Bonnet suggested the possibility of the presence of "germs or their eggs," with an increased resisting power. The spirilla play little or no part in surgery, and therefore a further reference to them would be beyond the domain of this article.

There are four constituents of a suppurating wound which notably attract our attention—the fixed cells, leucocytes, pyogenic organisms and liquor sanguinis.

The fixed cells perform the same function here as in aseptic wounds, viz.: repair the tissue, principally by karyokinesis. Thiersch advanced the theory that they possess stored up proliferating energy held in abeyance by mutual pressure, which, when the pressure is removed by breach of continuity,

is released, and they are enabled to repair the loss. I hardly think this is a sufficient explanation; I had rather believe the increased blood supply to the parts acts as a stimulant to the fixed cells.

In considering the leucocytes and bacteria three questions arise:

1. Why are they concentrated in an injured area? Buchner has extracted from some of the bacteria, by the use of potassium hydroxid, a substance identical with that existing in necrotic tissue and which exerts the same "powerful positive chemotaxic" influence on leucocytes. I apply the term chemotaxis to the repelling or attracting of leucocytes or bacteria. On the other hand, Gabritcheoski has proven that there are bacteria with a repelling chemotaxis for leucocytes, therefore we conclude that the necrotic tissue is more responsible for their presence than the bacteria. In our efforts to harmonize the results of the experiments of Buchner and Gabritcheoski, would we be justifiable in advancing the theory that when bacteria attract leucocytes they are either dead or in a dying condition, otherwise they would exert a negative chemotaxis or none at all?

Possibly a similar theory would be admissible in considering the attracting and repelling effects of leucocytes on bacteria. Klein maintains, in the words of Hemmeter, "that just as certain chemical substances of the bacteria attract or repel leucocytes, so also certain chemical substances present in the cells and tissues attract or repel bacteria."

I have ventured above to suggest the possibility, if not the probability, of the healthy leucocytes and the healthy bacteria exerting a repelling chemotaxis on each other. Then how are the leucocytes brought in a sufficiently intimate relationship with the bacteria so as to be disabled by them?

There are two explanations: the ptomaines formed by the bacteria may affect the leucocytes just as they do the fixed cells, or the positive or attracting chemotaxis, produced by the necrotic tissue on the leucocytes, may be more powerful than the negative or repelling chemotaxis existing between healthy leucocytes and healthy bacteria. Impaired circulation is another cause of their localization.

2. What are the effects of bacteria?

In addition to forming the soluble toxic substances known as ptomaines, they attack directly two of the most essential constituents of the animal body, viz.: proteids or albuminoids and the carbo-hydrates or amyloids. It has also been proven that they frequently multiply in the substance of the leucocytes, which I believe to be the case only when the vital powers of the leucocytes are impaired, as they naturally possess a substance inimical to bacteria; whether they secrete this substance or are endowed with it by their parent cell has not, as far as I know, been positively determined.

3. What part is taken by the leucocytes?

They are by many "regarded as scavengers which appropriate to themselves the broken-down material," including disabled bacteria, "which result from inflammation and thus aid in the process of repair." Buchner is of the opinion that bacteria are always affected or destroyed by "tissue juice" before being taken up by the leucocytes, which opinion is partially supported by the fact that when they attract leucocytes they possess a substance identical with that found in necrotic tissue. In a letter to me Dr. Hemmeter says: "It is believed that it is not the bacteria themselves that exert the phenomena of chemotaxis, but certain chemical substances which are produced by their presence in the tissue and tissue juices." If Buchner is correct, why then do the leucocytes possess a constituent or nuclein inimical to bacteria? This question may possibly be answered by saying, nature realizing, as scavengers, that they must pervade parts contaminated by bacteria, provided them with this substance, or the faculty of secreting it, for self-protection.

We now come to the last constituent or liquor sanguinis. There can be no doubt that this fluid is germicidal. Pekelharing inserted parchments containing anthrax spores under the skin of rabbits. The spores were soon destroyed, evidently by some soluble constituent of the blood, as the leucocytes could not have gained access to them. If the blood plasma is taken from an animal immune to a disease and injected into one susceptible, it will prevent the development of the microorganism in the latter. This power also belongs not, however,

to the same extent, to the lymph, and according to Sanarelli even after the loss of its corpuscles. Vaughan is of the opinion that nucleins secreted by, in his own language, "the bone marrow, the thyroid and thymus glands and possibly other glandular organs" are responsible for the germicidal influence of the blood.

We have long since learned to attribute suppuration to the presence of bacteria. The "American Text Book of Surgery" says: "Clinically we do not meet with examples of acute suppuration without the introduction of pyogenic cocci into the system. Foreign bodies or mechanical irritation can not produce pus without the aid of bacteria." Now that we have assumed the position that germs are destroyed by substances or nucleins in the liquor sanguinis, how are we to account for suppuration in an area not exposed to any external condition by which the bacteria could gain access? In looking for an explanation we naturally turn to the subject of natural immunity, whose principle is the possession by the blood of antitoxins or nucleins capable of destroying the germs. We have learned from Lazarus and Weyl that the chicken is naturally immune to anthrax, though it can be made susceptible. The healthy adult person is not very liable to contract scarlet fever; on the other hand if he is not healthy, that is to say, if the nuclein forming parts of the body are unable to perform their normal physiological functions, he is quite susceptible to the disease, the blood becoming a means of disseminating the germs throughout the system instead of preventing their entrance. Is not this equally true with all pathogenic microbes? But why then is there not suppuration in all poorly nourished bodies? The answer, in my opinion, is that though the germs may be present in the circulation, they are in an attenuated state, and hence the weakened fluid, while it acts as a carrier, is at the same time capable of preventing their development, unless they find a fertile field, termed by Senn, locus minoris resistentiæ. Lister proved that blood, even when out of the body, resisted the action of microbes in an attenuated condition. Grohman showed that the virulence of anthrax bacilli was weakened by blood plasma.

Abrasions of the skin or of the mucous membrane are said

to be the means by which they gain access to the blood, and in case of an inability of that fluid to destroy them, they are eliminated by the kidneys, intestines, etc.

The presence of air being regarded as productive of decomposition, we find Magatus as early as 1516 advising against the changing of dressings oftener than was positively necessary. At the same time others were endeavoring to get rid of it by resorting to the occlusion method and operating subcutaneously. In 1839 Langenbeck advocated irrigation or continuous immersion of the wounded parts, and in 1871 Lister introduced the spray. As we now know the epidermis of the surgeon, or assistants or patient and the instruments, etc., are responsible for infection, and not the air, it is possible in hospital practice, and should be our aim in all cases, to provide, before the operation is commenced, against the introduction of germs in the wound, which may be accomplished by the use of antiseptics.

Though Chaumette, in 1815, and Bayard, in 1846, with others realized a beneficial influence from coal tar on suppurating surfaces, it was left for Corne and Demeux, in 1859, to suggest the principle upon which it acted. Calvert is said to have been one of the first to attribute its beneficial effects to carbolic acid, which was more generally recognized after the publication, in 1863, of Lemaire's article; but to Sir Joseph Lister is the honor justly due for having, in 1865, introduced carbolic acid into surgery and popularized it as an antiseptic. After occupying a pre-eminent position for many years it was largely superseded by corrosive sublimate, which was first used by von Bergman in 1878, but gained popularity principally through the advocacy of the distinguished German investigator, Robert Koch. Sternberg claims that 1-5 of 1 per cent. (one in 500) solution of carbolic acid will prevent the development of bacteria; and ½ of 1 per cent. (one in 200) solution will destroy "septic cocci." The solutions in general use vary from 2 to 5 per cent.; but Koch does not think that anything less than 10 per cent. is a sure disinfectant, as anthrax spores can live in a 4 per cent. solution three days. It should, however, be remembered that the spore-forming bacteria are the most resistant of all germs, and that they rarely

play a part in surgery. Occasionally the surgeon has to deal with the tubercle bacilli, which, according to the experiments of M. Yersin, a 5 per cent. solution of phenol will destroy in thirty seconds and a 1 per cent in one minute. Professor Crookshank placed sputum containing tubercle bacilli, the spores of which are more resistant than when the bacilli are cultivated in glycerine jelly, as were those experimented with by Yersin, in six test tubes. In three of them he poured five times as much of the 5 per cent. solution of carbolic acid as there was sputum; allowing it to remain in one of the tubes one minute, in another one hour, and in the third four hours. Then pouring the supernatant liquid off, the precipitates were thoroughly washed with sterilized water to get rid of the carbolic acid.

The other three specimens were treated in the same manner with sterilized water, but no carbolic acid was used. The precipitates of these six specimens were injected under the skin of the thigh of the same number of guinea pigs. The inguinal glands of those "inoculated with the sputum which had not been acted on with carbolic acid at all" became very much enlarged, "showing the tubercle had developed there." The glands of the one inoculated with the sputum which had been acted on with carbolic acid for one minute, showed very slight enlargements; while the glands of the other two were not enlarged at all. These experiments seem to prove that the agent is a powerful antiseptic. Lister claims that it "penetrates deeply into" the substance of the epidermis, for which it has great affinity, and mixes with fatty matter; but Koch tells us that when mixed with fat it has little or no antiseptic properties. One great objection, however, to carbolic acid when used on raw surfaces is that it produces a profuse discharge, which may retard union by separating the opposing surfaces, or pass through the dressing, furnishing an excellent communication with the bacteria without.

Bichloride of mercury, one in forty thousand (1 in 40,000), is said to be capable of preventing the development of septic cocci; one in one thousand (1 in 1000) will destroy anthrax spores in ten minutes; one in five hundred (1 in 500) to one in one thousand (1 in 1000) has been used in cleansing

the hands, etc.; one in two thousand (1 in 2000) to one in ten thousand (1 in 10,000) is used in operations. Drs. Abbott and McCormick, of Johns Hopkins University, after experimenting with it, claim, on account of its readily combining with albumen and albuminous bodies, that it has practically, so far as surgery is concerned, little germicidal properties, not even as much as a 7 per cent. solution of acetic acid. Lister tells us that it will not mix with fatty matter, nor has it any affinity for the epidermis, which makes it inferior to carbolic acid as a cleansing agent for the skin.

I have endeavored briefly to place before you the properties of the two most important antiseptics in general use, and you are at liberty to draw your own conclusions as to their relative value; but I am rather inclined to pin my faith to carbolic acid. I know the question arises, why has there been such progress in operative surgery during the reign of bichloride of mercury? While it is not my desire to depreciate the value of this antiseptic, still I would attribute the success largely to the acquisition of a clearer idea of the avenues of infection, and the means resorted to in conection with corrosive sublimate solution to prevent it. If it were not for the profuse discharge following the use of carbolic acid, I would be disposed to regard it as an ideal antiseptic, and after all this discharge is incomparable in its bad effects to what occurs from lesions where the acid should be and is not used.

All antiseptics injure cell life, thereby retarding repair; hence they should not be used on an aseptic surface. It is in these wounds that water which has been previously boiled is resorted to with marked success. Bantock was one of the first to advocate the use of simple boiled water in the peritoneal cavity. "The American Text Book of the Theory and Practice of Medicine," says "exposure to hot air at 220 degrees F. for one hour will kill micrococci and bacilli, but not spores, which, however, may be killed by five hours' exposure to this temperature. One hour's exposure to a dry heat of 245 degrees F. will kill the spores."

The discovery of the inability of the pyogenic germs to resist heat has been used to advantage in cleansing instruments, etc.

Before a knowledge of bacteriology and its connection with surgery was obtained, the dressings for wounds were of many varieties, but all, save the dry methods, have gone their way to the "limbo prepared for the childlike fancies of untaught minds."

Sir Joseph Lister, in 1865, used lint soaked in a 10 per cent. solution of carbolic acid; afterward he used two layers of this material separated by oil paper; the inner one was prepared with the pure acid, and very little larger than the wound—the outer was prepared in a solution of the acid and much larger than the inner. He next tried carbolized lint covered with a plaster made of carbolic acid, oil and chalk. In 1868, two layers each of lint and plaster were alternately applied, commencing with the former. During the same year, the irritative properties of the acid being recognized, a protective was placed next to the skin, and with an exception in the method of preparing the plaster, gutta percha and shellac being used, this dressing remained until 1871, when the carbolized gauze was introduced into surgery. But the volatility of the acid made it necessary, in order to obtain uniformity of strength, that resin should be used in the preparation of the gauze, which rendered it almost if not entirely devoid of the power of absorption, thus depriving it of one of the most important properties of a good dressing. Experiencing several disappointments with this and other dressings, Lister turned his attention to the bichloride of mercury, which was being extensively used by the Germans, mixed with pine wood dust or "wood wool," and after investigating its antiseptic properties he prepared the sublimate gauze, containing 1 per cent. of the salt.

It was observed that "oil silk dipped in 1 to 500 solution of corrosive sublimate" and applied to the skin produced considerable irritation, whereas the gauze only occasionally gave trouble, and even then it was incomparable to that of the former. We readily understand the result in the first instance, but let us consider somewhat in detail the consequences of the use of the gauze, for here you have the salt in a powdered state, some of which must be dissolved before irritation is produced, and if the fluid is derived from the exudation of the wound the non-irritating albuminate of mercury will be formed

so long as there is albumen present, and only when it is exhausted will the sublimate enter the solution as such. The sweat may be sufficient to partially moisten the gauze, thereby bringing into solution a part of its contained salt. Lister's experiments with the albuminate, formed by the albumen in the exudation and the corrosive sublimate in the gauze, showed that while it is not soluble in water it is in an excess of serum and is an antiseptic, though probably not as reliable as the double chloride of mercury. These facts induced him to use blood serum in the preparation of his gauze, but he found this very disagreeable and the results not as satisfactory as were anticipated; for occasionally, where there was much discharge, albuminate was dissolved and carried to the lower surface of the dressing, thus exposing a part and through it the entire wound to infection. Therefore, this agent was abandoned for the double cyanide of zinc and mercury, the advantages of which are claimed to be, that while it is an efficient antiseptic, it is not irritating, nor is it so soluble as to be washed completely from any part of the gauze by the wound exudation; nor does its presence interfere with absorption.

On account of being a weak germicide, its antiseptic virtue depending upon the inhibitory power, it is necessary that some other agent be used, either before or during the preparation of the gauze, to destroy the micro-organisms contained therein. For this purpose carbolic acid is recommended, which is certainly preferable to the bichloride of mercury, as it will evaporate and leave the double cyanide unaltered, whereas the bichloride will form a triple compound, which is not only irritating but a very weak germicide. Starch was used to hold the salt in the meshes of the gauze until Lister, by accident, discovered that coloring matter, particularly the "aniline dye, hydro-chlorate of mauveine," answered this purpose better, and furthermore its color showed whether or not the preparation was uniformly distributed throughout the gauze.

Iodoform was used first as an antiseptic, in 1880, by Mosetig-Moorhof of Vienna. Steadily growing in favor it is now, probably, more extensively used in the form of powder and gauze than any other antiseptic; the general opinion is that it does not destroy germs; the experiments of Behring

and DeRuyter proving that it robs them of their destructive powers, which according to the former is accomplished by producing a chemical change in the ptomaines. Within the last few years Sanger and Braus have taken exception to the statement, so far as it applies to the bacilli of tuberculosis and anthrax, that iodoform does not destroy bacteria. Troje and Tangls' experiments prove that the vapor of iodoform killed the bacilli of tuberculosis after fifty days, and "cultures when mixed with the powder in proportion of one part to fifteen were rendered innocuous in eight days." "A 10 per cent. mixture of iodoform and oil or glycerine" is more efficacious than either vapor or powder. It produces little or no irritation; nor does it interfere with absorption by the dressing. Though volatile, it is insoluble in the exudation, and is said to stimulate the tissue to repair. As in the preparation of the double cyanide of zinc and mercury gauze, it is advisable to use some other antiseptic to destroy the micro-organisms already in the gauze, for at most iodoform is a very weak or limited germicide.

PSORIASIS—A CLINICAL LECTURE.

By WILLIAM S. GOTTHEIL, M. D., Dermatologist to the Lebanon Hospital, the Northwestern and the German West Side Dispensaries, New York.

Gentlemen—The patients that I show you to-day are classical examples of a common disease, and are on that account perhaps more worthy of our attention than those rarer affections that but very seldom come to the notice of the general practitioner. And they will serve me as a text in calling your attention to certain new and very eligible forms of treatment which have been developed in the last few years, and which have largely superseded the older methods.

The first patient is an excellent example of a general guttate psoriasis, psoriasis universalis, in a female 33 years of age. She has had the malady, to her own recollection, ever since her fifth year—the usual history of these cases—though it does occur *de novo* even in advanced age, and the defective memory and carelessness of our dispensary cases often lead them to claim that present in their first attack. It has been constantly present, in some degree, ever since the patient can recollect;

at times almost disappearing, and then, under the influences that we are ignorant of, advancing and spreading over the body until it occupies areas as extensive as that which you see affected at the present time. Her entire body is covered with white, scaly spots, looking very much as if some molten waxy material had been liberally sprinkled on it with a large brush. Each such spot consists of a heaped-up mass of silvery epidermic scales, which can be readily removed with the finger nail; leaving a reddish, slightly elevated papule behind, at points of which the torn tops of the papillæ of the skin show as minute bleeding points. The scales are lamellæ of fused epidermic cells, and their peculiar silvery appearance is due to presence of air between them.

The entire surface of the body is sprinkled with these guttæ; but in certain localities, and more especially on the flexor surfaces of the joints of the extremities, they are most abundant, and from more or less continuous scaly masses with but little healthy skin between them. So abundant is this scaling that the patient scatters a cloud of minute lamellæ around her as she moves when stripped, and several large handfuls can be gotten from her clothing. The epidermic proliferation is quite rapid in these cases; but it is only on parts not often washed that it occurs to so great an extent as you see. On the face and hands, where soap and water have not been quite so sparingly employed, there are no scales at all; only the low reddish papules mark the existence of the disease. It is important to note this fact, for in some cases where the disease is not extensive the patients have removed all the scales before they come and the apparent absence of so characteristic a symptom may lead to an error in diagnosis. The scalp is covered with more or less confluent psoriatic patches, but the palms and soles are free.

The second case is a male of about the same age, with a very different but just as characteristic disease appearance. Only the knees and elbows are affected. Each of these surfaces, where the skin is naturally thicker and rougher than on other portions of the body, shows a more or less extensive infiltrated patch, with apparently but little scaling, but scraping reveals the characteristic lamellæ. Here also the condition has existed for many years; the scaly infiltrated patches

disappear at times, especially during the hot weather, but they always reappear during the winter.

Both patients are evidently in good health; in fact, most psoriatic patients are robust, even when the disease is very extensive. Its cause is absolutely unknown. Heredity certainly plays no part in it. It may be of parasitic origin, but no microbe has been found. The epidermophyton described by Langer is certainly not the etiological factor.

It is to the treatment of these cases, however, that I would call your special attention. Internal medication is of the greatest importance, especially in cases so extensive as our first one. Arsenic, so little employed by the dermatologist, is undoubtedly of use here, German opinion to the contrary notwithstanding. But it must be taken regularly, and in large doses and for a long time. It is therefore better given in the pill form. Ichthyol is also beneficial, and we will put both patients on a combination of the two, using a modification of the famous "Asiatic pill," which is a favorite formula of mine:

℞. Ammom. Sulph-Ichthyolat.....ʒ ii.
Acid. Arseniosi.....gr. iii.
Pulv. Pip. Nig.....ϑ iii.
Pulv. Glyc. Nad.....ϑ iii.
M. Ft. pil. no. 90.

One of these is to be taken three times daily, after meals. The amount of arsenic may be gradually increased until a maximum dose of 1-20th or 1-15th grain is attained.

Local treatment, however, is of even greater importance than internal medication. It is essential in all cases, and is especially important when the face and hands are affected with the disease. The deformity must be removed as rapidly as possible.

Our local treatment will differ in the two cases. In the first and general one it should be systematic and thorough, and it may be summarized as follows:

1. Daily general bath of hot water and green soap. The scales must be entirely cleaned off from the surface of the body to permit the application of topical remedies.

2. After leaving the bath, paint each spot with:

℞ Ol. Rusci, or Ol. Cadini.....ʒ ii.
Spirit. Vini.....
Ætheris.....a a ʒ iv.
Spirit. Lavandulæ.....gtt. x.

3. Return to the bath and remain there half an hour.

4. After drying, paint each spot with the following:

℞ Anthrarobin, or Chrysarobin..... 1 part.
Liquor gutta purchæ, or Flexible Collodion..... 10 parts.

Anthrarobin is not quite so effective as chrysarobin, but it is safer. It may be employed over the entire body, whilst chrysophanic acid must not be used on the face or hands; not only on account of the very dark staining of the skin that it causes, but also on account of the likelihood of its causing the disagreeable and even dangerous "chrysarobin conjunctivitis." If we decide to use it, the ungt. hydrargyri ammoniati must be employed on the face and hands.

By this means the inuncting of the whole body with disagreeable ointments, the use of cloths and bandages, and all the nasty paraphernalia of the regular ointment treatment is avoided; and the clothing, inevitably ruined in the older methods, is in no way harmed. The evaporation of the etherial and alcoholic vehicles of the remedies leaves them in a thin and hard layer on the skin, and their penetration in these solutions is at least as great as when suspended in the ordinary fatty vehicles.

The local treatment of the second case is more simple. We now possess in the unguenta extensa, collamplastra, and the plaster mulls, a variety of very eligible preparations which are really ointments spread on plaster and so combined with the basis that they can be used and applied like ordinary rubber plaster. We simply take some of the 10 per cent. chrysarobin plaster mull, cut a piece to accurately cover the psoriatic spots, and apply them. They fit closely to the parts, need no cloths or bandages to hold them in place, do not soil the clothing, and, above all, limit the action of the remedy exactly to the diseased area. We will direct the patient to renew these plasters daily until the patches are cured.

Shall we succeed in curing our cases? Yes, for the time being. Every spot of psoriasis will disappear from the skin, but others will come back in time to take their place.

Congenital Malposition of Right Kidney.

A CASE OF CONGENITAL MALPOSITION OF THE KIDNEY.

BY AUGUSTUS McSHANE, M. D.,
ASSISTANT DEMONSTRATOR OF ANATOMY, MEDICAL DEPARTMENT, TULANE UNIVERSITY OF LOUISIANA.

In the course of my connection with the Medical College, about eight hundred subjects have passed through the dissecting room. In all this material only one instance of congenital malposition of the kidney was observed. The following notes, kindly taken by Mr. T. F. Richardson, will give a good idea of the position and relations of the kidney. The photograph, from which the accompanying engraving was made, was taken in the dissecting room in a not very favorable light, with the subject resting on the edge of a dissecting table and steadied by a student. The outlines are not very sharp, but the position of the organ is well shown:

The organ is situated over the promontory of the sacrum, below the fourth lumbar vertebra and below the bifurcation of the aorta, resting on the right common iliac and right external and internal iliac arteries and upon the psoas magnus and parvus. It is in contact with the right ileo-colic artery and completely overlapped and covered by the cæcum and ascending colon. It is covered by peritoneum on its anterior surface and held down on its posterior surface to the lumbar vertebræ and sacrum by loose cellulo-adipose tissue. Its upper extremity touches the bifurcation of the aorta; its lower extremity extends to the right sacro-iliac joint, reaching a point on a level with the sacro-sciatic notches.

Its shape is ovoidal; its dimensions are four and one-quarter (4¼) inches in length, two and one-half (2½) in breadth, and one and one-quarter (1¼) in thickness; its long axis being parallel with the median line. It projects into the true pelvis, being moulded to its brim.

The anterior surface is unequally divided into two parts by a deep furrow which lodges an anomalous renal artery. This vessel arises from the aorta at the point of origin of the right common iliac and passes obliquely downward to be distributed to the kidney in the above named furrow. Two other renal arteries are found: one arising from the aorta one-half inch above its bifur-

cation, crosses over left common iliac artery, and is distributed in the hilum, to which it descends; the other artery arises from the bifurcation of the right common iliac and also enters at the hilum.

The hilum is situated on the left antero-lateral aspect of the mass; it presents the normal appearance and exhibits the ureter in its usual position, passing vertically downward to its destination.

A renal vein is given off at the hilum; it passes upward and to the left over the left common iliac artery and empties into the left common iliac vein. This seems to be the only emulgent vein.

The right supra-renal capsule is found 1¾ inches to the right of the cœliac axis, its middle corresponding to the interval between the twelfth dorsal and first lumbar vertebræ. It measures 2¼ inches on its long axis, which is perpendicular and parallel with the vertebral column.

The left kidney appears normal in position, size and shape.

Congenital malpositions of the kidney are rare. Roberts, in his "Urinary and Renal Diseases," says: "A kidney congenitally displaced usually deviates more or less from its natural configuration, and is associated with malposition of some portion of the large intestine and peritoneum. The renal artery and ureter also necessarily deviate less or more from their natural distribution. The corresponding suprarenal capsule does not (in congenital cases) follow the kidney into its abnormal situation, but invariably occupies its usual place in the lumbar region. By far the most common, and also the most practically important, of the fixed misplacements of the kidney are those in which the organ lies within or upon the brim of the pelvis. In these cases the misplaced organ is liable to be felt during life, either through the abdominal wall or the vagina, and to be mistaken for some other object; if it lie within the pelvis it may embarrass and complicate parturition. In twenty-one cases of congenital malposition of the kidney which I have been able to collect and compare, the abnormality was in every instance confined to one kidney, and the left kidney was much more commonly affected than the right (left fifteen, right six). The most frequent of these deviations was to find the kidney lying

obliquely on the sacro-iliac synchondrosis. In some of the cases the organ was fixed beside the uterus or tranversely between the rectum and bladder, or across the prominence of the sacrum."

Proceedings of Societies.

QUARTERLY MEETING OF THE AVOYELLES PARISH MEDICAL SOCIETY.

MANSURA, La., July 12, 1894.

House was called to order by the president, Dr. Ducoté.

Were present: Dr. Ducoté, president; Drs. Arnold, Wille, Couvillion and Tarleton.

Dr. Couvillion was elected secretary pro tem.

Moved by Dr. Couvillion that the rules be suspended, and Drs. J. S. Branch, S. D. Porter and E. Regard be made members of the society.

Dr. C. J. Ducoté was unanimously re-elected president.

The president (Dr. Ducoté) having called Dr. Branch to the chair, nominated Dr. Tarleton for vice president. Carried unanimously.

Dr. Regard was elected secretary and treasurer.

By Dr. Branch—Moved that the Fee Bill be not discussed, as Dr. Buck, the originator of it, was absent. Carried.

By Dr. Arnold—That the secretary write Dr. Buck that his bill relating to fees was laid over for action at succeeding meeting, for the reason that he was absent. Carried.

A letter from Dr. Savant to the president was read, and at Dr. Arnold's suggestion the president will express the society's sympathy in a letter to Dr. Savant.

Dr. Roy's resignation was read, and, on motion of Dr. Branch, accepted.

All members present paid their annual dues of $1.

Dr. Arnold reported verbally an interesting case of supposed aneurism of the thoracic aorta, which resulted fatally in hæmorrhage.

Dr. Wille's paper on malarial hæmaturia, comprising six cases of recovery, was very acceptable, and provoked a good deal of discussion.

Dr. Couvillion very kindly read his report of the case of purpura hæmorrhagica for the benefit of those who were

not present the last meeting, and reported further on this interesting case.

Dr. Ducoté read a lengthy and very interesting paper, entitled "A Case of Compression of the Brain."

Dr. Branch's invitation to the society to meet at Evergreen was accepted with thanks.

There being no further business before the society the meeting adjourned to meet at Evergreen, Thursday, October 4, 1894.

EMIL REGARD, *Secretary*.

A SUCCESSFUL CÆSARIAN SECTION.

Performed by W. S. THORNE, M. D., Physician to St. Mary's Hospital.

Mrs. A., age 28; native of Italy; primipara. Patient entered St. Mary's Hospital May 24, having been in labor since May 20. An examination revealed a typical flat pelvis, the antero-posterior diameter of the superior strait about 1¾ inches. The sacrum was crowded down into the pelvis. The superior strait was filled by the right arm of the child. The bag of waters had ruptured two days before.

An operation was advised, and after the patient had been etherized an incision was made in the median line extending from a point two inches above the symphysis pubis to within an inch of the ensiform cartilage. The uterus was drawn out, a rubber band wound about the cervix, and before the former was opened it was allowed to fall back upon a hot antiseptic towel. The uterus was opened, the child and placenta delivered, and both the uterus and wall closed, the former with sterilized silk, the latter with a continuous catgut suture for the peritoneum and silk for the muscle and skin.

The position of the child was as follows: Occiput anterior in the right iliac fossa, the right arm filling up the contracted superior strait. The placenta was at its normal site.

Patient was freely stimulated and hypodermics of ergotine administered. From the time of the operation to this, the eighth day, the patient has had no unfavorable symptoms, the temperature never having risen above 100 deg. and the bowels performing their function from the second day. The child, a ten-pound boy, is well and alive.—*Pacific Medical Journal.*

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DR. F. W. PARHAM. DR. R. MATAS. DR. A. W. De ROALDES

DR. H. W. BLANC. DR. WILL H. WOODS.

Editorial Articles.

DEATH OF DR. A. B. MILES.

It is again our painful duty to record the death of one of the most prominent and esteemed members of our medical body. On August 5, 1894, at 11:30 A. M., Prof. Albert B. Miles passed to his last rest.

A man cut down in the fullness of his strength, and when he had just reached the height of his ambition—such, in brief, was the spectacle that shocked his many friends, and made them think of the uncertainty of earthly things. Though his illness had been known for some time, still no one thought that a frame so strong and well-tempered could fail to breast the storm that assailed it; and when the sad news was finally given to the world it was felt that a calamity had overtaken us.

The career of Dr. Miles was a most interesting one. Coming here almost a stranger he, by his perseverance, intelligence and devotion to duty, earned his way to the highest and most coveted position in the medical profession of our State. He was born in Prattville, Ala., May 18, 1852. When he was 5 years old his family moved to El Dorado, Ark., where his

father engaged in farming. His early education was obtained in that town. His father died in 1864 and his mother in 1865; and the care of the boy devolved upon his maternal uncle, who fulfilled his trust well. At the age of 16 young Miles entered Gordon Institute in southern Arkansas, and two years later entered the University of Virginia, where he spent two years.

From boyhood his ambition had always been to follow medicine, his uncle's profession. At the close of his academic studies, in 1872, he came to New Orleans, and took his first step on the road that led to fame. As it was his intention to practise in the Southwest, he wisely selected the school and hospital that would best equip him with the means of dealing with the diseases of the locality which was to be the scene of his future labors. He matriculated at the session of 1872–73, at the close of which he was appointed one of the resident students of the Charity Hospital. Before matriculating he was very fortunate in having as preceptor Dr. Samuel Logan, who was Professor of Anatomy in the old School of Medicine, and afterward Professor of Anatomy and, later, Professor of Surgery inthe Medical Department of the University of Louisiana. The friendship begun in student days lasted until the final summons came to Dr. Logan. It was largely due to Dr. Logan's friendship that Dr. Miles succeeded so well in life, and it was always most pleasantly referred to by him.

Mr. Miles served two years (the maximum term) as a resident student, during which time he served under Doctors Logan and Hawthorn, who have made for themselves large places in the history of the medical college. He graduated in medicine on March 16, 1875, being the valedictorian of his class. He remained in New Orleans. Two months after graduation he was made Demonstrator of Anatomy in the Medical Department of the University of Louisiana, which position he filled most creditably for ten years. During this time he was Chief of Clinic for Prof. Samuel Logan. In April, 1876, he became one of the visiting surgeons of the Charity Hospital, and one year after he was elected Assistant House Surgeon, which position he occupied for four years and three months. In 1880, he was made acting surgeon of the Hotel Dieu during the illness of Dr. P. C. Boyer, who was one of

Dr. Miles' staunch friends. On the death of Dr. Boyer, March 12, 1881, Dr. Miles became his successor as surgeon of the Hotel Dieu. On June 22, 1882, he was elected House Surgeon of the Charity Hospital, which position he continued to fill until his death. His hospital record may be summarized thus:

Student, from 1872 to 1875; chief of surgical clinic, from 1875 to 1881; demonstrator of anatomy, from 1875 up to 1885; in the Hotel Dieu, as acting physician, from 1880 to 1881; physician in charge, from 1881 to 1882; consulting physician, from 1882 to the time of his death; in the Charity Hospital, as resident student, from 1873 to 1875; visiting physician, from 1876 to 1877; assistant house surgeon, from 1877 to 1881; house surgeon, from 1882 to the time of his death.

In 1886, he became Professor of Materia Medica and Therapeutics in the Medical Department of Tulane University of Louisiana. On the death of Dr. Samuel Logan, Professor of Surgery, in January, 1893, Dr. Miles successfully discharged the duties of his own chair and those of the chair of surgery for the unexpired portion of the session during which Dr. Logan died. After the close of the session, Dr. Miles was transferred permanently to the chair of surgery, for which he had amply displayed his fitness during the crisis that arose at the death of Dr. Logan. During the past session of the college he endeared himself to his class, and sustained the reputation earned by eighteen years of careful and intelligent surgical work. It is sad, indeed, to reflect that he was cut down just as he had reached the height of his ambition and had entered upon the task of imparting to others the ripe fruits of a vast experience, and broad and conscientious study.

Dr. Miles' interest in affairs touching the profession was always active. He played a prominent part in medical organization, having been a member of the old New Orleans Medical and Surgical Association, the Orleans Parish Medical Society, the Louisiana State Medical Society, the American Medical Association, the Southern Surgical and Gynecological Association and the American Surgical Association. He was president of the Louisiana State Medical Society for the year ending in May, 1894; and it was during his administration that

the Medical Practice Bill, after many trying vicissitudes, was passed by the Legislature.

The death of Dr. Miles created a large gap in our community. He impressed people with whom he came in contact in a quiet yet forcible manner. He knew his strength and its limitations. He never spoke without knowing his subject thoroughly, whether in the lecture-room or elsewhere; and he was never called upon to retract a rash statement. Dr. Miles most strikingly exemplified a fact which over-zealous young surgeons are apt to forget, namely, that the basis of a successful surgeon is good judgment, to which the mechanical part of surgery is but the servant. Dr. Miles' good sense and clear judgment were always prominent in everything he undertook. He never made an incision without having a very clear idea of what he was doing and what he expected to accomplish. Dr. Miles never performed an unnecessary operation, and rarely erred in his calculations of the results of an operation. It must not be supposed that he slighted mechanical proficiency; on the contrary, he was, in this branch of his art, as painstaking and conscientious as in every other. He gave to the poorest as well as to the richest patient the best that modern antisepsis and modern technique offered. But it was always felt that the mind that guided the steps of an operation had weighed every factor in the problem, and had decided that what was being done was the best that could be done. This soundness of judgment came to be known speedily among the laity; and to them, Dr. Miles was always as a medical court of final appeal.

Dr. Miles' contributions to surgical literature were quite numerous, but scattered among a large number of publications. He had not published any systematic text-book on surgery, but his numerous papers proved the value of the literary material in him, which, had he been spared longer as professor of surgery, might have assumed the shape of a book that would have been a credit to New Orleans surgical talent. But, unfortunately, at the very moment when fortune had showered him with favors, and held out promise of many more, the Grim Messenger came and, with his sable mantle, turned a bright day into an endless night.

THE BOARD OF MEDICAL EXAMINERS.

The two State Boards of Medical Examiners appointed by Governor Foster, in accordance with the provisions of the bill passed at the last session of the Legislature, are composed as follows: (1) On the part of the regular profession—Drs. Thos. S. Kennedy and H. S. Cocram, of New Orleans; Dr. Thos. Y. Aby, of Monroe, Dr. Frank J. Kearney, of Plaquemine, and Dr. Feltus R. Barrow, of Baton Rouge; (2) on the part of the homœopaths—Drs. E. A. Murphy, C. R. Mayer, J. W. Belden, Robt. A. Bailey, and Gayle Aiken.

At the meeting of the regular board, held August 31, 1894, the following organization was effected: Dr. T. S. Kennedy, president; Dr. T. Y. Aby, vice president; Dr. H. S. Cocram, secretary and treasurer. The law requires that the tenure of membership shall be as follows: one for two years, one for three years, one for four years, one for five years, and one for six years. Ballots were cast with the following result: Dr. Kearney, two years; Dr. Kennedy, three years; Dr. Cocram, four years; Dr. Aby, five years; Dr. Barrow, six years.

The semi-annual meetings of the board will be held on the first Monday in May, and the first Monday in November, of each year.

The secretary was instructed to address communications to all physicians in good standing throughout the State, requesting them to forward as soon as possible to the board, or any member thereof, any violation of the law that may come under their observation, or to which their attention is drawn. In this connection the board decided to cause the act in full, as promulgated, to be published in the New Orleans papers, marked copies of which will be forwarded to some physician in every parish, requesting him to see that everyone in anywise interested in the act, or to whom it may apply, may be made fully cognizant of what it contains.

The board deemed it advisable to call the attention of midwives, as early as possible, to the sections that are applicable to them. The most important of these is, in parishes other than East Baton Rouge, unless they shall have registered within ninety days from the promulgation of the act (August 2), that they will be required to appear before the board for examination.

The orderly, business-like manner in which the board has settled down to work gives promise of good fruits. Our State has for many years been the dumping ground for the medical refuse of other States; but that condition of affairs will be no longer continued. The board will accomplish a vast amount of good in the future, but, of course, it can not undo the harm that has already been done—it can not be a retroactive body. There is a long future before us, which is of more importance than a dead past; and, while we should not expect the board to correct evils that exist by right of prior occupation, we certainly look forward with a feeling of confidence in the ever increasing future usefulness of a board composed of active and intelligent men who enjoy the confidence and esteem of their confrères.

Abstracts, Extracts and Annotations.

SURGERY.

THE PRACTICAL OUTCOME OF RECENT RESEARCHES ON CANCER.

By HERBERT SNOW, M. D., LOND., ETC., Surgeon to the Cancer Hospital.

By the kind invitation of the editors, I am enabled to lay before the busy practitioner who has scant time for perusal of elaborate monographs a succinct compendium of some recently published investigations in the very wide field of malignant disease. My work of necessity deals largely with questions which might (provisionally only) be styled questions of pure pathology: these are here left out of sight. But I have long felt convinced that no efficient or scientific treatment of cancer is possible without the very closest attention to pathological details; that in our modern schools pathology is too often widely separated from her twin sisters, surgery and medicine, with which she should rightly walk hand in hand. The present paper embodies this view, and deals solely with points which, based on pathological considerations, yet involve lessons and results of directly practical import.

Foremost of these ranks that insidious infection of the bonemarrow by mammary carcinoma as a routine occurrence,

which I believe I am fully entitled to claim as an original discovery. It was indeed previously known to science that in a very small percentage (not more than 2.5 per cent.) of the total cases of breast-carcinoma there were manifested certain peculiar lesions of the osseous system, involving spontaneous fracture of long bones, and marked deformity, or even tumor-formation, in the others. But the real nature of the condition was in no wise understood. Unless an actual tumor existed, it was vaguely referred to *fragilitas ossium*, or absorption of lime-salts, a consequence of chronic wasting illness. An article by Mr. Stephen Paget (*Lancet*, March 23, 1889) well illustrates the extent of our knowledge under this head, previously to the publication of my researches on *The Reappearance of Cancer and its Prevention* (Churchills, 1890); *Lancet*, March, 1891; *British Medical Journal*, March, 1892. I therein sought to demonstrate not only that these mysterious phenomena are due to the actual deposit of cancer-cells within the marrow, but, further, that the morbid state which underlies them, the actual infection of this tissue, takes place in the great majority of breast-cases—if not, indeed, eventually in all. It is, however, "insidious;" that is to say, it does not produce tumor, fracture, or marked deformity, though still plainly recognizable by a special train of symptoms described then for the first time. The most striking is a slowly progressive prominence of the sternum (the "sternal symptom") at the junction of the upper and middle portions of that bone. The association of this with so-called rheumatic pains in the loins and scapulæ, deeply seated, of a gnawing character, and not referred to the articulations, is the pathognomonic sign of marrow-deposit. Occasionally there is a tenderness on pressure and slight apparent thickening of the humerus on the side of the disease, in its upper third. The mechanism whereby the carcinoma-cells gain access to the marrow is believed to be that of the lymphatic system. Ordinarily metastasis in the axillary lymph-glands take place in about two months from the inception of an average *carcinoma mammæ;* thence results blockage of the lymph-channels, and diversion of the stream in abnormal directions. Regurgitation takes place along the lymphatics passing from the medulla of the adjoining humerus, the bone ordinarily first attacked; thus the cells are deposited in the marrow of that bone. In the other direction, they reach, by the same means, the residual thymus, a lymphoid organ never wholly obliterated. Multiplying in the recesses of that structure they produce infiltration of the sternum, and thus follows the peculiar sternal condition, which attains a certain degree of prominence, and

then remains stationary, very rarely proceeding to tumor-formation. The transference in these two directions may to a certain extent be interfered with by section of the lymphatics, as by an operation; in those cases known as "atrophic," which permit life for ten to thirty years, it is always very long delayed, and can not with certainty be affirmed to occur at all. In all ordinary instances of breast-carcinoma not excised within two to three months, the phenomena are developed sooner or later, and are then eventually followed by passage of cell-particles into the general circulation, with visceral metastases. The average period at which, subsequently to operative removal of the mamma, marrow-symptoms appear is four to five years.

The fact explains the many mysteries which have always attended carcinoma of the mamma, over and above every other form of malignant growth, such as the great tendency to recur after excision, and to deposit long afterward in the opposite breast, and the supposed "constitutional" source. It is further useful in connection with the obscure bone-lesions known as *mollities ossium*, *osteitis deformans*, *osteo-porosis*, *etc.*, many of which have already been identified with the presence of a malignant deposit somewhere in the marrow. It is further highly suggestive in connection with the ascertained retirement, in birds, of the *hæmatophyllum malariæ*, to the same structure, the blood becoming perfectly free for the time; and it indicates that, as in cancer, the "resting-spores" of many similar obscure infective maladies may here find a more or less prolonged resting-place. In view of treatment, it is of importance as indicating the vital necessity of free operative removal within the two months period; and, when delay has taken place, the subsequent establishment, immediately after recovery from operation, of a permanent opium habit, whereby life may be almost indefinitely prolonged. Of several cases cursorily published as exemplars in the *British Medical Journal* of March 10, 1894, one was in good health, with no palpable cancer deposit, fourteen years after the date of operation; and in several others, with very intermitting adhesion to this treatment, there was no obvious recurrence for from four to five years.

On the question of frequency, of 150 cases of mammary carcinoma seen at an average date of about ten months from inception, ninety showed well-marked symptoms of marrow-infection at the first interview; twenty, the same in slighter degree; eight developed them under subsequent observation; leaving thirty in which the phenomena were absent or doubtful. On analysis, these latter fall into two categories—namely, "atrophic" cases of many years' duration; and, secondly,

cases too recent to betray symptoms. Thus, of these thirty, twelve were "atrophic," *i. e.* non-ulcerated, shriveled-up deposits, of duration from between two and three to sixteen years, five being more than nine years old when first encountered. Again, twelve of the thirty were of duration six weeks to six months, and four from six to twelve months. We may thus confidently affirm the presence of marrow-infection in eight out of ten cases, or 80 per cent.

Opium was of old styled the "Divi donum"—the special gift of the gods to men. In respect of no diseased condition is this more true than in reference of cancer; but, unfortunately, a great mistake is made by the profession in withholding this beneficent drug until pain compels its use. Such a practice is simply barbarous. In order to secure its full measure of benefits, the medicine must be resorted to in the very earliest stages, whenever it is evident that radical extirpation by surgical methods is impossible. Thus used, no therapeutic agent we possess so nearly approaches the ideal of cure by medicinal treatment; and that deplorable vantage-ground of cancer, the female sexual organs, most markedly demonstrates the fact. Give opium continuously to a woman, for example, in the early stages of mammary carcinoma, and ulceration will be long delayed, often wholly prevented; the case passing into the shriveled atrophic stage, compatible with many years of comfortable life. Opium and its derivative morphine appear to me to exert a strong inhibitive effect upon the growth of cancer-parenchyma; not, it is true, wholly terminating, but always materially checking, the cell-proliferation. In my published lecture *The Palliative Treatment of Incurable Cancer* is cited a case in which a large measure of apparent absorption of widely scattered skin-deposits was attained; but it would be too much to hope for such success under all conditions. The good effects of opium are to a certain extent scientifically comprehensible when taken in conjunction with the indisputable frequency of supervention of mammary or uterine cancer upon an epoch of keen mental distress and anxiety.

From the surgical point of view, I have endeavored to show that "cancer"—even the fatal breast-carcinoma, the popular type of the entire class—kills not nearly so much by its growth on the primary site as by the infective metastases thence emitted. Therefore it follows that a permanent cure can always be effected in the organs with which the operating surgeon is mainly concerned; provided that not only the part first diseased, but also the tissues ordinarily affected secondarily, be timeously removed, before the infection has extended

still further. Thus excision of a scirrhous breast *per se* is an almost futile proceeding, doing a little to prolong life and obviate suffering, but that is all. In order to *cure*, the axillary lymph-glands, infected as a rule within eight weeks of inception, must also be thoroughly cleared away; then, *provided always the operation takes place within the above marginal period*, we may well hope for lasting immunity. The same rule holds good with cancer of lips, tongue, *et hoc genus omne*. Further, the golden maxim of modern cancer-surgery is, or should be, to excise the dangerous lymph-glands in the always definite "infection-path," *before the relatively late stage of enlargement*. Increase in bulk does not take place until after several weeks of insidious cell-growth in the meshes of a lymph-gland, during which period more remote glands are receiving metastases, and cell-particles may also pass into the current of the general circulation.

Here comes in the importance of an accurate acquaintance with pathology; for malignant tumors which are developed from the connective tissues do not infect the adjacent chains of lymph-glands, and if the latter be plainly diseased an operation is all but useless. If with a sarcoma of the mamma, for example, be found enlarged axillary glands, this denotes infection of the blood-current, and implies that visceral deposits will also be present. Hence not only will excision of the glands be futile, but it will generally be unwise to touch surgically the primary new-growth. Or again, should the case be recent and the axilla healthy, no advantage will be gained by exposing the patient to the somewhat greater risk of an axillary dissection—a measure imperative, with a few exceptional instances, in early carcinoma.

In the same connection may be, for practical purposes, regarded my differentiation of the two kinds of melanotic cancer, hitherto almost universally blended under the common title "melanotic sarcoma." Melanotic disease of the skin arises, with rare exceptions, in the pigmented cells of the Malpighian rete. It is therefore a variety of epithelial cancer, and infects the neighboring lymph-glands exactly as does the common epithelioma. Arising, as it very frequently does, in a small pigmented wart of the extremities, the corollary follows that extirpation of the primary lesion is of little use; the main point is evacuation of the axillary contents in the one case, of the inguinal lymph-glands in the other, otherwise the metastases herein rapidly infect more distant glands, and finally the blood. *Per contra*, melanotic cancer of the eyeball arises in pigmented connective-tissue corpuscles, and is a true sarcoma, not attacking the lymph-glands unless it affects also the viscera simulta-

neously. This generalization, at least so far as regards the integumentary lesion, has been since independently corroborated by Unna, of Hamburg.

Bearing upon this point of differentiating sarcoma from carcinoma and from epithelioma (terms I am compelled on clinical grounds to dissociate) is the maxim for microscopical guidance, that, when a thin section of any doubtful tumor is so examined, the latter must on no account be regarded as a sarcoma, unless it consist wholly or in great part of spindle-cells arranged in bands. There is no such neoplasm as a "round-celled sarcoma;" the growths so regarded being either carcinomatous; or derived from the lymph-glands, with other adenoid tissues; or, lastly, referable to those obscure malignant developments of unobliterated vestigial remnants which in the work last cited I have ventured to erect into a separate class under the title "Blastomata" germ. In view of the measures of "anticipatory lymph-gland removal" above advocated, the necessity for precise recognition of the true pathological position of any suspicious growth is apparent.

I have endeavored, on clinical grounds, to lay down a strongly marked line of demarcation between the tumor-formations of the female mamma, at its different stages of development. and this carries with it significant indications for treatment. In this organ three periods demand recognition—the period of evolution, lasting from the age of fourteen to twenty-five; a middle, of functional activity; thirdly, a final, of devolution or obsolescence, from thirty-four onward. The age of functional prime is, broadly speaking, devoid of tendency to tumor-formation, and so is here disregarded. The evolution-stage is characterized by the "Fibroma of Adolescence," the well-known adenoid of young girls, a harmless local hypertrophy, commonly multiple, not associated with cysts, not running into cancer, yielding readily to treatment, and not demanding surgical interference in any shape. On the other hand, the devolution-period displays the "Cystic Fibroma," sometimes called "Adeno-fibroma," a lesion bearing some resemblance to the preceding, but always associated with cysts, not influenced by treatment, invariably merging in the end into some form of malignant disease and so demanding early extirpation. This final decadence of the organ, it is hardly necessary to remark, is also the time whereat carcinoma must almost exclusively be looked for; and when, therefore, an *a priori* anticipation of its manifestation under the influence of due exciting causes should tinge our diagnosis of every breast-tumor. Carcinoma is but one of several phases of aberration in the permanent degeneration of the female

breast, all brought about by mechanical or emotional interference with natural processes, and all finally passing into either carcinoma or sarcoma. A "lump in the breast," previously to twenty-five years, may often be "severely let alone;" one after thirty-five can be disregarded only by the surgeon who is reckless to the verge of criminality.

It has been already indicated that for the man who surgically aims at curing cancer—and in these days heavy blame should surely rest on him who does not either approach it with that admitted object, or else does not plainly discern the sources of his failure—prompt recognition is everything, or very nearly so. So in my published writings I have strenuously labored to enforce the vital consequence of *a priori* considerations. We have to remember the usual obvious exciting causes of each local variety; and we have also, from the environment, to consider who is or is not a likely subject for malignant disease. We shall thus, I think, seldom fail to arrive at that judicial diagnosis, which, in the earliest stages of diseases, must ever be based upon a careful comparison of probabilities, and which, moreover, should never lose sight of the fundamental maxim: *No cancer without a definite cause.—Practitioner, August, 1894.*

A CASE OF ELECTRIC SHOCK OF ONE THOUSAND VOLTS—INSENSIBILITY OF PATIENT TO PAIN—RECOVERY.

By P. S. Donnellan, M. D., L. R. C. S., of Philadelphia; Visiting Physician to St. Mary's Hospital.

I am indebted to the courtesy of my colleague, Dr. W. M. L. Coplin, for the privilege of reporting the following case.

On the 20th of April, 1894, J. R., aged 44 years, while engaged in repairing broken wires for the Bell Telephone Company, grasped the ends of a wire that had crossed an electric light wire conveying one thousand volts. He received the full force of the current through his body and was immediately rendered unconscious. He was thrown violently to the ground, and could not be released until the current was broken by a fellow lineman, who cut the wires apart with a hatchet.

The man was brought to St. Mary's Hospital at 11 A. M., within half an hour of the accident, and I saw him a few minutes after his admission. He was in profound coma, with pupils widely dilated and irresponsive to light, breathing stertorous, face pale, and bathed in perspiration. About ten minutes later he vomited, and then became wildly delirious, so that it required the combined efforts of three men to keep him in bed. He moaned and cried incoherently, and tonic and clonic con-

vulsions of a severe type succeeded each other with great rapidity. At this time we were unable to take his temperature on account of his extreme restlessness, but to the hand it appeared about normal. His respirations now lost their stertorous character, and became more of the Cheyne-Stokes variety, averaging about ten per minute for two hours after his admission. The pulse was 80 per minute, of high tension.

At 11:40 A. M. the man was given morphine, gr. ¼, by hypodermatic injection; and as the delirium and convulsions did not abate, the injection was repeated at 12:10 and soon afterward he gradually quieted down. About 1:30 P. M., as his respirations were alarmingly feeble, he was given strychnine, gr. $\frac{1}{30}$, by hypodermatic injection with excellent effect. At 2 P. M. he fell into an apparently normal sleep, from which he awoke four hours later, conscious, but slightly dazed, and feeling, as he expressed it, "tired and sore all over." On my visit to the hospital next morning I found that he had slept well during the night; his temperature was 98.8 deg., his pulse 72, his respiration 18. He complained of pain from a number of severe burns that he received during his contact with the wire. These burns were distributed irregularly in lines over the back, arms and legs, and evidently were caused by the intensity of the current, as the clothing which covered the affected areas showed no signs of having been scorched.

On questioning the patient as to the nature of the accident, he remembered perfectly all of the incidents of his morning's work up to the time when he grasped the wire that conveyed the shock through his body. After that moment he had not the slightest knowledge of what had occurred, and did not suffer the least pain until he awoke at 6 P. M., as already stated, to find himself in bed in the hospital.

The subsequent history of the case was uneventful. The patient made an excellent recovery.

In view of the employment of electricity by the authorities of certain States for the purpose of putting condemned criminals to death, the facts of the case related are of interest. Dr. J. W. Brown has published the history of an electrocution that took place at the prison at Auburn, N. Y., in which the condemned man received a voltage of 1260 through his body for fifty-six seconds, and, being apparently dead, he was released from the straps. To the horror of those present, he gasped for breath and began to revive. He was placed again in the chair, but the current would not work, so that he was removed to the hospital, and developed a train of symptoms precisely similar to those observed in the case that I have reported. A second contact an hour and fifteen minutes later

resulted in death in forty seconds. The case attracted great attention at the time, from the supposed agony of the condemned man, who was regarded by the newspapers as a hero on account of his sufferings. According to the statement of our patient, he was absolutely insensible to pain from the instant he received the shock; even the actual discharge of the current caused him no suffering; and were it not for the burning of his skin, he would not have been aware that he had met with an accident.

While it is to be regretted that the public is greatly exposed to accident from contact with currents of high tension on account of the almost universal employment of electricity as a motive and lighting power in our large cities, it seems to me that, so long as capital punishment has to be enforced as a legal penalty, the electric current, properly applied and of sufficient high tension, is the most humane agent yet devised for putting condemned criminals to death.—*Medical News.*

REPEATED PERFORATIONS OF THE CRICO-THYROID MEMBRANE FOR TREATMENT BY SPRAYS AND VAPORS IN THE LARNYX, AND INTERSTITIAL INTRA-PULMONARY INJECTIONS.

In this paper the author explained that, in order to convey a medicament directly into the deeper parts of the larnyx and the subglottic region, he was in the habit of perforating the crico-thyroid membrane with one thrust of an exploring needle (five centimetres long), and then injecting with a syringe (capacity five cubic centimetres) either pilocarpin or strychnine into the glottic tissues, which are especially swollen with tubercular œdema. As a topical modifier of diseased tissues, he employed arseniate of strychnine, hypersulphite and phosphate of soda, or a solution of pure carbolic acid in almond oil. For direct pulmonary absorption, he advised spraying the above-mentioned remedies into the trachea, or oily solutions of menthol, thymol, etc. Dr. Roussel assured the section that the perforatiou of the crico-thyroid membrane was not difficult, did not disturb the patient very much, and left no trace whatever.—*Journal of Laryngology, Rhinology and Otology.*

USE OF THE ABDOMINAL DRAINAGE-TUBE DETERMINED BY BACTERIOLOGICAL EXAMINATION.

By C. B. Penrosf, M. D., Academy of Surgery, Philadelphia, June, 1894.

The subject of drainage in abdominal surgery is one about which there is still great difference of opinion, though this

difference is much less than it was only a few years ago. Some operators never used drainage at all after any operations, and yet obtained exceedingly good results; while others obtained equal results, and their statistics showed that they employed drainage in a proportion of their cases, which varied, according to the individual taste of the operator, from 5 or 10 per cent. to 75 per cent.

The general advice given by the advocates of drainage was "when in doubt, drain." It was this element of doubt which caused the diversity of practice. The doubting operators drained the most. Everything which increases our knowledge in regard to the facts which determine drainage, diminishes our doubts and brings about more uniformity of practice.

We drain the abdomen for two reasons—for hæmorrhage and for septic material. As the experience of the operator increases and his skill in enucleating tumors becomes greater, he has less hæmorrhage, and, other things being equal, he drains less. Our method of controlling hæmorrhage in abdominal operations are better than they were a few years ago, the Trendelenburg posture enabling us to check bleeding from small vessels in the bottom of the pelvis, which before the introduction of this position required drainage. The operator who enucleates pelvic tumors with two fingers and closes the abdomen without seeing what he has done will necessarily have much more doubt in regard to hæmorrhage and will use the drainage tube much more frequently than the operator who inspects the field of enucleation before closing the abdomen.

The second reason for drainage is the septic character of the material which escapes or is retained in the abdomen. Knowledge in regard to this fact is of great value in deciding about drainage in any case.

During the past winter, at the University Hospital, an immediate bacteriological examination has been made of the contents of every tubal or ovarian tumor which was ruptured during removal. And the report of the pathologist in regard to the septic or the aseptic character of the contents has determined my decision in regard to the use of the drainage tube.

I, unfortunately, have no record of the total number of cases in which such examinations have been made; but the results have been exceedingly satisfactory, for out of a series of forty-six cœliotomies, in which drainage was used but three or four times for hæmorrhage, and only once because the microscope showed the material which escaped into the abdomen to be septic, there has been no case of peritonitis or sepsis.

The tubal contents in most cases of salpingitis are sterile. Shauta (Archiv. fur Gynecologie, 1893, No. 44) reports 192 cases of salpingitis, in 144 of which the contents of the tubes were sterile, in 33 there were gonococci, and in 15 streptococci or staphylococci.

Before I began to use this method of bacteriological examination I inserted a drainage tube in every case of tubal and ovarian abscess where the contents escaped in the peritoneum. Now I neither irrigate nor use the drainage tube unless the microscope shows these contents to be septic. The presence of gonococci in small numbers does not necessitate drainage. Recently the value of this bacteriological examination was illustrated by two cases operated on consecutively. Each woman had a tubo-ovarian abscess, caused by sepsis at labor. In each case the abscess was ruptured during removal, and the pelvis filled with pus. In the first the pus was found to be sterile, and I closed the abdomen without irrigation or drainage. In the second one pus contained streptococci and staphylococci and coli commune. Consequently the pelvis was thoroughly washed out and drained.

Both women recovered without peritonitis or sepsis, though the convalescence of the first was very much easier than that of the second.

The examinations have been made for me by Dr. Beyea. Cover-glass preparations of the material to be examined are made and are fixed in the flame of an alcohol lamp and stained with carbol-fuchsin. The microscopic examination is made with a Leitz $\frac{1}{12}$ immersion lens.

The examination is quickly and easily made, and I think that no operating room is completely equipped without facilities for such bacteriological examinations. They furnish us with scientific data from which we can determine the propriety of an important surgical procedure, which otherwise depends upon the whim or prejudice of the operator.—*Denver Med. Times.*

ANATOMY AND PATHOLOGY OF CARBUNCLE.

Nosologically, carbuncle is one of the acute suppurative inflammations of connective tissue, and hence is generically related to osteomyelitis, parenchymatous abscess, acute abscess and furuncle, as well as other suppurative diseases of the skin. The essential unity of the group is shown when we consider that all have a local origin, all involve the same histologic structure, and all are due to the invasion of the same pus coccus; or at least one of the pyogenic cocci. The differ-

ences in clinical history, the divergence in pathologic process, and the various modes of termination which are found when we compare the several diseases of this generic group with each other, are determined by differences in the anatomic structure of the region or organ concerned. These differences are quite as marked in the skin of different regions of the body when they are compared with each other as are those found in one organ when compared with other organs. These variations in histologic anatomy relate to thickness, density, toughness, elasticity, vascularity, the surrounding attachments, and the amount and mode of disposition of the adipose tissue.

It is these variations in histologic structure of the skin in different regions of the body, or the structural differences in the various strata of the skin in a given region, that determine whether in a given case of invasion by the pyogenic coccus we shall have a superficial pustulation, as impetigo; or a deeper and more extensive suppurative process, as furuncle; or a still more deeply seated and extensive one, as acute subcutaneous abscess, or carbuncle, as the case may be. When the coccus invades the mouth of the hair follicle, sebaceous gland, or sweat gland, and is arrested there, we have impetigo or one of its congeners. There is little tension, no stasis, no obstruction to the outflow of fluids or pus, and no slough.

When the deepest part of the epithelial structures of the follicle, or the sebaceous or sweat gland is invaded, a true furuncle is the result. Here there is a degree of obstruction to the outflow of fluids and pus on account of the depth and partial closure of the passageway. Hence we have tension, stasis, liquefication (pus), a limiting wall, and in the centre a cone-like slough, which consists of the remnants of the gland or follicle surrounded by as yet undigested connective tissue, especially fibres of the yellow elastic tissue.

But when the pus coccus passes beyond the epithelial layer of the skin into the cutis vera, the result is either an acute abscess, with its circumscribed cavity filled with digested connective tissue and inflammatory products, or, on the other hand, a carbuncle with its dense infiltrated mass of undigested connective tissue, without any circumscribed cavity. Whether it be an abscess or a carbuncle will depend on the histologic structure of the skin of the particular region invaded. The region of predilection of carbuncle is "the dense and fibrous integuments over the posterior median line of the body." The skin of this region is characterized by:

(1) Its extreme thickness, especially the relative thickness of the cutis vera.

(2) The aponeurotic-like density of the papillary layer, and its having few and small openings.

(3) The more direct connection of the subcutaneous tissue with the reticular part of the true skin, as one continuous structure.

(4) The number and size of the polygonal spaces found in the subcutaneous and reticular strata, caused by the diverging and interlacing bundles of dense and not easily dissolved fibrous tissue which make up the framework of these strata. These polygonal spaces are chiefly occupied by adipose tissue constituting the paniculus adiposus, and a delicate network of fine easily digested connective tissue.

(5) The presence of Warren's fat columns, extending from the adipose tissue below to the base of the follicles of the lanugo hairs above, with their horizontal branches.

(6) The dense, tendon-like, cone-shaped fibrous bundles which extend from the base of the adipose columns obliquely to be inserted into the muscular fascia beneath.

The pus coccus having passed down and invaded these tissues, a focus of inflammation is begun, and we have all the factors and conditions necessary for the production of a typical carbuncle. The delicate network of areolar adipose tissue succumbs readily and liquefies, and, as tension increases, pus is forced to the surface through the slender adipose columns into the hair follicles as the only means of escape. Thus we have the numerous pus points, and eventually the cribriform condition of the surface of the skin so characteristic of carbuncle. As tension increases, the inflammation is forced to extend laterally further and further from the original focus through the polygonal spaces and channels occupied by the rapidly dissolving delicate connective tissue and fat. Thus we have the characteristic peripheral extension and the broad, flat, indurated mass pressed between the still resisting dense papillary layer above and the muscular fascia beneath, which are still firmly bound together by the tendon-like cones of fibrous tissue. If now an incision be made into this mass, there would be seen the numerous small pus points and channels, but no proper pus cavity; both of which conditions are well-recognized features of carbuncle. The process continues until the skin over the original focus becomes necrotic and sloughs away, thus reducing the tension and peripheral pressure, and we have the first step toward the natural limitation of the disease. But if this infiltration and induration have already extended so far as not to be influenced by this diminution of tension, it will continue to spread indefinitely, or until the sloughing process following in its wake has gained on it sufficiently to entirely arrest the peripheral tension. After all the long-resisting, dense, fibrous parts described

above, which began to die with the skin, have yielded and sloughed piecemeal, we have the crater-like cavity coextensive with the indurated mass.

It is said that carbuncle may occur on any part of the body, but this is not correct of true typical carbuncle conforming to a fixed definition. We can not have a typical carbuncle without continued surgical tension in inflamed tissues, one part of which resists the digestion or liquefying process of suppuration longer than other parts.

Many cutaneous inflammations are loosely called carbuncles, when they are simply abscesses. But as the characteristic features of the carbuncular skin are only typical in certain regions of the body, and are found more or less perfectly or imperfectly in other regions, it will often happen that a suppurative inflammation of the skin and subcutaneous tissue can not be definitely classed either as a carbuncle, an abscess, or a furuncle; or that the characteristics of one predominate, while those of the others are present in some degree.—*Canadian Practitioner.*

MEDICINE.

THE CAUSE OF THE FEVER IN THE INFECTIOUS DISEASES.

Attention has more than once been recently directed to the laboratory of Professor Tizzoni, of Bologna, through the reports of the careful chemic and physiologic researches that have issued from it. One of the latest and most important of these deals with the origin of the fever present in the infectious diseases. The article is by Centanni, and the conclusions at which he arrives can not, when they have become generally known, fail to excite wide interest and to stimulate further investigation in neighboring fields.

Centanni's results, briefly stated, are these: The febrile phenomena occurring in the course of bacterial infection are the consequence of a general intoxication of the patient with a poison to which he gives the name *pyrotoxina bacterica*. This substance is formed within the bodies of the bacteria themselves, and is entirely distinct from such bacterial poisons as the ptomaines, enzymes, and toxalbumins. The pyrogenic substance is present in approximately constant amounts in all bacteria, both pathogenic and non-pathogenic, and, though found in the different bacterial species, appears to have in all the same chemic and physiologic properties.

In the preparation of the pyrotoxin, cultures of bacteria

several weeks old were first heated and afterward boiled; the dead bacteria were then filtered out, the filtrate concentrated and treated with alcohol, the resulting precipitate being afterward dissolved in distilled water and freed from albuminates by dialysis. By repetition of the alcoholic precipitation the substance was finally obtained in a comparatively pure state and dried over sulphuric acid.

The pyrotoxin thus prepared is a grayish white amorphous powder, soluble in water and in glycerine, but insoluble in strong alcohol, ether, or chloroform. It is not injured at the temperature of boiling water. It is very hygroscopic, rapidly becoming fluid when exposed to the air. By the application of various chemic tests it has been shown not to be an albuminoid substance; it differs from the bacterial proteins described by Buchner and the nucleins of Gamaleia, and can not be classed with the ptomaines or enzymes. In fact, it is a product that does not fall in any of the groups in which the chemic substances derived from bacteria are at the present time ordinarily arranged.

When injected into animals (rabbits) the pyrotoxin induces all the typical phenomena of a febrile reaction, just as is seen when bacteria themselves, or simple extracts from them, are thus employed. The height of the temperature is directly proportionate to the quantity of the poison administered. The older the cultures used the more intense is the pyrexia, and the steeper are the ascending and descending limbs of the temperature-curve. Marked emaciation, often leading to fatal marasmus, is a characteristic effect of the injections. Serious disturbances of digestion are produced, diarrhœa occurs regularly, and loss of appetite is equally constant. Acceleration of the pulse and respiration is frequently associated with marked dyspnœa. There is a very evident general weakness, so that the animal staggers when it attempts to rise. At autopsy the intestine is found filled with fluid fæces; the vessels are hyperemic; there are signs of excessive secretion of mucus, and Peyer's patches are markedly swollen. The local phenomena at the site of injection vary; if absorption be speedy there may be only œdema and hyperemia; if absorption be delayed, by enclosing the pyrotoxin in sterile glass tubes, suppuration may be set up.

Centanni separated the pyrotoxin from a large number of varieties of bacteria, both pathogenic and non-pathogenic, and, as we have said, as far as he was able to determine, the products obtained were in all cases, chemically and physiologically, essentially the same. This observation, he thinks, should not occasion surprise, but is rather what should have been ex-

pected, as there is plenty of evidence in the literature to prove that cultures of saprophytic bacteria, when injected in sufficient quantity, are capable of causing toxic phenomena, and even death of the animal; besides, the examples of sapremia in human beings produced by non-pathogenic bacteria are so well known that they need only be mentioned to be immediately recalled. As a matter of fact, the earliest studies of fever of bacterial origin, those of Traube and Gscheidlen, were conducted with the putrefactive bacteria, and the pyrogenin of Zuntz and Aronsohn was separated from cultures of the hay-bacillus.

The weakening of the virulence of pathogenic bacteria does not apparently lessen the amount of pyrotoxin in the bacterial bodies. In spore-bearing the extracts are less active than those made from cultures of the same organisms free from spores. Centanni is therefore of the opinion that the pyrogenic substance may be included within the spores, and thus be rendered inactive. The pyrotoxin certainly has its origin in the bodies of the bacteria, and most probably, as he thinks, in the chromatic substance. It is possible, he further suggests, that the extracts from certain bacteria owe their activity in the main to the presence of pyrotoxin, and he puts forward tuberculin as an example, inasmuch as it has been shown repeatedly that a typical tuberculin-reaction can be evoked in tuberculous animals by the injection of extracts of bacteria of different sorts, even of the non-pathogenic varieties.

Cultures of such organisms as the tetanus-bacillus, the influenza-bacillus, and the diphtheria-bacillus contain, of course, other and more important active principles, but the pyrotoxin is always present along with these. The other substances usually act very quickly and powerfully, and may even lead to a fatal termination before the fever-poison has accumulated in sufficient amount in the organism to make its physiologic action clearly manifest. But when these special powerful poisons are destroyed (by heat in the case of toxalbumins, or by extraction with alcohol in the case of ptomaines) the cultures, like those of all other bacteria, yield on injection the typical febrile phenomena.

That the results of the investigations just outlined, if confirmed, are significant, not alone as far as the general biology of bacteria is concerned, but also particularly with reference to the practical question of a rational therapy for the fever of infectious diseases, goes without saying. It will be necessary henceforth in pyrexia of bacterial origin to recognize a simple intoxication with a perfectly definite poison worthy of being grouped with the intoxications due to tetanotoxin, to ricin, or to abrin.

Inasmuch as it has been possible in many cases, by means of careful vaccination, to produce in animals immunity to the definite bacterial and other vegetable poisons, so that the serum of the animal rendered immune when injected into another animal is capable of nullifying the poison, or of causing the rapid disappearance of the symptoms even after they have once been set up, Centanni hoped that he would be able to prepare an antitoxin for this *pyrotoxina bacterica*, and moreover prophesied that, as the pyrotoxin was the same in all bacteria, when once the antitoxin of the fever-poison of a single bacterium had been found, it would be the antitoxin for all pyrexia of bacterial origin. Since his report was published, a second article (by Centanni and Bruschettini) has appeared, in which some experiments are recorded which permit an *a posteriori* view quite in accord with these *a priori* speculations.

Bruschettini, while experimenting with the influenza bacillus, had noticed that animals undergoing vaccination very soon failed to react to strong doses of the vaccine, and that the serum of such an animal would not only prevent infection with the influenza-bacillus, but was also capable of bringing about a rapid and considerable depression of the body-temperature. As Centanni's experiments had proved that the fever-poison of the influenza-bacillus was the same as that of other bacteria, what more likely than that the serum immunizing against this disease should prove just as efficacious in combating the fever called forth by infection with other bacteria. Centanni and Bruschettini therefore set to work to test the question in three ways, studying the effect of antitoxic serum (obtained from a sheep rendered immune from influenza) on fevers produced (1) by inoculation of pyrotoxin separated from bacteria, or of sterilized cultures; (2) through injection of living cultures of bacteria that set up local infection; and (3) through injection of some of the bacteria that can cause septicemia in rabbits. Space does not permit of a detailed description of the observations made, although many points of interest are recorded; it must suffice for the present to state that the evidence, as far as the work has gone, goes to support the main point sought to be proved—namely, that the serum of an animal vaccinated against the fever induced by one definite species of bacteria exercises its antitoxic influence also against the infection-fevers caused by the most different varieties of bacteria or their pyrotoxin. The influence of the serum is constant, powerful and continuous, and the protection lasts for at least some time (in one case for seven days).

All these results are most encouraging, but it must be confessed that the antipyrotoxin has not been isolated in purity,

that the experiments have all come from one laboratory, and hat they are not as yet very numerous. As the science of bacterial toxicology is much younger than that of bacteriology itself, and as we are only now freeing ourselves from too wide generalizations made in bacteriology, it is, above all things, necessary to guard against hasty conclusions and the acceptance, without mental reservation, of new views until they have been approved and confirmed by a number of workers. Nor is it justifiable, as more than one bitter experience has taught, to transfer the result of animal experiments *ohne weiteres* to the domain of human physiology and pathology. After we have satisfied ourselves of the constancy of the results in animals, numerous trials and observations by competent and trustworthy men in large hospitals must be made before general conclusions are warranted.—*Editorial, Medical News.*

EARLY ATTEMPTS TO ARREST THE RAVAGES OF SMALL-POX IN AMERICA.

By Mrs. H. M. Plunkett.

Now that the attention of the whole country is turned to the extensive outbreak of small-pox in Chicago, and the persistent though small one in New York, that refuses to become "stamped out" in spite of daily promises that it will be, a little picture of the condition of things before the introduction of the beneficent ameliorations of the disease, first, by *inoculation* for small-pox; second, by vaccination of the *arm-to-arm* kind, with its occasional mischiefs and risks, and thirdly, the safe and almost infallible protection of the pure bovine virus skilfully inserted, may not come amiss.

Cotton Mather was, as readers of colonial history know, a very prolific writer both on religious and medical themes. That he had a lofty ideal of the powers of the two vocations—theology and medicine—may be inferred from the passage in the "Magnalia," where, in writing of Thomas Thatcher, first minister of the Old South Church in Boston, and author of the first medical treatises printed in this country, Mather says: "Thatcher was a notable example of the *angelical conjunction* of clergyman and medical practitioner." Mather wrote a book called "The Angel of Bethesda;" it was never printed, but part of the manuscript is still in the possession of the American Antiquarian Society, and the only date that helps to fix its period is observations of a case November 14, 1724. His attention was certainly alert on medical matters, and he did not hesitate to incur obloquy and danger in defending medical ideas that he believed in.

In 1721 a fearful epidemic of small-pox had visited Boston, which then had a little less than 16,000 inhabitants. Nearly 1000 died. A little previous to this the news of the value of inoculation for small-pox, as brought to England from Turkey by Lady Mary Wortley Montagu, had found its way across the water; and Rev. Mr. Mather, being an omnivorous reader, had "taken it in." Very possibly the operation, which he calls a *wonderful practice*, gained additional favor in his eyes from an experience that will be best related in his own words. It will be remembered that Lady Mary found the practice to belong to the immemorial usages of the Orient. Popular tradition always fastens on China as the *fons et origo* of everything—it would not surprise us to learn of their claiming the phonograph yet—but in this case knowledge seems to have dwelt with some of the sons of Africa. Of course Rev. Mr. Mather had slaves; but from what province one could have come to be called a "Garamantee servant" modern maps do not reveal. Mather says: "I was first informed of this wonderful practice by a Garamantee servant of my own, long before I knew that any *Europeans* or *Asiaticks* had the least acquaintance with it, and some years before I was enriched with the communications of the learned *Foreigners*, whose accounts I found agreeing with what I received of my servant, when he showed me the scar of the wound made for the operation, and said that no person ever died of the *small-pox* in their country that had the courage to use it.

"I have since met a number of these Africkans, who all agree in one story: that in their country grandy-many dy of small-pox. But now they learn this way: People take juice of small-pox and cutty-skin and put in a drop; then by 'nd by a little sicky, sicky; then very few little things like small-pox; and nobody dy of it; and nobody have small-pox any more. Thus in Africa, where the poor creatures dy of small-pox like rotten sheep, a merciful God has taught them an infallible preservative. 'Tis a common practice, and attended with constant success."

It is no wonder that, when prayers were being asked in the churches at the rate of a hundred a day for persons sick of the loathsome disease, Mr. Mather got the doctors of Boston—then six in number—together, and recommended this practice. But behold—how the "prophets were stoned!" Of these six doctors, Zabdiel Boylston was the only one whose convictions were strong enough to result in action. On June 27, 1721, he inoculated his only son for small-pox, and afterward, in the course of the epidemic, 290 were inoculated, of whom six died—one-forty-eighth; while one-seventh of those

who had the disease in the natural way died, and of the survivors some were blind and some frightfully disfigured. Dr. Boylston was mobbed. Rev. Dr. Mather had a hand grenade thrown in at him through his window. An old lady of 80—Mrs. Crossland—has published some "reminiscences" this year, and, among other points of superiority for this century, calls attention to the fact that when she was a child nearly everybody had pock-pitted faces. This was in England. When the amelioration had a fair opportunity to demonstrate its value, America was far in advance of England in adopting it. It was soon found that a person passing through the inoculated disease gave it to others exactly as if it had been taken in the natural way; so very soon "inoculation houses" were established—we should say "sanatoria." It was sixty years after the knowledge of the practice was brought to England before it gained the royal sanction; and your conservative Englishman was not going to risk his life till royalty had set the example. A certain influential Frenchman told of its destructive work; and Edmund Massey, lecturer at St. Albans, preached against "sinfully endeavoring to alter the course of nature by presumptuous interposition, which he would leave to the atheist and the scoffer, the heathen and unbeliever." The sermon was reprinted in Boston, but, to their credit be it told, many New England preachers boldly advocated the practice in their pulpits. For much of the preceding credit must be given to the medical essay of Dr. O. W. Holmes, on the Medical Profession in Massachusetts. Now that the pestilent anti-vaccinists are trying to place themselves athwart the efforts making to stamp out small-pox in some parts of the country, it may not be amiss to quote this veteran practitioner and lecturer's estimate of vaccination. He says: "The third century of our medical history begins with the introduction of the second great medical discovery of modern times [that of Harvey being the first]—of all time up to that date, I may say. For the month of July, 1800, Dr. Benjamin Waterhouse, of Cambridge, Mass., submitted four of his own children to this new process."

Of course the history of the final triumph of the process is familiar to all; but comparatively few know the difficulties that beset its discoverer in its early days. Some of the London doctors undertook to vaccinate without having made themselves acquainted with Jenner's careful rules for its practice. They had no conception of the modern phrase "surgically clean," and when one of them inserted vaccine virus with a lancet that had been used a short time before to inoculate for small-pox, and had not been washed *ad interim*, and the subject had

small-pox instead of kine-pox, we see one of the dangers that was likely to disrate the operation. Jenner was finally forced to give up his pleasant Gloucestershire home and go to London to protect from mistaken friends and avowed enemies this child of his brain, this fruit of twenty-five years of study and observation. The germ theory of disease leads us to believe that there may have been cases in which undesirable diseases may have been occasionally introduced along with vaccine virus; but in this day, when pure, safe virus that has never passed through anything but the tissues of a healthy calf can be had, prepared with the utmost care by men who know how to carry out asepsis in its nicest minutiæ, the frantic hullaballoo made by a little knot of active ignoramuses is indeed pitiful.

Jenner did not escape jealousy, envy, and misrepresentation. He had sacrificed a lucrative country practice to come to London, and made inroads on his private fortune in supplying nearly all Europe and parts of Asia and Africa with vaccine matter, and Parliament had made him a grant which seems niggardly enough beside the benefit conferred, and some of his ardent friends moved to secure another. The story of the spread of his discovery to all parts of the civilized world reads like a fairy tale; but in his own country an anti-vaccination party sprang up which counted among its members some wealthy men who could print unlimited broadsides, books and pictures. This party charged that nearly every loathsome disease in the category had been imparted along with vaccine virus; that cow-pox left the system weakened and ready for the onset of almost every disease; that small-pox fortified and purified it! A rain of inaccurate and misleading pamphlets set in; the title of one was Poisoning by Act of Parliament. Some of the caricatures have survived till now. One flaming colored one represents a "Mighty and Horrible Monster." It had the horns of a bull, a tiger's claws, the hind hoofs of a horse, and the jaws of an alligator, yards apart, with doctors galore with their names down their backs emptying into its yawning chasm baskets and huge shovelfuls of infants, while the background is made up of funeral monuments and hearses. This creature is named "VACCINATION," and the body is written over with "plague," "leprosy," "Pandora's box," etc. It was seriously argued in Parliament that the people would become cow-faced, and that the desire to be vaccinated had become a craze. An astute adherent of Jenner replied that "if this bestial transformation did occur, it was a wonder that it had not already been brought about by eating roast beef and beefsteaks, and drinking milk." This argument carried weight, for the grant of money was made; but Jenner's professional pride was deeply wounded

because members of Parliament believed in the positive value of his work, but did not put enough faith in his scientific suggestions to put a stop by law to the dangerous practice of inoculation for small-pox. A statute was enacted to accomplish this in 1840, long after Jenner's death.

Gasquet justly says: "We who live in that security from the horrible and universal plague of small-pox, for which we are indebted to Jenner's immortal discovery, can not realize the blessing that he conferred on mankind. The death rate from this disease in England in the last half of the last century was such that, if applied to the present population, it would give 70,000 deaths per annum. In London the deaths before 1804 had averaged 2018 in a population of 1,000,000. In 1890, in a population of 4,000,000, there was just one death from small-pox. A modern miracle! for communities left in a state of unassisted nature are just as pervious to its attacks as ever—witness the complete destruction of the Mandan Indians, and the following instance in South America: In 1879 Mr. Ashley, M. P. for Brighton, made a yachting tour to Brazil. He stopped at Ceará, which had recently been visited by an epidemic of small-pox. On inquiring into the facts, he learned that in the ten months following August, 1878, no less than 27,064 burials had taken place in one cemetery and 13,000 in another—40,000 out of 70,000 had died; and yet there are anti-vaccination "cranks" extant who ask us to neglect the *only* effectual preventive!

One of the most striking testimonies to the mischief that a knot of active anti-vaccinationists can do is shown in the experience of Stuttgart, the capital of Würtemberg, between the years 1864–69. Stuttgart was the focal point from which radiated anti-vaccination influence, and, in consequence, not only many private citizens but the militia of that city were "unprotected." It had a population of 1,760,000 souls—less than New York—yet in the five years indicated there were no less than 11,092 cases and 800 deaths. During that time there were 34 cases in the army of the whole country, but not a death; and now that vaccination and revaccination are not only compulsory, but done under a faithful inspection, the German army is the bright, conspicuous example, shining like a beacon, for all the world to follow. If Germany could build an impassable fence between herself and Russia, the whole country would soon show itself completely freed from the pest; but there is always an immigration from Russia into Germany of persons from that land, where the persistence of cholera shows the inability to cope with epidemics.—*Sanitarian.*

A CASE OF MALARIA—SIMPLE TECHNIQUE FOR BLOOD EXAMINATION.

By Ernest B. Sanger, A. M., M. D., Assistant Professor of Pathology in the Medico-Chirurgical College, Philadelphia.

Some time since a medical friend consulted me as to the probable cause of occasional severe and long continued headaches which annoyed him, and which had heretofore resisted treatment. Shortly before this a patient had visited me, suffering in an almost similar manner, and as an examination of his blood with subsequent anti-malarial treatment, and complete recovery, proved his complaint to have been of that origin, I suggested to my friend that perhaps he also had malaria. Accordingly I put a drop of his blood under the microscope and was not surprised to find numbers of misshappen corpuscles, crenated, granular and irregular in outline, most of them containing the plasmodium malariæ. In order to demonstrate to him what normal corpuscles ought to look like under that power, I made another slide of my own blood. To my astonishment, the corpuscles here shown resembled his, except that the proportion of bad to good was very much greater.

My first impression was that possibly I had been laying too much stress on these irregularities in the corpuscles, and that perhaps they did not mean so much as I had supposed. On carefully reviewing my physical condition, however, I found that it left much to be desired. Though having given the matter no particular thought, the fact recurred that for some time past I had by no means been enjoying my usual meed of health, that I had suffered from general soreness and slight wandering pains, had felt strangely nervous and irritable, and in addition had been tiring so easily that only a very moderate amount of exertion almost exhausted me.

Though conscious of these facts, with that usual carelessness with regard to ourselves, I made no investigation into them, vaguely attributing the sensations to overwork, though where the overwork came in was a question.

Indeed, I must have looked below par, for some friends of mine, medical directors of an insurance company who had freely passed me as first-class two years ago, had recently refused me anything but a conditional policy.

At once I began taking from twelve to eighteen grains of quinine a day, just enough to keep my ears gently ringing, and in a week's time the change in my physical condition was most marked. The corpuscles had almost all returned to normal, and I felt my elasticity and sense of well-being fully restored.

From a large number of blood examinations on patients

coming to me complaining of this or that indefinite series of sensations, I have found in so many instances the malarial parasite in greater or less numbers, and the cases yielding readily to anti-malarial medication, that I am convinced the condition is, in this locality at least, more prevalent than is commonly supposed.

We know it has come to be quite customary for the average layman when in a general state of malaise, to stock himself with quinine from the nearest drug store. In many instances much benefit is derived from the home treatment, and I am of the opinion that such is the case because the condition is very often due to the malarial parasite.

Examination of the blood for this purpose is extremely simple and can easily be followed by any one who has a microscope. My own method is to pass a rubber band around the distal phalanx of one of the fingers to impede the return flow of blood, and puncture the finger just back of the nail with a sharp pointed bistoury. Formerly I used a needle, but the bistoury causes less pain, is more certain to bring blood with a light touch, and usually requires no pressure to force out the blood.

The small drop of blood that oozes out is gently touched with a carefully cleaned slide, the latter slipped along for from one-quarter to one-half an inch and then lifted up. This should be done without touching the finger so as not to crush any of the corpuscles by pressure. By this means at the point of starting and stopping a rather thickish mass of corpuscles is gotten, and between usually a single layer. Over this is now laid a very thin and light cover-glass, generally with no hair between, as I do not find it necessary. Separate or massed corpuscles can now be studied, and the field gone over looking for crenated, misshapen or globular, granular looking corpuscles. Such, as a rule, contain the plasmodium in some one of its many morphological changes.

Alterations of form can often be observed even on the cold slide, but intercellular movements can easily be observed by means of the warm stage. One of these can be made by passing around the edge of a slide a light copper wire, and at one end of the slide twisting two wires for about three inches. The slide can be held inside the wire loop by means of thread tied around, or very light wire, or may be simply pasted to the wire by slips of paper. On this slide the drop of blood can be put, and the latter kept moist when about to dry by running under the cover-glass a small drop of a one-half per cent. solution of common salt. The whole slide can be kept at about blood heat by standing an alcohol lamp under the twisted

end of the copper wire, and moving the lamp near to or farther from the microscope stage according to the amount of warmth desired or obtained.

An old professor of mine was fond of saying to us in the clinic room, with regard to certain conditions: "What is the use of guessing when we can know?" So I say with respect to this protean trouble, malaria: What is the necessity for wondering whether or not our patient has it, when in two minutes the question can be definitely answered.—*Hot Springs Medical Journal.*

THE TREATMENT OF TRIGEMINAL NEURALGIA.

In reviewing a paper prepared by Professor Rose, and which appeared in the *Lancet* of March 17, Dr. W. S. Hedley, of Edinburgh, strongly commends two surgical procedures, for their brillancy and success, when seemingly nothing else would have availed. But here he interposes a most important suggestion, namely, that other means should *not be charged with failures* until they had been properly tested, and cites the unskilful and uncertain application of electricity there mentioned as an instance where the manner of the application and not electricity itself was, perhaps, responsible for the seeming failure, and details a case in which, when properly applied, electricity gained for itself a credit parallel with that of the surgeon's knife. He criticises the method of application which was charged with failure, in the following words:

"The application of the constant current (from five to ten cells) to the face was recommended." To my mind these words point to what may be considered a crude and insufficient procedure, inasmuch as (1) by such a measurement no adequate idea is conveyed either to the operator or reader of the current-strength ("intensity") passed through the patient; and (2) the application of even a known and measured quantity of electrical energy in this form by no means in such a case exhausts the resources of electro-therapeutics. The former of these points is obvious to any one possessing any electrical knowledge; the second it is proposed to illustrate by the following case.

A man aged 53 had for about four years suffered from severe paroxysmal neuralgia of the second and third divisions of the fifth nerve. In September of last year he was, as he expressed himself at the time, "desperate" from it. It was relieved by five milliampères of galvanic anode—the details of which application need not here be entered upon. On several subsequent occasions the same proceeding had been

successful, and at other times the pain had disappeared under the administration of Indian hemp. After some months of complete freedom from pain he again (on April 5) presented himself for electrical treatment. He said that for the past three weeks he had suffered "night and day." A variety of medicines, including Indian hemp, had been used without benefit. He described the pain as "plunging like knives," "stabbing," "seizing the roots of the tongue," and he altogether bore an expression of great suffering. During a paroxysm the face became fixed in spasm, and he vigorously grasped the left side of the lower jaw, exercising powerful pressure with his thumb on the point of emergence of the mental branch of the inferior dental. Having examined the mouth without result for a probable "offending tooth," five milliampères of continuous current were locally applied for five minutes, viz., the anode (an electrode of 4 cm. diameter) over the seat of pain, and the kathode (14 by 8 cm.) at the nape of the neck. This was without effect. By the simple expedient, however, of insulating the patient and "taking sparks" over the points of greatest pain it completely disappeared, and he went away smiling. A short-lived smile. Scarcely had he reached home when, within half an hour of the application, things were as bad as ever. Next day a similar application was followed by an hour's relief and a night's rest, but there was an immediate return of pain on getting out of bed next morning. Both as to symptoms and treatment this represents the history of the case for the next few days. On April 15, besides the electrical application, a tooth (third left lower molar) was extracted at the patient's request on the chance that there might be exostosis or other undiscoverable condition of the root. After half an hour the pain returned with much increased violence.

On the 17th, the condition of the patient having in no way improved, and despairing of results from localized applications of drugs, the hydro-electric bath was administered at a temperature of 98 deg. Fahr. for fifteen minutes—the current being obtained from an alternating light circuit having a potential of 100 volts and 8000 alternations a minute. Its strength was regulated simply by means of a sponge rheostat, with a sixteen candle-power lamp in circuit. The effect was striking and immediate. From a condition of intense suffering on entering the bath, the patient found himself on emergence absolutely free from pain. Seven such baths were given on the same number of successive days—but from the first, with the exception of a slight "bruised" feeling for a few days, the freedom from pain has been lasting and complete. The patient says that he has felt from the first "a different man," and

stoops down to lace his boots without misgiving—a position which before would inevitably have induced a paroxysm of pain.

Now, if instead of the above treatment this patient had been subjected to operation, the operation would with justice have claimed the result. As it is, this may be fairly credited to the electrical treatment. It is idle to talk of "cure" in such cases. The important questions are: How long will immunity from pain continue, and how far will the same procedure be successful on recurrence? It is more than possible that this patient may eventually have to be sent for operation, but in the meantime it is at least satisfactory to think that before the more heroic remedy is resorted to, there are yet other weapons in the varied army of electro-therapeutics.—*North American Practitioner.*

CHOLERA INFANTUM.

Reported by GERTRUDE STUART BAILIE.

Dr. S., of Philadelphia, has kindly permitted the writer to see and report two cases of cholera infantum, of which he says:

There is no general treatment for this disease. Each symptom can best be met by the most appropriate remedy. As in every other case, the most important treatment, and the best possible prophylaxis, is the removal of the cause, which, in 99 per cent. of the cases, is due to dentition. In these days of palliative, rather than heroic treatment, few physicians resort to lancing, unless there is an imperative demand for surgical interference. Though the weather has been exceedingly trying thus far for city-bred infants, I have not yet lost a case out of a record of forty-two, and I attribute results to lancing rather than therapeutic measures. Experience has proven, every other remedy invariably fails, when, upon examination of the gums, redness has been seen, with perhaps no noticeable swelling, and lancing neglected.

In one case, which was somewhat slow to respond to treatment, lancing was finally resorted to, though there existed no apparent cause for same, with the happiest effect. Vomiting is generally the earliest symptom of the disease. It may be obstinate, though rarely so. The diarrhœa and character of the stools, generally thin, containing more or less mucus, of a greenish color, and considerable odor, all helping to confirm the diagnosis.

As a rule the disease is milder in its course during the

early summer months; the worst cases are met with the latter part of July and August.

Case I.—Child, aged 4 months. History: Had been vomiting its food for twenty-four hours, when mother decided to send for a doctor (!). Diarrhœa excessive. The child did not look very ill, however. Evidently a mild case. Treatment:

℞ Syr. rhei. aromat ..... ℥ ss.
Tinct. opii ..... gtt. iv.
M. S.—Teaspoonful every three hours.

Only four doses of the above were taken, the child recovering fully. In this case the gums were not lanced.

Case II.—Child æt. 11 months. History: Child had been ill for two days when I was sent for. Found the case reduced to the last extremity, both diarrhœa and vomiting having been severe. Child almost moribund. There had been a rise of temperature for three nights, though of course it was impossible to guess the true febrile condition from the mother's rambling statement. Thermometer only registered two degrees above normal when I took the temperature in the axilla. Four teeth above and three below were quite through. I could discover no sign of the fourth tooth below. Ordered cod liver oil and laudanum, half teaspoonful of the former and one drop of the latter every three hours. As it was difficult for the child to swallow nourishment ordered two drops of brandy in teaspoonful of water (boiled, then cooled) every half hour.

Next day the child seemed better. No fever. Bowel movements reduced to five. Treatment continued.

On the third day child had a relapse. Stools increased to ten. Temperature normal. Pulse rather weak. Ordered a mustard bath with the following for the vomiting, which had recommenced:

℞ Hyd. chlor. tinct. ..... gr. ss.
Sacc. alba ..... gr. x.
M. Ft. cht no vi.
S. One powder every half hour.

The brandy was continued.

On the fourth day again made a careful examination of the gums. Only slightly appreciable to the touch and absolutely devoid of redness; decided a lower back tooth was the cause of the trouble, which was thereupon immediately lanced.

Fifth Day—Found the child decidedly better, rests well and takes nourishment, consisting of strongly diluted sterilized milk, about two parts milk to five of boiled water, to which was added a teaspoonful of lime water. The brandy continued.

Seventh Day—Child was doing nicely. Medicine discon-

tinued, and nourishment ordered to be gradually increased in strength every other day.

Although appearances were very much against this case, the child recovered; nevertheless it is doubtful if the child would have been able to respond to treatment had not the gums been lanced. In all such cases the best rule to adopt is, when in doubt, don't hesitate to use the lancet.

Both of these cases are typical of the mild and severe form of cholera infantum.

Mustard plasters over the epigastrium are recommended by some authorities as of great service in arresting vomiting, but the mustard bath will be found equally efficient and doubly beneficial when either collapse or convulsions are threatened. As long as the temperature remains subnormal, the mustard bath should be continued, the child not to be dressed, but wrapped in blankets. The disease should of course be checked early, before follicular enteritis has time to establish itself.

The complications of cholera infantum are inflammation of the brain, hydrocephalus and marasmus, which must be guarded against. After the disease is subdued, if debility remain, iron in some form should be given.

In many cases of cholera infantum the following has met with excellent results in arresting excessive purging, and though it resembles a "gun-shot" prescription, it boasts the advantage of having been tried and found efficient:

℞	Mist. cretæ	℥ij.
	Tinct. opii	gtt iv-vi.
	Tinct. kino	℥j.
	Pulv. acacivæ	℥ij.
	Sacchain	℥ij.
	Pil. hydrarg	grs. iij.

M. S.—Teaspoonful every three hours for a child ten months old.

—*Woman's Medical Journal.*

DOSES OF NEW REMEDIES.

Acetylphenylhydrazin, antipyretic and analgesic, 3 to 5 grains per os.

Agaricine, antisudorific in phthisis, ½ grain per os.

Amylene hydrate, hypnotic, anodyne, ½ to 1 drachm.

Antrharobin, against skin diseases.

Antikamnia, 3 to 10 grains.

Aristol, antiseptic and in skin diseases.

Benzoyl-anilide, antipyretic, 1½ to 5 grains per os.

Benzoyl-guaiacol, antituberculotic, 4 to 10 grains per os.

Betol, antigonorrhœic, in bougie.

Bismuth salicylate, against gastric affections, 6 to 15 grains per os.

Bromoform, against pertussis, 1 to 2 minims per os.

Camphoric acid, antisudorific in phthisis, etc., 30 grains per os.

Cetrarin, stomachic, 2 grains per os.

Chloralamid, hypnotic, 30 to 45 grains per os.

Chloralurethan, hypnotic, 15 to 45 grains per os.

Creasote, antituberculotic, 3 minims per os.

Creolin, antiseptic, 5 minims internally.

Cresalol, antiseptic, antifebrile.

Elixir of albuminate of iron—Sennewald, not injurious to teeth, teaspoonful.

Ethylenimine, hydrochloride, general stimulant, 1/6 to 1/3 grain subcutaneously.

Guaiacol, antituberculotic, 1 minim per os.

Hydrastinine, against uterine hæmorrhage, 1 gramme subcutaneously.

Hydroxylamine, against skin diseases, externally.

Hypnone, hypnotic, 3 to 8 minims per os.

Ichthyol, antirheumatic, against sciatica, erysipelas, skin diseases, externally, and 4 to 20 minims per os.

Iodine, trichloride, antiseptic, externally in 1 per cent. of solution.

Iodoform bituminate, antiseptic, externally.

Mercury peptoglutine, antisyphilitic, 1/6 grain, subcutaneously.

Mercury phenate, antisyphilitic, 1/3 to 1/2 grain, subcutaneously.

Mercury salicylate, antisyphilitic 1/6 to 1/3 grain, subcutaneously.

Methylene blue, analgesic, 8 to 15 grains per os.

Methylene chloride, narcotic anæsthetic.

Monobromacetanilid, analgesic, 1 to 8 grains per os.

Myrtol, antiseptic in phthisis, 5 minims per os.

Naphthalene, antiseptic, 2 to 8 grains per os.

Naphthoic acid, antiseptic and antiparasitic.

Naphthol, antiseptic.

Naphthol camphoratum, antiseptic, antituberculotic, subcutaneously.

Orexin hydrochloride, stomachic, 5 to 8 grains per os.

Paraldehyde, hypnotic and sedative, 15 to 45 minims per os.

Phenylurethan, antifebrile, antirheumatic, 6 to 8 grains per os.

Piperazide hydrochloride, general stimulant, externally.

Poluboskos, gluten food, teaspoonful.

Proteinol, stimulant reconstructive, succedaneum for cod liver oil, tablespoonful.

Pyoktanin, antiseptic.

Pyridin, antiasthmatic, 1 to 1½ drachms by inhalation.

Pyrodin. See acetylphenylhydrazin.

Resorcin, antipyretic, antifermentative.

Rubidium ammonium bromide, antiepileptic, ½ to 1½ drachms per os.

Salol, antiseptic, antigonorrhœic, 15 to 30 grains per os.

Sanmetto, vitalizing tonic, teaspoonful.

Sodium anisate, antipyretic, antirheumatic, 15 grains per os.

Sodium dithiosalicylate, antipyretic, antirheumatic, 3 grains per os.

Sodium, paracresotate, antipyretic, antirheumatic, 8 to 15 grains per os.

Sodium theobromine salicylate, diuretic, 8 to 15 grains per os.

Somnal-hypnotic, 30 minims per os.

Sozoidodol, antiseptic, externally.

Sulphaminol, antiseptic, externally.

Sulphonal, hypnotic, 15 to 30 grains per os.

Terpine hydrate, against pulmonary affections, 3 to 10 grains per os.

Terpinol, against pulmonary affections, 2 minims per os.

Tetronal, hypnotic, 15 to 30 grains per os.

Thallin sulphate, antigonorrhœic, injection.

Thioresorcin, antiseptic.

Tribromphenol, antiseptic, externally.

Trional, hypnotic, 15 to 30 grains per os.—*Doctor and Druggist.*

SOME IMAGE BREAKERS.

Not all unsightly things are unsanitary. Bank-growing weeds are better than the same weeds cut and rotting where they so luxuriantly grew. Dangers to health do not lurk in pools covered with "nasty green scum," so often as in the depths of wells whence is drawn the clear and sparkling water.

The "*green scum*" is one of nature's modes for purification, and when it is carefully examined, it will be seen to be composed of a mass of living vegetation, which feeds upon the impurities of the water and renders it healthful.

Virchow found that when the sewage of Berlin had sunk through a meter of the soil of the sewage farm, it had been robbed of all organic matter, and all disease germs, and the water then escaped to the streams as pure as when it came from the hillside springs.

Oxidation takes place when there is free exposure to sunlight and air.

Putrefaction takes place when air is excluded, whether in sunlight or darkness. The products of oxidation are harmless.

From putrefaction we get infection and sepsis.

Lime thrown around at random in a closed precinct does not furnish a substitute for cleaning up.

Substitution of one smell for another by the use of "disinfecting machines" is very rarely of any hygienic value. In most cases holding the nose while exposed to foul odors will be equally efficient as a sanitary precaution, and vastly cheaper.

It is not sewer gas, but the living germs, which escape from the unventilated sewer, driven by the wind into our houses, which threaten with disease and death.

Neither teething nor heat, or night chill are the efficient causes in cholera infantum and summer diarrhœas, but putrefaction, caused by bacterial infection of the intestines.

The milk produced by a herd of many cows is a better food for infants than that of a single cow, and the worst food for an infant, in our experience, is the milk of a high bred Jersey cow.

Exercise without sufficient nutrition will never restore strength to a debilitated person.

Bathing in cold water often is a potent factor in reduction of physical force. We have seen many patients who were washed nearly to death.—*Col. Med. Jour.*

CHANGES PRODUCED BY THE BACILLUS TUBERCULOSIS.

In the *New York Medical Journal* of July 7, Dr. Prudden gives a résumé of our knowledge of the actual and essential changes produced by the bacillus tuberculosis and a record of experiments instituted for the purpose of determining the concurrent effects of other pathogenic bacteria, giving special attention to the concurrrent results from the introduction of the streptococcus pyogenes.

Dr. Prudden made three different sets of experiments.

The first were injections into the trachea of rabbits of pure cultures of the streptococcus and gave the usual nega-

tive results, the rabbit not being very susceptible to the streptococcus.

The second class of experiments were the injection of a pure culture of the bacillus tuberculosis, with the result of producing a diffused tubercular process in each individual case. The process in rabbits is marked by cellular infiltrations and coagulation necrosis, rather than by cavity formation.

In the third series of experiments the rabbits were first infected with the bacillus tuberculosis, and then at varying intervals with the streptococcus pyogenes. In this series the lungs showed marked cavity formation.

Dr. Prudden thinks that the concurrent action of two pathogenic germs may result in a considerable modification of the lesions which either alone could produce.

Further, that the importance of the results of mixed infection upon the progress of disease with the complications that may arise therefrom, with the necessary modification of treatment in our present state of knowledge, can not be estimated.

Again, this mixed infection serves to explain the varying vicissitudes of tuberculosis, why in those living closely or in unhealthy localities the disease may pursue a rapid and virulent course, in fact have a secondary septic course.—*Colorado Med. Journal.*

MORPHINOMANIA CURED IN TWENTY-FIVE DAYS.

M. Comby reported the case of a young woman, aged 22 years, who, since an attack of pelvic peritonitis that occurred in February, 1891, had contracted the habit of injecting subcutaneously 0.25 gramme (4 grains) of hydrochlorate of morphine per diem in twenty doses. When admitted, on April 5 of this year, into the Tenon Hospital, she had reached an extreme degree of cachexia, and she was covered with abscesses and the scars of such, due to the use of the hypodermatic needle. From the first day the daily dose of the drug was reduced from 0.50 (7¾ grains) to 0.06 gramme (1 grain) given in three doses. She was given, at the same time, a mixture containing 0.10 gramme (1¾ grains) of sparteine sulphate, 0.50 gramme (7¾ grains) of caffeine, and 0.50 gramme (7¾ grains) of sodium benzoate, the whole to be taken in twenty-four hours. This daily dose was continued up to May 1, when the morphine was totally discontinued. At this date the condition of the patient had undergone a complete transformation, and the improvement has continued up to the present. M. Comby considers the case as cured. — *Lancet, May 19, 1894.*

ERGOT FOR THE NIGHT SWEATS OF PHTHISIS.

Goldendach thinks that the night sweats of consumptives are not simply due to fever, and that their real cause has not yet been fully explained. Many remedies have been recommended for them—quinine, acetate of lead, atropine, hyoscin, brandy, rubbing the body before sleep, or using a powder composed of starch, talc, and salicylic acid. Most of these Goldendach has tried and found wanting. On considering the part probably played by the vasomoter nerves, he determined to try the effect of ergot against night sweats, and in most cases found the result most satisfactory. He usually gives one or two 3-grain doses of powered ergot before bedtime, and the cases are few in which this remedy is found quite useless. He has, moreover, never seen any harm result.—*British Med. Journal.*

CODEIA.

In a "Note on Codeia," in the *Lancet*, Dr. James Braithwaite, of Leeds, says: "Codeia seems to have a special action upon the nerves of the larynx; hence it relieves a tickling cough better than any ordinary form of opium. Two-thirds of a grain may be given half an hour before bedtime. It was in my own case that I first began to use codeia. For more than twenty years, usually once every winter, I have been seized with a spasmodic cough just before going to sleep, which becomes so severe that I am compelled to get up and sit by the fire. After an hour or two I return to bed and am free from the cough till the next winter. In other respects I enjoy good health. Many years ago I found that 1 grain of codeia, taken about two hours before bedtime, absolutely stops the attack and leaves no unpleasant effect the next morning. In cases of vomiting from almost any cause, ¼-grain doses of codeia in an effervescing mixture usually answer exceedingly well, or ½ grain may be taken at rather longer intervals. In the milder forms of diarrhœa ⅔ to 1 grain of the drug usually answer most satisfactorily, and there are no unpleasant after-effects. If, however, there is great pain the analgesic effect of codeia may not be sufficient, and opium itself or morphia hypodermatically may be required. It should be given in the form of a pill. Sometimes chronic neuroses may be cured by breaking the continuity of the pain, for which purpose I have found this drug peculiarly suited. It is better in such cases to prescribe it in a rather large dose at a long interval, as two-thirds of a grain or a grain every twenty-four hours. This need not prevent other treatment being adopted if necessary.

Codeia will not entirely take the place of morphia, for it is not so powerful. It will not relieve an intense pain, but it has distinctly its own sphere of action."—*Medical Bulletin.*

THE COEXISTENCE OF INFECTIOUS DISEASES.

Dr. Caiger, at a recent meeting of the Epidemiological Society, presented a study on the coexistence or close succession of two or more infectious diseases in the same individual. His experience at Stockwell, he said, had satisfied him that such concurrence of infections was as frequent as mere probabilities would explain, and that, so far from affording protection against other diseases, some certainly increased the susceptibility thereto. (*The American Journal of the Medical Sciences.*) In the last four years he had seen 362 cases of two and 17 of three diseases running some part of their course concurrently; in 200 of these the acute febrile stages of two or three coincided. The priority of the several diseases was calculated from their known incubation periods. The primary disease was scarlatina in 197, which was complicated by diphtheria in 97 cases, varicella in 43, measles in 41, whooping-cough in 13, erysipelas in 10, enteric fever in 2, and typhus in 1. Scarlatina was a complication in no fewer than 88 among 97 in which the primary disease was diphtheria; in 20 among 23 of varicella; in 14 of 17 of whooping-cough; in 6 of 9 of enteric, and 9 of 18 measles, though here diphtheria accounted for another 7. Among the 17 triple attacks scarlatina was the primary disease in 9, and a complication in 4 only, diphtheria holding the highest place with 9. During the past six years, 48,367 cases of scarlatina had been admitted into the hospitals of the Asylums Board; of these 3166, or 6.54 per cent., were complicated, 1094 with diphtheria, 899 with varicella, 703 with measles, and 404 with whooping-cough; the relative numbers of diphtheria and whooping-cough being probably owing to the fact that many had already had whooping-cough in infancy, while diphtheria, though less frequent, might and often did recur; these four diseases accounted for 3100, or all but 66.

The questions suggested by these figures were: 1. Did any disease render the individual less or more susceptible to infection by another? 2. Did the primary disease in any way influence the course or character of the secondary one as regards (*a*) incubation, eruption, etc., periods; (*b*) severity of the disease; (*c*) distribution of local phenomena; (*d*) liability to sequelæ and other complications? The conclusions at which he arrived, after eliminating the influence of age incidence,

seasonal prevalence, actual frequency, etc., were first, that there was no such thing as antagonism between any, but rather the reverse, increased susceptibility being brought about, generally or locally; that is, first, by the lessened power of resistance induced by a disease attended with grave constitutional disturbance; and, secondly, by the local inflammations facilitating the development of the contagia of diseases known to affect the mucous membranes or tissues in question. Thus, an attack of varicella exerted no influence on any that might follow, but when scarlet fever was the primary disease, varicella, favored also by the quasi-dermatitis left behind, might rival unmitigated small-pox in intensity of fever and extent of eruption. Scarlatina was frequent and dangerous after diphtheria, but diphtheria following scarlatina was still graver, since the scarlatinal throat, teeming with staphylococci and streptococci, was a perfect soil for the bacillus of Loeffler. So, too, while the general phenomena of measles might be aggravated by previous diphtheria or scarlatina, and in the latter conjunction the rash would be intensified, an attack of diphtheria following on measles was even graver than the post-scarlatinal, since it inevitably attacked the larynx and trachea, and tracheotomy was very rarely of any avail. Measles and whooping-cough were known to follow one another, or to coexist, mutually increasing the susceptibility of the individual. The author had never found the incubation period of a disease affected, but the presence of scarlatina accelerated the appearance of the rash in measles by a couple of days.—*N. Y. Medical Record.*

GYNECOLOGY.

TREATMENT OF GONORRHŒA.

Dr. Edward Martin, of Philadelphia, after investigating different remedies and methods of treatment of gonorrhœa in a large number of cases, says: Concerning the conclusions which this series of observations seemed to justify, the following is a *resumé*.

1. The abortive treatment of gonorrhœa by means of a 10 per cent. solution of nitrate of silver injections applied to the navicular fossa is advisable when the disease is seen in its earliest stages, that is, when inflammatory phenomena are absent, and when the symptoms consist in the slight, whitish discharge and tickling or moderate burning on urination, and when microscopic examination of the discharge shows that it is made up mainly of mucus and epithelium containing little

pus. This abortive treatment is successful in an uncertain percentage of cases. When it fails it does not materially complicate the subsequent course of gonorrhœa.

2. When gonorrhœa is first seen in its florid stage, in addition to ordering rest, light diet, regular evacuation of the bowels, free drinking of plain waters, hot baths on retiring, alkaline diuretics, and the treatment appropriate to ardor urinæ and chordee, balsams should be given in full doses, and mild antiseptic irrigations or injections should be practised at once. The most efficient balsams are sandalwood and copaiba. These should not be pushed to the point of disordering the stomach.

He uses capsules, each containing:

℞ Balsam copaiba, } aa .....mv.
Oil sandalwood, }
Oil cinnamon.....mj.

Of these he gives six to twelve per day, administering them one hour after meals.

3. Irrigation of the urethra by means of hot antiseptic lotions gives better results than any other treatment. These should be continued either once or twice a day until gonococci disappear from the discharge, or from the clap shreds found in the urine. They should be displaced by astringent injections.

4. When irrigation can not be employed, even during the florid stage, injections are indicated; these should be of bichloride of mercury 1 to 20,000 or nitrate of silver 1 to 10,000. These injections should be gradually strengthened as urethral tolerance is established.

5. Injections of nitrate of silver, 1 to 3000, or bichloride of mercury, 1 to 1000, or injection Brow, or any of the formulæ customarily used in practice in the increasing or florid stage of gonorrhœa, distinctly predispose to the development of hyperacute posterior urethritis, epididymitis, and other complications of gonorrhœa, and may aggravate and prolong urethral inflammation. Strong astringent injections employed in the early period of the subsiding stage are equally dangerous.

6. Treatment by internal medication alone is followed by a small percentage of epididymitis and posterior urethritis, but by slow cure. The most efficient treatment consists in the combination of the balsams with local antiseptic washing.—*Therapeutic Gazette.*

SOME COMMON MISTAKES IN THE TREATMENT OF SYPHILIS.

Dr. George H. Fox read a paper on this subject. Many physicians, Dr. Fox said, hold to the belief that syphilis is an incurable disease. On the contrary, the disease in every case

tends to run a natural course and get well of itself. If a person suffering from syphilis inherits a sound constitution and takes care of himself, the prognosis is extremely favorable, even though no treatment whatever is adopted. With the methods of treatment at our command, no disease furnishes such good results.

Another common mistake arises from the belief that mercury and potassium iodide are practically the only remedies we have at our command in the treatment of syphilis. While they are both very potent remedies, yet complete reliance on them often causes serious injury to the patient. In anæmic patients iron should be regarded as an anti-syphilitic remedy. In strumous individuals, cod-liver oil is very serviceable. The alleviation of mental anxiety and the adoption of hygienic rules are of the utmost importance in certain cases. The mistake is too frequently made that we treat the disease instead of the patient.

Another fallacy is the belief that a certain definite period of time is required to effect a cure. Some say two years, others three, etc. The course of syphilis varies in different individuals, and the period of treatment must likewise vary, according to the severity of the case. One case of syphilis may require twice as much medicine as another, and the period over which treatment should be extended may be twice as long.

Another common error is that many ills occurring in a syphilitic subject are treated as though they were of syphilitic origin. The fact that a patient has syphilis does not exempt him from non-specific disorders, yet the physician is very apt to jump to the conclusion that such disorders are the result of the syphilis, and to treat them accordingly. In many cases lesions on the tongue and oral mucous membrane in syphilitics remain unaffected by specific treatment, and the fact should be borne in mind that similar lesions may occur in persons who have not had syphilis, as the result of digestive disturbance. Even if they are syphilitic, such lesions may persist in spite of specific remedies unless the digestive errors are corrected. *Journal of Cutaneous and Genito-Urinary Diseases.*

NON-SURGICAL TREATMENT OF OVARIAN DISEASE.

Gynecology is undoubtedly the most rational department of practical medicine at the present day, nevertheless it too often happens that the specialist does not find it convenient to bring into operation all the rational treatment which gynecology

recognizes and affords, but depends, instead upon these temporizing and merely palliative measures, such as pledget-placing and local treatment. Women are sometimes apparently cured of transient or acute chronic displacements, whether of the uterus or ovaries; but such disorders of the uterus and ovaries as give rise to severe menstrual pain and pelvic discomforts are rarely if ever cured by this means. The cure of these disorders requires much more efficient measures. It is necessary to aim therapeutic measures, not at specific local morbid conditions alone, but to take into account all accompanying morbid conditions, and especially disturbances in the static relations of the stomach, bowels, liver, kidneys, and other viscera which almost uniformly accompany uterine displacements and congestions, except when due to acute inflammation or traumatism.

Unfortunately, gynecologists, as well as other physicians, too often forget that recovery from a chronic disease is secured, not altogether by the dexterity of the physician in the manipulation of therapeutic agents, but by a process of growth on the part of the patient. The recovery of health by an invalid is just as much a matter of development as is the growth of a tree.

My experience in the treatment of several thousand invalid young women has convinced me that a lack of vigorous muscular development is one of the fundamental causes of a great share of their special ailments, congestions, hyperæsthesias, uterine and ovarian displacements, and that a substantial cure can not be effected by any other means than by the development of the muscular system and the building up of a good physique. This alone is many times sufficient to accomplish a radical cure. A young woman that has been spoiled by fashionable bringing up and education, who has never properly developed her body by muscular exercise, suffers from an abnormal nervous irritability, which renders any little mechanical disturbance of the static relations of the organs, pelvic or abdominal, a source of an enormous amount of pain and suffering. The tissues are filled with nerve-irritating poisons which excite the nerve centres and rasp and irritate the nerve trunk and nerve fibres until they are brought into a state which renders even the stimulus of ordinary contact with external things almost intolerable.

When such a woman consults a gynecologist, examination reveals the fact that she has sensitive ovaries. If she happens to consult an ophthalmologist, he finds a sensitive optic nerve. The specialist in the diseases of women, looking through his gynecological spectacles, sees only diseased ovaries as the point from which all the patient's sufferings emanate. The ophthal-

mologist, looking through eye glasses of a different tint, finds in eye strain the sole cause of a multitude of neurasthenic symptons. The neurologist finds in spinal irritation the key to all the pathological problems which the case presents. If the patient happens to fall into the hands of a rectal specialist, rectal papillæ and pockets afford an equally lucid and satisfactory explanation of every symptom, local or remote. Very likely all are right, yet all are wrong. All may be right in finding a source of reflex irritation in each of the locations mentioned, and these patients are so susceptible to mental or nervous impressions that they may apparently be cured by treatment of either the eyes, spleen, rectum or ovaries. But, unfortunately, cures effected in this way are not permanent. The patient sooner or later relapses into the old state again, and something else must be done.

I have frequently had under care cases in which a woman had gone the rounds of all the different classes of specialists mentioned. A skilled ophthalmologist had operated upon her eye muscles and dextrously trimmed and balanced the internal recti until not the slightest suspicion of muscular insufficiency remained, and the patient was apparently better, but speedily a return of all the symptoms had demanded a resort to some other means of relief. At this time the ovaries happened to be the chief seat of expression of the morbid state, and a gynecologist was consulted. In one case the ovaries had been actually removed, apparently to the great relief of the patient, but another relapse led her to consult, through the influence of friends, a rectal specialist, and the rectum, after indefinite trimming and pruning, had finally been actually removed by performance of the so-called "American Operation,"—more properly the operation of Whitehead, consisting of the amputation of the lower inch of the alimentary canal. Still the poor woman suffered, having previously undergone treatment for years for "spinal disease," including rest cure, electricity, blisters, and various repulsive applications, and finding herself no better after all experiments, was quite in despair. But the patient got entirely well without any special treatment whatever by simply building up her whole system, making her constitutionally and vitally stronger. It is not simply better ovaries, better rectum, better eye muscles, and better nerves that these patients need, but better bodies. They need to be placed on a higher plane of animal vigor. It is the *vis medicatrix naturæ* which cures the patient, not the doctors, nor the remedies administered. Doctors may serve as pilots, and remedies may act as sails to catch the breeze, but the wind that blows the invalid's bark into the haven of health is the vital energies of her

own tissues. Doctors may do much in the direction of what might be termed "raising the wind," but the getting well the patient herself must do. Every intelligent man must be familiar enough with these principles, but in practice they seem too often ignored.

In dealing with quite a large proportion of cases of functional ovarian derangements, it is only necessary to put the patient on a higher vital plane to relieve her of all local suffering. I have often had occasion to notice the marvelous influence of muscular exercise in lessening nerve sensibility. Every gynecologist who has had any extensive experience in dispensary work has seen, time and again, cases of poor women of the laboring class who had been going about for years with the uterus and a considerable portion of the rectum and bladder outside of the body, and yet apparently without suffering otherwise than from the mechanical inconvenience occasioned by the procidentia. On the other hand, a woman who has been daintily raised and whose physical education has been neglected may suffer untold agonies from an ovary which has slipped down out of position, perhaps as the result of a misstep, a fall upon the ice, or a jar received in alighting from a carriage. Such a young woman suffers, not because of the gravity of the local ailment, but because of the abnormally sensitive state of her whole nervous system. If this young woman's tissues, muscles, nerves and nerve centres can be brought into the condition of the laboring woman, the nervous irritability and the local pain will for the most part disappear. This may be accomplished by exercise, and by skilfully managed physical culture, which also affords the very best means of attaining an actual cure, as it develops and strengthens the structures which serve as supports for the internal viscera, and the weakening of which is the most frequent cause of visceral displacement.

Local treatment must not be ignored. Physical exercise alone will effect a cure in most cases, but in the majority of cases, in which ovarian disease has become chronic, the patient can not exercise without so much pain and suffering that anything more than very gentle exercise is quite impossible. These cases require the most careful and discreet management. To send a patient of this class to a gymnasium for exercise, with instruction to use her muscles, would be as absurd as to send a man requiring medicine of some sort to a drug store with the general instruction to help himself, or to take such medicine as he thought himself able to bear. At the beginning, exercise of the most gentle character must be employed. The patient may be quite unable to begin with

calisthenics, or any kind of so-called gymnastics. Massage, manual Swedish movements, mechanical Swedish movements, or exercise of special sets of muscles, obtainable with precision by the aid of suitable electrical currents, and best, in the writer's opinion, by means of a slowly alternating sinusoidal current— these are the measures which it is necessary to employ on beginning with a chronic and severe case of functional ovarian disease. Ordinary measures of local treatment, by means of medicated pledgets with the vaginal douche, etc., should not be forgotten. I consider these local measures of treatment of very great importance, and in many cases add pelvic massage with great advantage, although this is a measure which needs to be used with great discretion, and requires a great amount of experience and training of the fingers and hands in order to obtain any benefit from it, and to avoid most unhappy results.

When the patient becomes stronger and the ovarian irritability is lessened to a considerable degree, more vigorous exercise may be undertaken. These may be begun while the patient is still in bed. I have arranged various series of exercises adapted to different stages of progress, each being suited, as nearly as possible, to the patient's strength, and modified according to individual requirements. These exclude what I term "bed exercises," "chair exercises," "wheel-chair exercises," and a half dozen progressive grades of exercises to be taken by means of apparatus, and varying in the amount of work required, from an aggregate of six or seven foot-pounds to one hundred and twenty foot-pounds in a day's prescription.

In cases of functional ovarian disease I also make great use of the Swedish system of pedagogical or educational gymnastics. This system consists of what might be termed a regular alphabet of fundamental movements which may be so combined and varied as to make many thousands of different movements of varying degrees of vigor and bringing into action all the important muscular groups of the body.

Used alone, as before intimated, exercise is of comparatively little value in the treatment of invalids of this class. It may be a source of infinite damage. My greatest difficulties have been with cases of ovarian disease in which exercise had been undertaken indiscreetly, or under unwise management, resulting in so much suffering that the patient was thoroughly convinced that exercise was the most dangerous thing possible, and must be studiously avoided.

To lead a patient who has been confined in bed for several years from ovarian disease, out of her feebleness and her

invalid ruts, up to the enjoyment of robust health and vigor, requires the nicest management, the closest attention to details, and a much larger knowledge of the physiological effects of exercise than is possessed by the ordinary teacher of gymnastics, or by professional trainers of persons in ordinary health. An infinite amount of patience is required on the part of the physician, and if he has any considerable number of patients to care for, skilled and experienced assistants are also essential. Before exercises of any considerable vigor are undertaken, it is also essential that an accurate diagnosis of the condition of the patient's muscular system should be made. The ordinary system of anthropometry is of almost no value for this purpose. This system answers fairly well for growing youths, such as ordinarily come under the care of the director of gymnastics or physical culture in connection with a school or college, since in this class of persons there is not so likely to be found any very extraordinary abnormalities as regards muscular symmetry; but in adults, and especially in young women whose physical education has been neglected, it may work most disastrously.

In most of the cases there will be found very great disparity in the degree of development in the muscular groups of the different parts of the body. This condition is the rule, rather than the exception. The arms or legs may be able to do nearly an average amount of work, while the muscles of the trunk are so weak that an amount of exercise not sufficient to exhaust or even tire the legs or the arms may quite overdo, and perhaps temporarily injure, the muscles of the loins. It is of the highest importance to find the weak spots in each individual case, and adapt the exercise to the case with such care and precision that the asymmetry in the muscular development will be overcome. When muscular symmetry has been established, such all-round exercises as tennis, bicycle riding, mountain climbing, etc., become safe and beneficial. The same may be said respecting calisthenics and other all-round gymnasium exercises.

The purpose of this article is not to belittle the importance of gynecology, or to discount the value of local measures in the treatment of pelvic disorders, but to emphasize the need of recognizing and utilizing those measures of regimen and treatment which are capable of reorganizing and renovating the entire body, so impressing the whole organism that the patient will be fairly lifted out of the ruts into which her malady has led her, and elevated above the level of disease, up to the high-water mark of health and vigor in every bodily organ and function. In my opinion, when medical men come to appre-

ciate the fact that patients are to be treated, not simply maladies; that the woman suffering from functional ovarian disease needs not simply the treatment of her diseased ovaries, but needs to be made a better animal, a more vigorous, less sensitive, and more highly vitalized woman, a vast number of women who are now languishing on beds of suffering or dragging out lives made miserable by chronic invalidism will be restored to health, and a very large number of young women who are now subject to ovariotomy will escape the surgeon's knife, and become happy mothers, to the credit of rational non-surgical gynecology.

In a number of cases ovariotomy had been recommended and urged by physicians previously consulted, and in several instances the operation would unquestionably have been performed if the patient had not recovered through the employment of the means described, the patient coming under my care through the urgent solicitation of former patients, as a last resort before radical surgery.

I consider the cure of a case of ovarian disease by non-surgical means a vastly greater triumph than the most successful laparotomy or a long series of successes, and take greater satisfaction in knowing that I have been instrumental in restoring to health and usefulness a young woman whose life was made wretched by chronic pelvic pain than in the removal of a huge ovarian cyst or a uterine fibroid. It seems to me that much evil arises from the too distinct specialization of work among gynecologists. A specialist in gynecological surgery perhaps too often ignores the value of those slowly operative measures which require time and patience to secure results; while on the other hand, it is, perhaps, still too frequently the case that medical gynecologists exhaust their patience and the purses of their patients by fruitless efforts to cure structural disease of the ovaries, which operative measures alone will cure. There is no class of cases in which sound judgment, good common sense, and a conscientious regard for the patient's best interests, are so much required as in a case of this sort, and there is certainly no class of cases in which the highest degree of skill and precision in diagnosis is more essential to success, nor in which the reward of patient and painstaking effort is more gratifying to patient and student.—*Medical Standard.*

A CASE OF INSANITY DUE TO THE MENSTRUAL FUNCTION—OOPHORECTOMY—RECOVERY.

In the *Medical News* of May 20, 1893, appeared an article from the pen of Dr. B. D. Evans, Medical Director of the New Jersey State Hospital at Morris Plains, on "Periodic In-

sanity in which the Exciting Cause Appears to be the Menstrual Function." The doctor closes the article by drawing a few deductions from the case he relates, of which the following is a synopsis: "That in many cases of periodic insanity the exciting cause may be directly traceable to the menstrual function; and, when the attacks are coincident with the catamenial flow, and an apparently normal mental condition prevails between the menstrual periods, removal of the ovaries is justifiable even though there be no pathologic lesion." He cites a case of insanity of eight years' duration, which attained to perfect mental and physical health after oöphorectomy, and it is the purpose of this article to add another case to the literature of the subject, my own views being in perfect harmony with the sentiments above elucidated. The following case is interesting and instructive from every point of view, and not only supports the above deductions, but in its result contains much food for reflection.

The case to be related is that of a young school girl, aged 16, who, when well, was inclined to be very sociable, lively, and even tempered. Hereditary history of a maternal grandaunt who died insane. Menstruation had been regular and normal. She was admitted to this hospital on March 23, 1893, with the following history:

She had been attending school until the latter part of September, 1892, when she became very much interested in her spiritual welfare and became converted. Shortly after joining the church her mother noticed that she was not at all like her former self. From a lively, sociable, bright girl she became moody, irritable, worried, and depressed. When questioned by her mother she admitted that it was the weight of her sins that was troubling her.

This condition of depression steadily increased until at Christmas-time, after having on several occasions threatened suicide, she passed into a semi-stuporous state, eating but little and sleeping practically not at all. She remained in this state of stupor for three weeks, when she suddenly began to improve. The improvement, however, was but temporary and of short duration. She again lapsed into a state of depression, but not so profound as in the preceding attack, and, apparently about to recover, she passed suddenly into so violent a stage of mania as to render restraint imperative. At this time she attempted to kill her mother and sister, and succeeded in wrecking much household furniture. Three weeks after this maniacal outbreak she was brought to this hospital.

On admission she was very quiet and lady-like, talked in a rational and consistent manner, and had the appearance of

being a thoroughly well girl, both physically and mentally. She was, however, placed under careful observation, but gave no evidence of mental instability until the approach of the menstrual epoch, the latter part of April. As the flow commenced she became profoundly depressed, refusing to talk or eat, and for several days was fed with a nasal tube. From this period of depression she recovered in time to pass into a period of exaltation as the June menstrual period approached. She continued in a state of excitement for two weeks, and it is from this time onward that the regular periodicity seems to have become established. Every month thereafter, for a few days preceding and following her menstrual period, she became greatly excited and erotic. Her language during these periods was offensively obscene and profane; her self-control was entirely abolished and she exhibited many delusions, chiefly of an erotic character.

These periods usually were of about ten days' duration, and, as the menstrual flow ceased she began to improve, and in a few days would be apparently well. Then she was extremely reluctant to discuss her former condition, and any questioning in regard to it embarrassed her greatly. She was perfectly cognizant of all that happened during the cycle through which she had passed, and the fact that it was a source of much anxiety and mortification to her, would indicate that she looked back upon her actions and speech from a comparatively sane standpoint. To her it was incomprehensible, and she begged to be made well.

In December, 1893, she was subjected to a vaginal examination, with negative results. The ovaries and tubes were apparently in a normal condition, but there was a slight tendency to anteversion on the part of the uterus. During the examination the absence of tenderness was especially noted and commented upon.

February 1, 1894, immediately following cessation of menstruation and consequent return to mental health, she was removed to the Mount Sinai Hospital in New York City, and on February 3 was operated upon by Dr. Brettauer, who removed both ovaries and tubes. With the exception that the left ovary contained a small cyst, the appendages were normal. She made a rapid and uninterrupted recovery from the operation, and at no time did her temperature rise above 100 deg. F.

February 19 she was again returned to our care in excellent physical and mental condition, quiet, rational and with the abdominal wound entirely healed. For one week after her return she remained quiet and orderly, with normal pulse and temperature.

February 26, when she should have menstruated, she manifested a tendency to exaltation with a decided erotic impulse. She destroyed a pair of drawers and threw them down the closet. Her movements were so abrupt and nervous as to almost simulate chorea. In her talk she was rational, but inclined to be saucy and irrelevant. This period lasted but three days, and was the last evidence of mental instability she ever presented to us.

At our request she was taken home by her mother on May 31 last, but before leaving was thoroughly and carefully examined. The parts were apparently in a perfectly normal condition, with no evidence of any adhesions or signs of hernia. The scar on abdomen was not at all tender and there was no soreness anywhere.

At the present writing, five months after operation, she has remained perfectly well, mentally and physically, and has not shown the slightest tendency to a return of her abnormal mental condition.

In this case the operation was performed as a *dernier resort*, and as embodying the only hope the patient had of escaping, not only from her periodical paroxysms, but from that condition from which no mind returns, and into which she was rapidly drifting—dementia. The operation intervened—a serious one it is true—but the patient survived, and is now, and probably will continue to be, a useful member of society. Still, had she died under the knife of the surgeon, will any one contend that it would not have been better so, than that she should have become a hopelessly demented atom of humanity, and a life-long charge upon the State or her friends?

This case differs from others which have been reported, in that the period of excitement seemed to come on as a result of the preparatory evolution incident to and preceding the menstrual flow. Whether this is due to the congestion which is claimed by competent authorities to always precede this function, is a point to be determined, but to my mind it is conclusive. It is also worthy of note that three days after the flow had become established there was an appreciable lessening of cerebral and motor excitement. This in itself would tend to confirm the opinion that congestion of the parts, concomitant pressure on nerve supply, and consequent reflex irritation as a result of increased blood pressure, is at least a factor in causation.

We can not fail to be impressed by the many and varied psychic disturbances which occur in sane women at the menstrual period, not alone in the delicate and sickly, but in the most robust. When we take into consideration the intimate

relation of the brain with every other organ in the body by reason of its direct and reflex connections, it can readily be appreciated how much greater must be the strain in those who are afflicted with a neurotic diathesis. It is, therefore, not a matter of theory, but a matter of fact, that the menstrual function exerts a most potent influence upon the nervous system of women. Why in some it should be so much more severe than in others, and become in itself an element of shock or stress so great as to dethrone reason, can only be conjectured. No two organizations are precisely similar, and so many other elements, such as physical health, environments, heredity, etc., must be taken into consideration, that in many cases of insanity where menstruation is normally performed, it is well nigh impossible to say with any degree of certainty that this function is the cause, pure and simple, of the insanity.

Admitting, however, that in the cases under consideration the menstrual function is simply the exciting cause, where this function exerts so profound an impression upon the nervous protoplasm as to induce insanity; where, instead of acting as a "safety-valve" it becomes the cause of menstrual explosion, then it is, in my opinion, the imperative duty of the physician to advise the artificial production of the menopause. Especially will this obtain in those cases in which the cause may be directly traced to disorders of menstruation, and in which there is an hereditary taint.

And in this connection let me qnote a few lines from Bevan-Lewis. He says, "Given an organism predisposed by inheritance to insanity, such prediposition will tell with special force at periods of reproduction and development."

I am not one of those who hold the sexual organs of women responsible for the majority of her ills, and I deprecate as much as any one the abuse of abdominal section. I maintain, however, that death is preferable to chronic insanity, and in view of the remarkable and brilliant success achieved by the surgeon along this line, I am convinced that we have a field which has been but little explored, and one which offers bright inducements as regards the cure of insanity by the removal of the cause; and I need only add that the consensus of opinion of many well known writers confirms the statement that the menstrual function is the cause of insanity in a large number of cases. Pozzi says "the sexual apparatus is not, so to speak, an accessory wheel in the female mechanism; it is, on the contrary, the chief wheel, and it is to secure proper action that constant economies and reserves are made by nature."

Dr. George H. Rohe, in an article considering the legal aspect of this subject, published in the *Medical and Surgical*

Reporter of July 15, 1893, reports the result of twenty-two oöphorectomies embracing the different forms of insanity. There were twenty physical recoveries and two deaths. Of this number four made an absolute, and three a partial, mental recovery. In seven there was decided mental improvement.

I am confident that I have seen several cases become hopelessly demented, or so deteriorated mentally as to be beyond medical or surgical aid, which, had ovariotomy been performed, would have recovered their reason. There are cases under observation to-day which I am positive would be greatly benefited, if not permanently restored mentally, by such an operation.

Under these circumstances it seems to me that it ceases to be a question of whether or not oöphorectomy is justifiable.

I maintain that it should be done in all those cases in which the menstrual epoch acts as the exciting cause of insanity, and the earlier the operation is performed the better for the patient and for posterity.—*Medical Record.*

Book Reviews and Notices.

Biography of Eminent American Physicians and Surgeons. Illustrated with fine photo-engraved portraits. By R. French Stone, M. D. Indianapolis: Carlon & Holbeck, 1894.

When a man does a worthy deed it is meet that we honor him and hold him in grateful remembrance. Medical men, as a class, have been rather backward in proclaiming their own merits, and it is time to make a change. It is folly for a man to hide his light under a bushel. It is natural for us to desire to know something of the personal characteristics of a medical man who has by his labors brought himself into honorable prominence. A recital of a great teacher's personal traits and his picture serve to put us in more intimate relationship with a man whom we may never have seen, but whose labors may command our respect and admiration, and whom we recognize as a co-laborer in the noble work of alleviating human suffering. Such a book as Dr. Stone's "Biography" is always a welcome visitor. It almost gives us a personal introduction to the men written about. No such publication has appeared in the last fifteen years. We learn from the preface of Dr. Stone's work that biographies of American physicians and surgeons were published in 1828, 1845, 1861, and 1878; each of these preserved the memories of men of its time, which is the

object accomplished by Dr. Stone's work for the men of the present time. He has worked on it from 1891 to 1894, much delay being caused by the failure of contributors to send their matter in promptly. Over 1200 biographical sketches are given, forming an attractive volume replete with interesting information.. New Orleans furnishes eleven of the biographies. This small number can scarcely be said to represent the total number of men worthy to be remembered, but is due rather to the inability of the compiler to obtain data for writing biographies. We hope that a second edition of this interesting work will show New Orleans in a better light.

It is a pleasure to glance through the book and see the name and portrait, sometimes, of a man who has made himself famous in American medical annals. We commend it to our readers with the conviction that it will prove a source of much pleasure to those who take an interest in medical affairs, and know the names of men who are constantly adding to our store of medical knowledge. A. McS.

To Control the Vomiting of Chloroform-Narcosis Warholm recommends the inhalation of vinegar-vapor, upon the basis of a considerable personal experience. A towel or napkin is wetted with vinegar and held before the nostrils of the patient after the narcosis. The inhalation may be permitted *ad libitum*.

MORTUARY REPORT OF NEW ORLEANS.

FOR AUGUST, 1894.

CAUSE.	*White*	*Colored*	*Male*	*Female*	*Adults*	*Children.*	*Total*
Fever, Yellow							
" Malarial (unclassified)	6	5	5	6	7	4	11
" Intermittent		1		1		1	1
" Remittent	2		1	1	2		2
" Congestive	3		2	1	1	2	3
" Typho	4	2	2	4	4	2	6
" Typhoid or Enteric	3	1	2	2	3	1	4
" Puerperal		1		1	1		1
Leprosy							
Small Pox							
Measles							
Diphtheria	8	2	6	4		10	10
Whooping Cough	3			3		3	3
Meningitis	11	1	5	7	2	10	12
Pneumonia	8	6	8	6	10	4	14
Bronchitis		2	2			2	2
Consumption	34	27	35	26	61		61
Cancer	11	4	4	11	15		15
Congestion of Brain	1	1		2	1	1	2
Bright's Disease (Nephritis)	7	4	7	4	10	1	11
Diarrhœa (Enteritis)	26	8	21	13	12	22	34
Cholera Infantum	9	9	9	9		18	18
Dysentery	4	4	3	5	8		8
Debility, General	1			1	1		1
" Senile	15	2	5	12	17		17
" Infantile	2	7	3	6		9	9
All other causes	145	81	129	97	153	73	226
TOTAL	303	168	249	222	308	163	471

Still-born Children—White, 20; colored, 13; total, 33.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 19.70; colored, 29.00; total, 22.25.

L. F. FINNEY, M. D.,
Chief Sanitary Inspector.

RUDOLPH MATAS, M. D.,

PROFESSOR OF SURGERY, MEDICAL DEPARTMENT OF TULANE UNIVERSITY OF LOUISIANA---1894

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XXII. OCTOBER, 1894. No. 4.

Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

NOTES OF CASES ILLUSTRATING SURGICAL LESIONS OF THE VASCULAR SYSTEM.

BY RUDOLPH MATAS, M. D., NEW ORLEANS.*

OBSERVATION 1.—A large spontaneous (atheromatous) aneurism of the right common carotid involving the bifurcation and trunk, to a point two inches above the origin of the artery, in an old alcoholic subject. Ligation of artery low in the neck between sternal and clavicular attachments of the sterno-mastoid, under cocaine anesthesia. Recovery.

The patient was admitted in Ward 2, Charity Hospital, in April, 1888. He is a tall, thin, but muscular, negro. Blacksmith by occupation; age nearly eighty years. Peripheral arteries all markedly atheromatous; "pipe-stem" radials; arcus senilis. Addicted all his life to alcoholic indulgence. The general bad condition of the arterial system, together with the age and the habits of the patient, decided that I should operate under cocaine anæsthesia.

As the neck was long and thin and the interspace between the sternal and clavicular heads of the sterno-mastoid quite large and favorable, this space was selected for the application of the ligature (Sedillot's method). No difficulty was experienced in creating a cocaine atmosphere over the line of

*Proceedings Louisiana State Medical Society, May, 1894.

the artery with a 3 per cent. aq. sol. of cocaine hydrochlorate. The artery was exposed and ligated without difficulty as low in the neck as possible to avoid the neighborhood of the aneurismal region. The innominate bifurcated high in the neck and the bifurcation was recognized. An aseptic silk ligature was used and the wound closed without drainage. The wound healed without complications, *per primam*. Patient never complained of pain either during or after the operation. When the patient left the ward, twenty days after the operation, the aneurism had become quite hard and was much smaller.

OBSERVATION 2.—Arterial varix (cirsoid aneurism) of the right common carotid extending from origin to a point one inch from bifurcation. Double ligature of the common carotid; one below bifurcation of the carotid and one over the dilated trunk itself. Recovery with aseptic healing of wound and apparent improvement in aneurismal condition.

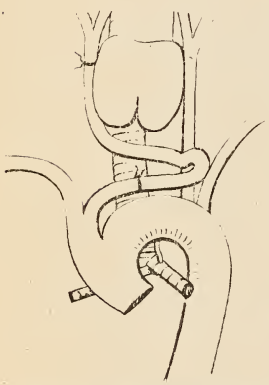


Diagram illustrating a cirsoid aneurism of right common carotid, and points of ligation. (Dr. Matas' collection.)

The patient, James C., of Baton Rouge, La., negro laborer, aged sixty years. Was admitted to Ward 2, 1890. No hereditary history; no distinct history of syphilis. Some alcoholism. On January 1, 1890, noticed a small tumor pulsating near root of neck immediately above sternal notch. It gradually increased in size, and last June cough, dysphagia and dysphonia annoyed him to an extent that decided him to go to the hospital for assistance. He was treated in one of the medical wards one month for thoracic aneurism before he was transferred to the surgical service.

On examination patient appeared to enjoy a good general health. He is moderately stout, muscular, with a short, broad neck, covered with thin skin and little fat. Examination readily reveals a distinct tubular swelling starting under right sterno-clavicular articulation and sternal origin of right sterno-

mastoid muscles; the swelling fills up the supra-sternal fossa and extends over trachea to anterior border of left sterno-mastoid muscle in an obliquely upward direction, from right to left, reaching apparently the lower level of the left lobe of thyroid. A characteristic, expansile pulsation, thrill, and loud, systolic *bruit* confirm the aneurismal nature of the tumor. The abnormal vessel lies under the sterno-hyoid and sterno-thyroid muscles and it is difficult to determine its precise outline, but the direction would suggest that the tumor originates in the anterior mediastium and escapes upward into the neck as high as the lower thyroid level until it reaches the anterior border of sterno-mastoid overlapping the *left* carotid sheath. The left carotid is felt pulsating on a level with the upper border of thyroid, apparently perfectly normal at bifurcation. The right carotid pulsates more vigorously and is clearly recognized at level of normal bifurcation, though apparently closer to the median line and hugging the thyroid.

The exact condition is difficult to determine. At first examination concluded that it affected the arch of the aorta, which was congenitally displaced upward, but further examination discouraged this idea because the contour of the tumor could be made out, above the sternum, on the left side. I decided finally that it would be better to perform an exploratory operation, and to expose the aneurismal vessel if possible, believing that owing to the absence of inflammatory adhesion, in the peri-vascular territory and the laxity and apparent soundness of the overlying tissues it would be possible, by careful manipulation, to determine the true condition and relations of the involved parts.

Accordingly, on August 6, after very careful antiseptic preparation and with the valuable assistance of Dr. Michinard and other members of the staff, a free incision was made from the cricoid to the anterior sternal region. After dividing the fascia and carefully separating the muscles in the median line, I exposed a large tortuous trunk which evidently originated deeply in the chest, apparently at the point of bifurcation of the innominate under the right sterno-clavicular articulation and ascended obliquely upward until it touched the left carotid sheath under the edge of the left sterno-mastoid muscle.

There the large dilated vessel became suddenly contracted, and forming a curve folded on itself and returned over the trachea, following the contour of the thyroid and returned to the right carotid region, where it terminated in an apparently normal common carotid that bifurcated at the usual level. The vessel in its first portion had the caliber of a large innominate trunk; its coats were very thick, and the impression conveyed was that it was a large artery that had undergone a uniform dilation with some thickening of its coats, but without any sacciform or fusiform dilation. The diagnosis was, therefore, arterial varix or cirsoid aneurism of the common carotid.

This condition was so peculiar and novel to us that we hesitated for a moment, but concluded that it would be safe to apply a distal ligature to the common carotid on the Brasdor principle, just below the bifurcation. This was done without difficulty and a sterilized silk ligature was used. As the coats of the dilated artery over the trachea were thick but soft and apparently free from calcareous deposit, we decided to risk the application of another ligature over the middle of the varix itself. This was not done until an attempt had been made to trace the varix to its origin at the root of the neck. The fear of injuring the left innominate vein, which was separated with difficulty from the arterial trunk, compelled me to desist from satisfying myself as to the exact origin of the dilated trunk, but it appeared to me from its length and depth that it must have arisen from the arch of the aorta itself or from a very short innominate trunk.

As stated previously, the condition of the abnormal artery was such that I felt justified in applying a ligature over the middle of the dilated portion, using a double heavy aseptic silk ligature and employing just sufficient force to merely approximate and keep in contact the arterial coats. No attempt was made to lacerate the intima, only simple approximation of the arterial surfaces was aimed at. The object of this second ligature was to produce sufficient irritation at the point of ligature to excite adhesive inflammation, and in conjunction with the distal ligature, below the bifurcation of the carotid, to obliterate the vessel. A marked diminution in the size of the ves-

sel and the *almost* complete cessation of pulsation beyond it, attested its obstructive action.

Dr. S. M. Fortier (one of the present Assistant House Surgeons, Charity Hospital), then interne of the service, writes in his notes: "Dressing, August 8 and 10; sutures removed, union having taken place by first intention. A pulsation still exists (over supra-sternal fossa), but not as vigorously as before. As the patient imagined himself cured he persisted in leaving, feeling very much improved."

I received a letter from him one month after, stating that he was doing well and felt himself cured, as all his previous symptoms had been relieved. I have not heard from him since, and it has been impossible for me to ascertain his whereabouts.

There may have been some temporary arrest in the progress of the disease, but it is not at all probable that a permanent cure has been effected, as the first portion of the artery was too long and pulsating too actively to warrant the belief that it would undergo any retrogressive change.

OBSERVATION 3.—Suspected aneurism of the right internal carotid, possibly of traumatic origin, projecting into the fauces and threatening life by suffocation, etc. Ligature of common carotid at point of election. Recovery.

Supposed Aneurism of the internal carotid bulging into fauces. Showing displacement of palate and encroachment of tumor into pharyngeal isthmus. (Dr. Matas' Collection.)

H. B., Englishman, hostler, aged 35 years. Came to Eye, Ear, Nose and Throat Hospital of this city, complaining of a difficulty in swallowing and inability to speak and even breathe properly on account of a large tumor which nearly filled his throat.

He stated that about six years ago, while working in Ontario, Canada, he was taken ill with an acute inflammation of the throat, accompanied with swelling and huskiness of voice, which his medical attendant thought necessary to "lance," but without apparent result. From that time he no-

ticed that the swelling in his throat had continued and gradually increased to present size.

On examination, externally, it is noticed that an irregular ovoidal tumor fills the submaxillary and parotid regions. The tumor appears, on careful palpation, to be indented by the digastric muscle, which gives it a bi-lobar contour. The submaxillary portion of the tumor projects about 1½ inches from the angle of the jaw. It extends from the tragus to the hyoid bone; from the angle of the jaw to the mastoid. The tumor feels very hard, but pulsates vigorously; and, if it is aneurismal, must contain a great deal of hard, active clot in its outer walls.

Intra-buccal examination.—A large bulging mass projects into the fauces almost filling the whole isthmus. It springs from a broad base of attachment in the right tonsillar region. Intra-buccal palpation confirms the marked pulsation of the whole mass; but the peculiar, tense, expansile feel of a typical aneurism is wanting. The mass feels unusually hard for an aneurism. There is only a very narrow passage left for food and drink and the patient is compelled to subsist on semi-solid or liquid food. Uvula and palate displaced, to left; below, the mass extends to the epiglottis and hyoid. Compression of the common carotid at point of election causes complete arrest of all pulsation and *some* diminution in size of tumor.

The patient is seen by Drs. Logan and Souchon, consulting surgeons of the hospital, who pronounce the case one of aneurism of the internal carotid of traumatic origin and advise the ligature of the common carotid.

I must confess to having entertained some doubts as to the aneurismal character of the swelling in spite of the history, and especially after one year's observation of the case subsequent to the ligature of the artery; but the ligation was clearly indicated, if only as a denutrient factor.

With the valuable assistance of Dr. de Roaldes and staff of the Eye, Ear, Nose and Throat Hospital, the common carotid was exposed and ligated at the point of election. The tumor was immediately reduced in size, but not as much as was anticipated. The wound healed aseptically, and the patient left the hospital apparently much improved,

as the reduction of the intra-pharyngeal portion had facilitated speech and deglutition. The effect on the size of the tumor was disappointing, however, as, even now, after two two years' observation, I find that the tumor remains, only smaller in size, thougn it does not pulsate nor appear to grow. I am therefore inclined to believe that this is really a case of tonsillar fibro-adenoma, which has been reduced and kept dwarfed through arterial fasting.

OBSERVATION 4.—Enormous traumatic aneurism of the common femoral, simulating an aneurism of the external iliac. Sac filled the thigh and the whole iliac fossa, pushing up the external iliac and femoral, almost causing spontaneous cure through upward pressure of the overlying iliac artery. Laparotomy; ligation of the external iliac midway between Poupart's ligament and origin; aseptic healing. Death from anemia and exhaustion one week after operation. Autopsy reveals a cavity containing fully one gallon of clot.

This patient, a young mulatto, aged 23, was admitted in Ward 2, June, 1892, presenting an exceedingly wasted and anemic appearance. He had a tumor which filled the right iliac fossa, the inguinal and upper femoral and obturator regions. The swelling was semi-elastic, tense, full, covered by a glazed skin; there was no sense of fluctuation except at inner half of base of Scarpa's triangle, where a soft spot existed, in which a slight thrill and murmur could be perceived. The first impression caused by the appearance of this tumor was that of a tubercular abscess. But the history of traumatism (a gunshot injury sustained several months before), carefully elicited by Mr. Brady (Dr. C. Milo Brady, of Gretna), interne of the service, convinced us that we were dealing with a large traumatic aneurism. The solid, elastic feel indicated that the sac had filled with a large mass of clot and that the circulation within it was quite sluggish.

The exact point of communication of the sac with the artery of supply could not be ascertained, but owing to the extension of the tumor above Poupart's ligament we concluded that the common femoral was injured on a level with the ligament

and that a higher exposure of the iliac artery or even of the common iliac would be required to apply a safe ligature. Accordingly, after careful preparation of the patient, median laparotomy was performed and the artery was exposed. It was noticed then that the tumor which filled the entire iliac fossa extended deeply down into the pelvis in the direction of the obturator foramen. An aseptic silk ligature was applied without difficulty at the point of election midway between Poupart's ligament and the bifurcation of the common iliac. The artery was flattened against the tumor, but pulsated vigorously down to Poupart's ligament, where it was lost in the tumor. The Tredelenburg posture permitted of a ready exposure of the affected area and exhibited the pelvic relations of the aneurism.

The patient rallied slowly from the anesthetic, ether. No marked difference in the size of the tumor was observed, but the purring thrill and murmur over Scarpa's triangle disappeared. The patient was not seriously affected by the operation. There never was a sign of peritonitis, but hiccough set in, the abdomen retracted more and more every day, the pulse gradually grew weaker and finally the patient succumbed on the seventh day, apparently from exhaustion.

Report of Autopsy.

Subject injected about twelve hours after death with chloride of zinc and glycerine, followed by plaster of Paris. The injection was made through the abdominal and thoracic aorta (this was on Thursday, 14th).

Autopsy on Sunday, 17th. The subject remarkably emaciated. Abdominal wall retracted, presenting a wound in the linea alba about 4½ inches in length, extending from a point about 1½ inches above the pubes to a point just a little above the umbilicus. This incision had to be torn apart, and its edges throughout the entire thickness, including the peritoneum, show evidences of recent plastic exudation as if primary union had taken place along the whole extent of the wound. Inspection of the peritoneal cavity revealed a total absence of adhesion or exudation in the peritoneal cavity.

There were no evidences of vascular injection anywhere. The intestines were collapsed and empty, and everything pointed to a perfectly normal condition of its cavity and total absence of peritonitis. After enlarging the wound and cutting down to Poupart's ligament a perfect view was obtained of the whole extent of the common iliac and external iliac arteries from the bifurcation of the abdominal aorta to Poupart's ligament. It was then seen that about 2½ inches above Poupart's ligament the external iliac artery had been ligated and that the ligature (silk) was imbedded in a mass of exudation, which covered also a slight perforation in the peritoneum through which the ligature had been applied. The artery above the ligature was distended with plaster, while below it, all the way down, the vessel was empty and collapsed.

By continuing the abdominal incision into the thigh down to a point about eight inches below Poupart's ligament, a complete view of a large semi-fluctuating tumor was obtained. This tumor filled up the whole of the right iliac fossa up to the iliac crest posteriorly and bulged into the pelvis below the iliac vessels. It was apparently constricted at Poupart's ligament and then appeared to fill up the whole of the thigh down to about the level of Hunter's canal. At a point midway between the anterior spine of the ilium and the spine of the pubes the fascia lata which covered the tumor appeared to be very thin and threatened to burst. By carefully exposing the artery from the point of ligation down to Poupart's ligament, it was easily seen that it had not been injured in any way until Poupart's ligament was reached, when it was found to have become very adherent to the surrounding fascia and that it communicated with the tumor directly by an opening which nearly measured one inch in its longest diameter. Below this point the artery was easily separated from the surrounding parts and was traced down about four inches below Poupart's ligament where the profunda was given off. Upon laying open the artery it was found filled with a thrombus from the point of ligation to the opening which led to the aneurismal pouch.

The sac was now laid open by a free incision and enormous quantities of clot were removed, which measured at least a gallon. The clots were of the passive, grumous variety, indicat-

ing recent coagulation, while masses of adherent active clot were found attached to the distal walls of the sac and especially to the parts neighboring the foramen, which communicated with the artery. After washing out the aneurismal cavity it was found that the anterior walls were formed entirely of very thin atrophied cutaneo-musculo-peritoneal layers, and the posterior walls were formed mainly by the denuded skeleton of the iliac fossa and thigh. The ilio-psoas muscle had been entirely disintegrated and absorbed, leaving the venter ilii entirely exposed. A rudimentary tendon attached to the lesser trochanter of the femur, which was exposed in the cavity, was the only vestige of the psoas-iliacus. The femur down to about three inches below its surgical neck was entirely exposed and only covered by periosteum. All the anterior femoral and the adductor group of muscles had been amalgamated with the fascia lata and were reduced to an exceedingly thin musculo-membranous sheet, which included the femoral sheath, the vein, artery and nerve. It was found that the capsule of the hip joint had been entirely eroded in its anterior portion, exposing the head of the femur in the acetabulum. The femoral vein was found uninjured.

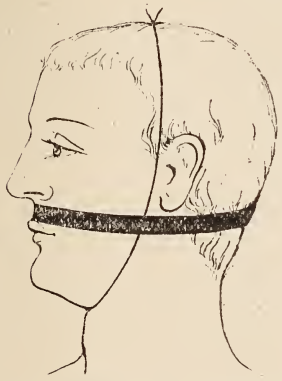
Further examination of the lower extremity shows that the injection did not reach these parts, while on the opposite side the soft parts were saturated with the preservative fluid.

The position of the limb was that of complete abduction and outward rotation.

Conclusions.—1st. There was no peritonitis. 2d. The abdominal wound was healing by primary union. The ligature which was placed on the external iliac between Poupart's ligament and the bifurcation of the common iliac was being rapidly encysted. 3d. The cause of death appears to have been exhaustion and anemia, due to the enormous internal drain upon the vascular system by this vast aneurismal cavity, which contained fully a gallon of coagulated blood. 4th. Coagulation of the contents appeared to have been almost completed before death. 5th. The aneurism was evidently caused by a gunshot injury involving the artery about the level of Poupart's ligament.

OBSERVATION 5.—Contusion of the upper lip in an infant 9 months old. Laceration of the *frænulum labit;* hemophilia, bleeding. Failure of hemostatics and suture. Arrest of hemorrhage by direct elastic compression.

In August, 1894, I was called to attend a little Italian baby, aged 9 months, nursing at the breast. It accidentally fell on its face and contused the upper lip and lacerated the mucous membrane at the gingivo-labial commissure, corresponding to the bridle of the upper lip. Little importance had been attached to the accident at the time, but the continuous bleeding which took place from the laceration in the lip decided the parents to call the family physician, who upon examination regarded the injury as trivial in view of the small extent of the laceration, which did not exceed one-quarter of an inch and was very superficial. Washes with arnica tincture were ordered, but as these failed the tincture of chloride of iron was applied. This only served to blacken the mouth, but had no effect in arresting the steady, continuous oozing that constantly filled the mouth with blood, especially when the baby took the breast. The child had bled in this manner about four days, and was exceedingly weak and pale. At this stage I was called, and recognized that the condition was of the utmost gravity in view of the feebleness of the little patient and the extreme anemia, which caused almost cadaveric pallor. It was evident that so trifling an injury could not have caused this rebellious bleeding without the aid of some constitutional condition which interfered with coagulation and physiological hemostasis. It was also plain that the suction movement of the lip, while nursing, greatly favored the tendency to bleed. The first indication was to stop nursing and to substitute the spoon for the breast or the bottle; then the wound itself was closed by a single suture with a small round milliner's needle and fine



Obs. 5.—Diagram illustrating application of elastic compression of upper lip for arrest of hæmorrhage in hæmophilic subject. (Dr. Matas' Collection.)

thread; the tissues were grasped deeply and for the moment the hemostasis was complete. The next morning I was again notified that bleeding had returned and that the child was growing weaker. I called, and noticed that some slight but continuous oozing still came from the wound, so that I again applied two more deep sutures with a view to compressing all the tissues at a distance from the trauma. The sutures now completely concealed the little laceration. This for the moment seemed to accomplish the desired result until the next day, when I was again summoned, with the explanation that there was *still* some oozing from the wound. I could scarcely believe this statement, as the wound had been practically buried by the sutures, but upon careful examination I discovered that the oozing came *from the points of suture.* This discovery was certainly discouraging, but after thinking of the situation for some time it occurred to me that simple elastic compression applied externally to the lip would be effectual in arresting the flow. I therefore applied an elastic band, such as is sold by all stationers for holding papers together, and which I happened to have at the moment around my pocketbook, and secured this snugly over the lip and occiput, after protecting these parts with pads of gauze. The elastic was prevented from slipping upward or downward by the attachments shown in the accompanying figure. The band exercised just the pressure that was required and effectually stopped the bleeding. It was worn continuously during three days after confirming the permanent arrest of all bleeding. Feeding was not interfered with by this simple hemostatic contrivance, and the child soon recovered from the extreme weakness and anemia that threatened its life.

There were several petechial and ecchymotic spots over the chest and limbs which indicated a purpuric condition, but these have since disappeared and the child is now apparently in the best of health.

This is instructive, in so much that it illustrates the great danger attending even the most trivial injuries in hemophilic subjects and suggests a method of relief which may be of service to those who may be confronted by a similar perplexing and troublesome experience.

OBSERVATION 6.—Prophylactic ligation of the external carotid artery as a preliminary to the resection of the second and third divisions of the trigeminus for tic douloureux on a level with the basal foramina, viz.: f. rotundum and ovale, by Mixter's modification of Salzer's operation. Unexpected death forty hours after, notwithstanding apparent complete recovery from operation, with symptoms of sudden respiratory and cardiac failure, due possibly to the formation of cardiac or medullary thrombus.

The patient, a white male, type-setter, æt. 34, had suffered for eight years prior to operation with a progressively aggravated neuralgia of the trigeminus, for which all classical remedies, including galvanism and large doses of morphia hypodermically administered, had absolutely no effect. The superficial as well as deep branches of the superior and inferior maxillary divisions were involved, the gustatory branch being the seat of the most intolerable pain. As the patient's general condition was otherwise excellent, I decided to resort to the modification of Salzer's operation described and successfully practised by Mixter, of Boston (*vide* Boston Medical and Surgical Journal for August 13, 1894).

The operation was performed January, 1893, with the valuable assistance of my friends Drs. F. W. Parham, L. F. Reynaud, and other gentlemen of the Charity Hospital staff.

To protect the patient against the dangers of excessive bleeding from the temporal, meningeal and terminal branches in the spheno-palatine fossa of the maxillary artery, I began by a preliminary ligation of the external carotid at the point of election. The ligature was applied without notable difficulty.

A temporal flap consisting of all the soft parts down to the bone was raised from the skull; the zygomatic arch divided with a saw and the pterygoids lifted with a periostotome from the zygomatic and spheno-palatine fossæ. The superior maxillary trunk was divided in the spheno-palatine fossa on a level with the foramen rotundum, and after clearing the fossa with a blunt curette and insuring the destruction of Meckel's ganglion, the terminal portion of the nerve was exposed in the infra-orbital foramen and the whole nerve extracted entire from

the infra-orbital canal. The terminal, nasal, labial and palpebral filaments were also dissected and removed.

After exposing the external pterygoid plate the inferior maxillary trunk was recognized in the space between the spinous process and posterior border of the pterygoid; fully one inch of the inferior maxillary was resected from the level of the foramen downward. There was no arterial bleeding, the venous flow from the pterygoid plexus was considerable, but was finally completely controlled by an iodoform gauze pack, which was left in the pterygoid fossa. The zygomatic arch was restored by drilling through the malar bone and zygoma and wiring with silver. The control of the venous hemorrhage consumed considerable time and the patient was kept under chloroform for fully two hours. Nevertheless, the general condition was excellent and never gave a moment's concern. The patient recovered perfectly from the anesthetic and examination of the tongue and face corresponding to the affected regions demonstrated an absolute anesthesia, showing that the section of the superior and inferior maxillary nerves had been complete.

The patient's mind was perfectly lucid after the operation; nothing peculiar was observed in the pulse, which fell to 110 after the patient was removed to his bed and the respirations were normal.

All went along smoothly until the second night after the operation, when the patient complained of weakness and pain deep in the neck on a level with the carotid ligature. The pulse at the same time rose rapidly in frequency, running up to 140, 150, and soon became so rapid and compressible that it could not be counted. The respirations, on the other hand, progressively diminished in frequency and finally were so retarded that no voluntary breathing could be observed except when artificial stimulation and respiration were resorted to.

The pupils were contracted. The mental state simulated somnolence and stupor, but the patient could be roused and gave intelligent but monosyllabic answers when repeatedly and loudly questioned.

A quarter of a grain of morphia had been given hypoder-

matically early in the evening when the patient had first complained of pain in the neck, and as the condition imitated opium narcosis completely he was treated on an antidotal basis, with repeated injections of atropia, caffeine, strychnia, ammonia and digitalis, which were administered with a liberal hand by Dr. Parham and myself. But all this seemed to be of no avail and the patient gradually sank into total unconsciousness, coma, and death about eight hours after the initial disturbance began. The temperature, which had been 99° in the evening, gradually became sub-normal. The wound looked healthy; slight oozing had occurred through the drainage tube; there was no hæmorrhage, but the iodoform pack which had been left in the pterygoid fossa was removed shortly after the pain and cardio-respiratory disturbance began, for fear that the bad symptoms were due to excessive pressure upon the pneumogastric.

There was no paralysis. The urine, which had been carefully examined before and after the operation, showed no traces of sugar or albumen.

What was the cause of death in this case? It was surely not opium narcosis, because the patient had taken large doses of morphia prior to the operation, one and two grains hypodermically, without any untoward effect. Yet the symptoms were nearer those of opium poisoning than those of any other condition. An injury to the pneumogastric during the operation would have caused a disturbance in the respiration and circulation at the time of the injury and would not have waited nearly a day to manifest itself. I can not account for this unfortunate complication and termination in a manner satisfactory to myself. It has occurred to me that a small embolus which would have lodged in a branch of the vertebral controlling the circulation of the fourth ventricle and the pneumogastric nuclei would have accounted for this condition; but this is not at all probable, as there were no paralytic or other nervous manifestations than those mentioned.

The cause of death in this case will ever remain a mystery, as no autopsy was held.

Observation 7.—Secondary diffuse lympho-sarcoma of the axilla involving the axillary vein in the middle and lower thirds recurring nearly one year after amputation of the breast for primary growth. Resection of the diseased axillary vein and prophylactic ligature of the axillary artery below the subscapular to prevent venous choking of the limb. Uneventful recovery from operation, but recurrence of disease almost immediately after cicatrization. Enormous lymphatic edema and neuralgia from pressure, four months after last operation. Death.

Mrs. H. A., æt. 38, white, apparently in perfect health apart from the existence of a painless tumor which involves the right mamma and is slightly adherent to its upper and outer quadrant. No glands in axilla can be felt. Tumor discovered three months previously, when it was detected as a small nodule in the breast. Growth has been rapid during the last month. In November, 1891, the breast and axillary contents were removed by Gross' method. No diseased gland could be detected in the axillary fat. Microscopical examination revealed the tumor to be round-celled sarcoma. The wound healed *per primam*, and outside of a slight impediment in raising the arm the recovery of the patient was complete. Nearly twelve months after, a slight edema of the hand made its appearance. Neuralgic pain in the arm became annoying. A characteristic infiltration in the axilla, along the outer boundary and over the vascular sheath, easily accounted for the symptoms and announced the recurrence of the growth.

A secondary operation was decided upon and the axilla was freely exposed. A large nodular, diffusely infiltrated mass was discovered surrounding the axillary sheath. Much difficulty was experienced in making the dissection, as the vein—a short large trunk—had been partially incorporated in the growth. In order to gain free access to the diseased mass the pectoralis major was divided, and, finally, after much patient work the artery and nerves were isolated. The vein was ligated above and below the diseased portions and resected with part of the adherent mass attached. Adopting a precaution (Braun, Pilcher, Souchon) which I now believe to be unnecessary in dealing with wounds of the large venous trunks

of the neck and upper extremity, I ligated the axillary artery below the sub-scapular to prevent venous choking of the limb. The hand and arm were cold for a few days, but no notable circulatory phenomena followed this operation. The axillary wound healed partially by first intention and by granulation. The rapidity with which the axillary gap was closed was extraordinary and was only accounted for by the unusually vigorous physique of the patient. Cicatrization had barely taken place, however, when the scar became hard, brawny and manifestly diseased. The movements of the arm were seriously crippled, and in two weeks after convalescence lymphatic edema of the arm and of the whole extremity soon gave it an elephantine appearance. Neuralgic pains, which followed the course of the median and musculo-spiral branches, added greatly to the distress of the patient. The scar assumed a fungous appearance; emaciation and cachexia supervened and multiple nodules of malignant infiltration appeared on the chest and neck.

Morphia in enormous doses was the only agent that momentarily relieved the patient, who continued to live through this constantly increasing torture until nearly four months after the second operation, when death closed a scene that I have never seen paralleled by its horrors as well as by the heroic fortitude of the patient in all my surgical experience.

I have selected this unfortunate case from a list of thirteen cases of malignant diseases of the breast which have been treated by modern operative methods simply to call the attention of the members of this society to the propriety of advising disarticulation at the shoulder in this especially unfortunate class of patients who, being still young, vigorous and robust, are prepared to offer a long resistance when attacked by axillary growths which involve the vascular sheath and nerve plexus and in whom lymphatic edema and neuralgia are sure to follow attempts at radical extirpation.

These cases are practically incurable, but they are often operable, and there is no doubt in my mind that a more satisfactory effort at radical extirpation can be attempted if the useless preservation of a worthless limb is left out of consideration. If disarticulation is performed as advocated by Watson

Cheyne, not only will the operation be more thorough and the chances of recurrence diminished, but the patient will be relieved of an enormous burden. The lymphatic edema in these cases is progressive. The arm assumes gigantic proportions; it is rigid and absolutely immovable; even the fingers become so swollen that they are inflexible. As the arm swells it becomes flexed and its weight upon the abdomen or chest interferes with rest in any position. The sitting or recumbent postures are nevertheless the only positions that the poor sufferer can tolerate, because the weight of the huge swollen limb drags and chains the patient down, like an anchor, to his bed. The neuralgia of the arm is also a terrible cause of suffering and compels the use of morphia in excessive doses. By resorting to disarticulation at the shoulder early, recurrence will not necessarily be prevented, but life will be prolonged without the martyrdom that otherwise characterizes these terrible cases.

Observation 8.—Large cavernous angioma of nevoid origin, involving palm of hand: the whole thenar region, entire thumb, index and part of medius, involved in the tumor. Attempt at conservatism by resection of diseased soft parts, leaving a purely tegumentary flap. Ligation of radial artery in first inter-space with other digital branches. Sloughing of all diseased area, with great and nearly fatal shock; secondary amputation of all but the fourth and fifth fingers and metacarpals. The remnants of the medius utilized to fill the gap caused by the loss of the index and its metacarpal.

In July, 1892, a little mulatto boy, F. V., æt. 4 years, was brought to me for the relief of a swelling which had developed shortly after birth in his right hand. The child was born with a spot in the hand like a "mother's mark," which at first attracted little attention, as it was insignificant in size and appearance. Gradually as the baby developed, the spot enlarged and became thicker. As the functions of the hands were brought into greater play by the increasing activity of the child, the palmar spot began to swell, and finally a distinct, prominent deformity of the hand aroused the anxiety of

the parents, who sought the advice of a physician. The doctor recognized the nevoid character of the growth and advised that the child be at once subjected to surgical treatment. Nothing was done, however, until several months after, when the boy was brought to me for treatment. When first seen by me the little patient appeared to be a healthy, vigorous child, possibly a little pale and underweight for his size, but yet showing no abnormality outside of the deformity of the hand, which at once commanded attention. As shown by the accompanying illustration, the whole thenar eminence, including the thumb and part of the proximal portion of the index, was abnormally blue in color and swollen. The swelling was equally visible in the dorsal surface over the metacarpal bone of the thumb to the styloid process of the radius, and as far as the middle or third metacarpal. If the hand was allowed to hang down the swelling markedly increased; if elevated above the head the tumor diminished, so that the hand had an almost normal appearance. If an elastic string was applied above the wrist, as is shown in Fig. 2, the swelling remained and appeared to be more turgid than ever.

Upon careful palpation the vascular and erectile nature of the tumor was easily determined. By systematic pressure the tumor could be easily emptied of its fluid contents. The metacarpal bone of the thumb could be easily outlined in the centre of the swelling and appeared to be entirely denuded of all the soft parts, as if the palmar muscles had been entirely atrophied by the growth. It felt like a skeleton finger in a rubber bag. The second metacarpal gave much the same sensation to palpation. There was no distinct pulsation, but the affected area felt unusually warm. The skin covering the parts was very thin, and when the elastic band was applied so as to interfere with the venous circulation the tension was so great over the thenar eminence that it appeared as if the skin would burst. It was plainly a case of *angioma cavernosum* with a preponderance of venous ectasis. What to do in the way of treatment was a question which could not be answered easily. Amputation of the hand or a part of it appeared to be the easiest and safest way out of the difficulty. Injections of carbolic acid or other irritating coagulants appeared dangerous from both the

standpoints of embolism and sloughing. Electrolysis has been exceedingly unsatisfactory in my experience and was especially difficult of application, because of the long duration of the treatment and the restlessness of an active child under restraint.

I concluded that I would carefully lay open the diseased area and dissect away as much of the erectile tissue as possible after ligating all visible vessels of supply. Chloroform was administered and the Esmarch constrictor was applied. An immediate collapse of the erectile tissues followed, and the hand assumed a perfectly natural appearance. An incision was now made from the base of the first phalanx of the thumb to the middle of the palm, which completely bisected the thenar eminence and exposed the interior of the most prominent part of the tumor. It was now easily ascertained that the flexor muscles of the thenar eminence had entirely disappeared and that a loose cribriform connective tissue—evidently erectile—had taken their place. The bone was only covered by this tissue and periosteum. Another incision was now made on the dorsal surface of the hand which extended from the second phalanx of the index, along the line of the second metacarpal up to the styloid process of the radius, leaving a flap attached to the extensor surface of the thumb. The first interosseous muscle was brought to view, but it had evidently participated in the abnormal process, as it was riddled with vascular cavities through its whole extent. The second interosseous was likewise affected. The skin itself appeared to be essentially diseased. This was very discouraging but had been expected, and an attempt was now made to excise as much of the diseased muscle and erectile tissue as possible. The whole area of the skin was trimmed, and made so thin by constant shaving on its under surface that it resembled a large Thiersch graft consisting only of epidermis; the first interosseous muscle was excised *in toto*, and the vascular mass which represented the thenar group of muscles was likewise excised with scissors and knife.

While clearing the field in this way the radial artery was purposely exposed as it enters the palm in the first interosseous space. After securing this vessel we decided to relax the constrictor and observe the restoration of the circulation in the

Fig 1. Dorsal Aspect.

Fig. 2. Palmar Aspect

Observation 8.—Cavernous Angioma of the Hand. (Dr. Matas' collection.)

parts. We were prepared for a change, but the spectacle offered by the sudden exhibition of the extraordinary vascularity of the parts was astonishing. The skin, which appeared to be thinned to a mere epidermal parchment, was now swollen, angry, turgid, and blue as if nothing had been done to it. The whole wound swelled up and it was almost impossible to understand the enormous capacity for distention that was exhibited by the merest shred of connective tissue. With all this, however, there was no spurting of arterial blood; there was simply a general and copious oozing, which came from every quarter and flooded the whole field of the operation. All attempt at further extirpation was given up and our efforts were simply directed to hemostasis, which fortunately was readily secured by returning the dissected flaps to their places and compressing the whole thenar region with packs of iodoform gauze, cotton, and firm bandaging over a splint that extended to the elbow. The child recovered perfectly from the anesthetic (chloroform) and was removed to his home from the hospital that evening.

Early the next morning, I was summoned by the parents to see the boy. There had been no hemorrhage, but I was told that a severe and long chill had come on during the night, and that very high fever accompanied by intense pain in the hand had followed. When I saw the child it was unconscious and in convulsions. The temperature had risen to 105½° F., and the pulse was so rapid that it could not be counted. It was evident that serious mischief had been caused, but I could not believe that it was due to septic infection. The hand was hurriedly unbandaged and I discovered that the whole diseased area was cold, dark and completely anesthetic. This meant sloughing. The hand was bathed in very hot water and a loose dressing consisting of lintine saturated in a weak carbolized solution and loosely bandaged was kept constantly applied. An ice bag to the head, general sponging of the body with cold water and the internal administration of digitalis, potassium bromide, and minute doses of phenacetin in whiskey toddy constituted the basis of the treatment for that day. The unconscious state continued with elevated temperature all that day and following night—but finally the temperature slowly fell

to 103° and continued at this height with slight remissions forty-eight hours longer. The hand in the meantime did not improve. The vitality of the affected area had been permanently destroyed and a line of demarcation began to show itself before the third day. This line mapped out with absolute precision the whole erectile area on both the palmar and dorsal surfaces. The sloughing process did not extend one line's breadth beyond the diseased area, but when the sloughs were removed, it was found that only half of the palm had been left, together with the third, fourth and fifth metacarpals and their corresponding fingers. The medius was so much denuded on the radial side that I decided, some time later, to turn it down after the extirpation of the ungual phalanx, and utilize it to fill the gap caused by the removal of the second metacarpal and index finger. The hand is now reduced to part of the palm and two last fingers, which are very useful to the patient.

The remarkable feature of this case is the limitation of the slough to the diseased tissues, which were differentiated from the normal elements with extraordinary accuracy and in a manner that could not have been approached by the surgeon with the help of the naked eye. At the same time it teaches the lesson that conservatism in these cases is dangerous and that radical measures must be preferred from the start. The sloughing was evidently due to three causes, viz.: (1) impaired vitality from arrested arterial supply; (2) prolonged ischemia caused by Esmarch bandage; (3) interference with a weakened circulation by firm and prolonged compression, with a view of maintaining hæmostasis after the operation.

The conclusion is finally forced upon us that in advanced cavernous angioma of the hand which involves the deeper structures and the true derm as well, it is best to amputate as conservatively as possible as an initial procedure.

Observation 9.—Gunshot injury causing a large traumatic aneurism in the lower and inner femoral region. Incision of the whole sac along the line of the femoral vessels ten days after injury. Exposure of the femoral artery and vein completely divided at the bottom of the sac in Hunter's canal. Ligation of both trunks. Packing and iodoform gauze. Recovery without notable complications.

This case is selected out of a group of four traumatisms involving the ligation of the femoral because of the special severity of the injury, which included both the artery and vein in their passage through Hunter's canal. The patient, N. D., a white laborer, æt. 21, was admitted to Ward 8, Charity Hospital, in the summer of 1892. He stated that he had been shot accidentally by a friend. The revolver carried a 38-caliber bullet, which appeared to enter the middle of the thigh, near the apex of Scarpa's triangle, and then took a downward and inward course, to escape finally in the popliteal space, near the inner border of the inner hamstring tendons. The injury had been received the day before, and the patient had been admitted shortly after the injury and put to bed, as it was evident that one of the femoral vessels had been injured. Much blood flowed through the anterior opening; a firm compress over this controlled the external bleeding, but the rapid swelling of the thigh indicated that a large hematoma was forming.

A firm bandage was applied and ice bags were kept over the wounded area, but the tumor continued to increase in size and soon developed a characteristic heaving pulsation, purring thrill and murmur which indicated the advent of the aneurismal state. On the 10th day after the injury, the patient was placed under the influence of chloroform, and after the application of the Esmarch, the sac was opened freely throughout its whole length.

The aponeurotic covering of Hunter's canal was divided, and a complete transverse section of the artery and vein was discovered. The artery had retracted, the divided ends being only held together by a portion of the sheath. The ends of the injured vessels were secured with sterilized silk ligatures, and the whole cavity packed with iodoform gauze after thorough preliminary irrigation with hot sterilized water.

The recovery of the patient was uneventful. A slight flexor contraction of the leg upon the thigh remained for several months, but I have recently examined the patient and he has now no trace of the injury in his walk. The scars alone indicate the site of the injury.

Observation 10.—Punctured and incised wound of the superficial and deep palmar arches. Wound soiled by cob-webs and perchloride of iron. Great prostration and acute anemia from excessive bleeding. Anesthesia, careful washing of the wound; bleeding points secured with hemostatic clamps; iodoform tampon in wound. The limb immobilized by long extensor and flexor splints and aseptic dressing. Removal of the hemostats in three days followed by complete healing by granulation.

In November, 1892, the patient, a robust male, æt. 36, while opening an oyster with an unusually sharp knife transfixed the left palm through and through, so that the rounded end of the knife appeared on the dorsum between the third and fourth metacarpals. Profuse bleeding followed, which indicated that an important vessel had been injured. He was brought to a neighboring drug store for assistance, but a handful of cob-webs had been applied in the meantime over both bleeding orifices. The druggist applied a compress of lint soaked in perchloride of iron and then bandaged the hand. This temporarily checked the bleeding, but in a few hours the hæmorrhage recurred, soaking through the bandage, the blood soon dripping to the floor. When I saw the patient late at night, I found him exceedingly weak, with a small, rapid pulse. There was great pallor, nausea and inability to sit up. After the administration of aromatic spirits of ammonia, digitalis and brandy, I unbandaged the hand and applied an Esmarch bandage. A mixture of equal parts of chloroform and ether was administered and well taken by the patient. The whole hand was dipped into a bowl of hot carbolized water and scrubbed until the hard perchloride clots and cob-webs had been washed away.

The palmar wound was then freely enlarged on a line corresponding to the long axis of the medius and its metacarpal until the deep tendons were exposed. It was evident that both the superficial and deep arches had been injured, and that it would not be an easy matter to discover the bleeding points in the midst of the stained tissues. Nevertheless, after freely exposing the whole depth of the wound, the constrictor was relaxed and the point from which the blood spurted at the bottom

of the wound was promptly secured with a Tait's clamp, which was left *in situ*. The wound in the superficial arch gave no trouble and all further oozing was readily controlled by a firm iodoform gauze pack. A long extensor splint reaching to the elbow was then applied and the arm was thus immobilized. Three days after, the splint was removed and the hemostat unclamped. The wound had a healthy appearance and finally healed without accidental complications.

This case is presented to illustrate a simple method of treatment for an injury which is not rare and which is likely to cause no small amount of worry to the inexperienced practitioner.

It is well known and admitted that the ligature of the arteries in the forearm for a bleeding palmar arch is untrustworthy, and that nothing short of the ligation of the brachial at the bend of the elbow above the bifurcation, as recommended by Thiriar, of Brussels, can give security against secondary hæmorrhage. But the ligation of the brachial at the bend of the elbow, simple as it may appear to the surgeon of experience, is nevertheless an *anatomical* operation which many practitioners will hesitate to attempt. Furthermore, it is always unsurgical to ligate a parent trunk when it is possible to control the bleeding vessel at the bleeding point. The danger of septic teno-synovitis has been the chief drawback in the past against the ligation of the deep palmar vessels. The difficulty of securing a bleeding vessel in the depths of the palm has also discouraged the application of the ligature in the wound, and favored ligation at a distance, but the modern methods of antisepsis and hemostasis have cleared the field of these objections.

The practitioner of the present day should find no more difficulty in controlling a palmar hæmorrhage *in loco* than he would in dealing with bleeding in wounds of other localities.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

MASSAGE VERSUS REMOVAL OF THE SOUND-CONDUCTING APPARATUS IN NON-SUPPURATIVE CASES OF DISEASE OF THE EAR.

By Louis J. Lautenbach, M. D., Surgeon to the Pennsylvania Eye and Ear Infirmary; Throat and Nose Physician to Odd Fellows' Home, etc.; late Chief of Eye Clinic, German Hospital.

It has of late years been more and more evident that the symptoms of defective hearing, tinnitus, and vertigo, when not due to a disease of the auditory nerve, are occasioned not by a pathological drumhead, but rather by some lesion of the sound-conducting apparatus. The ossicles, instead of being freely movable one upon the other, are more or less rigid from abnormal attachments between them, or the walls of the middle ear cavity, or both. In consequence of these attachments the true arch of the ossicles has been disturbed and the stapes is driven into the oval window, often ankylosed, causing pressure on the labyrinth. This pressure on the labyrinthine fluid occasions the periodical vertiginous symptoms as well as the tinnitus, the defective hearing being due to the rigidity of the conducting apparatus and the contraction of the ossicular arch. This conducting apparatus may be compared to the levers and hammers of the piano. When the key is touched, if the joints and the levers are freely movable the hammer strikes the vibrating string; but should there be any rigidity in the mechanism the key must be struck with more force to produce an equal effect.

The membrana tympani, to which formerly such supreme importance was given as the essential to hearing, is now known to be of little value in this respect, serving as the outer fixation point of the ossicular chain and preserving by its elasticity the normal ossicular arch, being to some extent a protector of the middle ear cavity, preventing the ingress of foreign bodies and being only to a slight extent concerned in the function of hearing by concentrating the sound-waves to the handle of the malleus. It is to the proper movements of the ossicles that we are indebted in the main for the conveyance of sound. If these are abnormally limited in their motion, either by attachments or overweighting, or by a shallowing of the middle-ear cavity, due to the impaction of the stapes or retraction of the membrane, thus shortening the ossicular arch, sounds are not carried at their normal intensity.

It is to these cases of ossicular attachments, overweight-

ings and shortened ossicular arches that the methods of treatment, pneumo-massage, and ossicular removals are adapted. Ossicular exercise, which I usually term ossicular massage, has for its object the regular movement of each ossicle one upon the other, with the consequent changes brought about as to the nutrition of their joints, from the friction and the increased circulation. It aims to increase the length of the shortened ossicular arch and also to draw out into a normal position a retracted or adherent membrane, while at the same time it endeavors to loosen a jammed stirrup or one more or less adherent to the oval window. In addition to this, pneumo-massage slightly influences the round window and the internal-ear fluids within, and likewise exerts some effect on the upper end of the Eustachian tube, as well as the entire mucous lining of the middle-ear cavity. Its action is mild and regular, simulating the effects of a well-trained masseur. It stimulates the parts, puts the mucous membrane into healthier condition, hastens the absorption of all morbid deposits, and gives to the muscles and ligaments their normal activities, and at the same time amplitude to the joint movements. Its action being a drawing out of the drumhead, with a corresponding outward motion of the attached ossicles, is therefore directly opposite to that produced by air-concussions and loud sounds, which so often, especially when continuous, occasion ear diseases, the whole tendency of modern ear use, due to the multiplicity of shops, factories, etc., being to drive in the drumhead and jam the stirrup in the oval window.

This method is not one of destruction, but of construction; it removes nothing; it allows the parts to remain intact, while it gives to them normal exercise of the muscles, ligaments and articulating surfaces, and an increased and healthier circulation with correspondingly increased and healthier secretions.

The practical deductions which I have reached as the result of my use of ear massage are:

1. The method is not difficult to apply, and can be used by any one who has a proper conception of the structure and functions of the ear with a knowledge of the pathological conditions present.

2. There is no risk. It has never occasioned harm nor made the symptoms worse, nor does it in any way interfere with other treatment.

3. Should it fail in accomplishing the desired result, it does not prevent the use of further measures.

4. It has improved the hearing in over 90 per cent. of my cases.

5. In about 90 per cent. has the tinnitus been relieved.

6. It has perhaps in a little over the half removed the vertiginous symptoms.

Ossicular removals aim to relieve the same conditions by destroying the continuity of the conducting apparatus by taking out either one or more of the ossicles to the outer side of the ankylosis, usually removing at least one of the ossicles of the ankylosed joint. Of late years this has been modified by, in addition to removing one or more of the ossicles, mobilizing the remaining bone or bones.

As to the practical value of these operations there is considerable difference of opinion among operators, but I believe the following statements will meet with little or no opposition from the impartial observer; they are formulated from the observations and results of many operators:

1. These operations are difficult. They require considerable skill and experience. Often the operator is not able to see what he is doing, but must feel his way very carefully. They should be reserved for the ear surgeon, as being the one most to be trusted with such delicate work.

2. The risks are considerable. Cases of permanent facial paralysis, persistent vomiting, and even death have occurred; whereas temporary palsy, acute inflammations of the middle ear, and caries are not uncommon results of the operation. Sometimes the very symptoms which called for the operation are exaggerated after its performance.

3. Should the operation prove a failure it usually prevents the adoption of other measures, being thus truly a last resort.

4. It improves the hearing in perhaps a little over 25 per cent. of the cases.

5. It relieves the tinnitus in about 50 per cent. of the pa tients.

6. It has in about half the cases removed the vertiginous symptoms.

Having found, in a case unattended with suppuration, the ossicles to be rigid and not responding to the old treatment, we have either to pursue the massage method or that of ossicular removal; but it will be asked, how are we to decide between the two? There is no need to decide between them, the massage treatment should be instituted, and if unsuccessful, then are we to consider the question of operation. I do not believe any case should be operated apon until after the patient has been at least three months under treatment. I have heard operators say that they never operated until after they had thoroughly examined and for a long time treated the patient, and yet I remember one day in April of last year three patients presented themselves at my ear clinic who had been advised to

have the operation performed, not one of whom had been under treatment for the ear, even as much as one visit, the opinion being given upon their first visit to an ear clinic.

During these three or more months the patient should be placed under the best hygienic influences, should be treated locally (nose, throat and ears), as well as generally. Any part of the body needing it should receive proper attention. The ear treatment should include systematic pneumo-massage, and if deemed necessary careful phono-massage. If, after three or more months of such persistent treatment, there is no improvement of any kind; and if we are convinced, in a case of impaired hearing, that the auditory nerve retains its functional value, or that the tinnitus or vertigo, or both, are so great as to justify it, then only can we properly countenance an operation. I feel sure that the need of such an operation will rarely arise, even in a very large special practice. Personally I have performed but twenty-four such operations in five years, treating in that time over 4000 ear patients.

The first of these I performed in March of 1889, removing the stapes as well as the incus and malleus; the last in August, 1894, removing the incus only. In no other case have I advised the operation. I have held myself ready to do it in perhaps thirty or forty more, telling the patients that perhaps later it might be necessary, but the need for it has been dissipated by treatment.

There are distinct fields for the use of the massage and the removal treatments, the latter being advisable only where the former fails. I do not think that removal should ever be done without the previous continuous use of massage. To subject the patients to operations, with the risk of making the conditions worse, and even that of death, when not absolutely necessary, I consider most reprehensible. After you have tried, and thoroughly tried, all the means at your disposal, including the proper and systematic use of the massage, then only, if the symptoms should prove of sufficient gravity, will you be justified in subjecting the patient to the risk before mentioned. I have seen so many of the bad results of ossicular operations (in fact, more than the entire number of operations I have myself performed), and I so often meet with those who have been advised to have it done, and yet have not had their ears thoroughly treated, that I feel it to be necessary to condemn these operations unless they are done as a last resort to relieve either most distressing symptoms or to endeavor to restore hearing which can not be otherwise improved. For the past few years there has been a great degree of recklessness in advising patients to have these operations performed. I remem-

ber the case of a patient with a watch-hearing distance of as much as eighteen inches (18.52) in the to-be operated ear, without vertigo, and but little tinnitus, being so advised. Now what were his chances of gain? Very little as compared with his chances of loss. He almost surely would have been worse had he submitted to the operation. I will mention a typical case more fully. It proves interesting from the fact that about six months' treatment has done for her more than any such operation could possibly have accomplished.

Mrs. E. H., aged 45 years, in the winter of 1891 to 1892 had an attack of the catarrhal type of la grippe, during which time marked tinnitus of both ears developed, with defective hearing of the left ear. In May of 1892, on account of a hypertrophic nasal catarrh, she put herself under the care of a throat specialist, who, to some extent, relieved her of the nasal trouble. The ear symptoms increasing, she was sent to an ear specialist in October, 1892, who advised her, after examining her on two occasions, but not subjecting her to any treatment, that the disease of the middle ear demanded the removal of the ear-bones—that no other treatment was useful, whereas this operation was followed by good results in more than ninety out of one hundred cases; consulting her family doctor, he advised against the operation.

In February of this year she came to me, having in the meantime used no treatment except salt water for the nose and throat.

On examining the left ear, I found that she was troubled with extremely annoying tinnitus, with occasional vertigo, and that she could barely hear a fifty-two inch watch on contact; on the right side she had a hearing distance for watch of twenty-two inches, with occasional tinnitus only.

The left ear, the one which she was advised to have operated upon, was the one to which I devoted my attention. After finding very marked retraction of the membrane, with little or no motion of the ossicles, and finding the auditory nerve in good condition, I subjected the ear to both pneumo and phono-massage, especially the former, twice a week, with the result that her hearing has markedly improved. She now hears the watch at thirty-eight inches, a greater distance than in the good ear, in which she hears it at thirty-four inches.

In the left ear there is occasional tinnitus, only upon taking a head-cold; the tinnitus in the good ear is now more noticeable than in the bad one. The left drumhead, which was formerly retracted and of a dull-leaden hue, without any ocular evidence of blood circulation, is now normal in shape, somewhat of a pearly-pink color, and fairly well nourished.

In this case the tinnitus has almost entirely disappeared, there is no vertigo, and her hearing is quite fair for one of her age, much better than I have ever seen as a result of an operation on the ossicles. The ear in which the operation was to be done, indeed, is now better than the ear supposed to be good.

Is it not better to use a method which is painless and which is unattended by any risk, local or general, one which is almost always successful, at least in some degree, and which leaves the anatomical structures so that, if necessary, we can apply other methods, and which if unsuccessful, at most delays future treatment for from three to six months only, than to subject the patient to an operation which is painful, uncertain in its effects, one which destroys structures that can not be replaced, so that if unsuccessful, which it is in more than half the cases, the patient leaves all hope behind, and which sometimes intensifies the very symptoms for the amelioration of which the operation was performed? It seems to me that there can be but one answer. In non-suppurative cases of ear disease use massage and other necessary treatment first; in case of failure, then only, the operation.

DISCUSSION.

Dr. L. J. Hammond—The experience of Dr. Lautenbach does not accord with that of Drs. Knapp and Dench, of New York, as given at the meeting in Washington. They seemed to think that the massage treatment did not give the results that were expected from it. The experience of these and other gentlemen has been that where there is marked retraction with great thickening, the results are not as good as those obtained by the ordinary methods with the Politzer bag and Siegle speculum. The cases that were at all benefited were the mild ones that would have shown the same result by the routine treatment.

Dr. Lautenbach laid great stress upon the bones as a conducting medium. There have been a number of cases where the malleus and incus have been entirely destroyed with the membrane, and yet hearing was perfect. I recall three such cases. I think that the bones as a whole have very little to do with hearing, except the stapes. I think that the healing depends largely upon the condition of the footplate of the stapes over the oval window. If that be markedly bound down, I do not see how massage alone will be of great value. When added to the general routine treatment it may serve a good purpose.

Reference was made to permanent paralysis following operative treatment. I have done the operation many times,

principally for suppurative conditions, and have had temporary paralysis only follow. All operations involving the tympanic attic have been followed by temporary paralysis, and the general opinion is that it is impossible to prevent it in these operations, owing to the close proximity of the facial nerve. It, however, invariably subsides without treatment in a few weeks.

Dr. E. Larue Vansant—I have had considerable experience with this massage, and in non-suppurative cases have been fairly well pleased with it. Certain cases, however, are not improved, and this may be explained by the pathological condition present. Where the adhesions are not great the case will improve. It may truly be said that they improve almost as well under the use of the catheter and Politzer bag. Where there are marked adhesions binding the drumhead down to the promontory, and probably adhesions between the ossicles, the massage treatment will not break these adhesions, and may not even stretch them. What it will do will be to puff out that part of the membrane not bound down by the adhesions. I have for some time made use of Delstanche masseur and with it used Siegle's speculum, and in this way I can easily see when by increased pressure certain parts of the membrane are made to bulge. Indeed, you can almost at once give a prognosis as to whether or not massage will do good.

In non-suppurative cases I think that it is not wise to recommend removal of the drumhead and ossicles for the permanent improvement of hearing. For intense tinnitus or vertigo it may be recommended in certain cases. It is more preferable than massage for intense tinnitus with vertigo. Lately I have been treating these cases of non-suppurative otitis media with marked retraction by a combination method. I have first made an incision in the drumhead, and then, taking the little trowel-shaped knife used in removing the ossicles, I have attempted to cut through some of the bands in the middle ear, particularly toward the promontory, and then followed this treatment by massage so as to prevent the reformation of adhesions while healing is going on. I think that my results have been better than with either method alone.

Dr. George C. Stout—I think that massage and treatment of that kind should be instituted before any operation is recommended and that this is the general practice. Operation should be reserved for a last resort, and, so far as I can learn, this is the rule with all modern aurists.

The instruments which make a noise synchronous with the massage are as yet considered a doubtful improvement over noiseless massage.

Dr. Lautenbach—I am glad to learn that so many have

used massage, but unfortunately most of the methods in use have been crude. I have used Siegle's speculum as a masseur for thirteen years; but this is not the method that I referred to in my paper. I refer to regular massage, with a definite amount of exhaust used, a definite number of times a minute, studying your case until you find the amount of motion that you desire, and regulating it accordingly. When Dr. Knapp and Dr. Deuch referred to massage they could not have spoken of this method, as they knew not of its use. They have to-day no such instrument in their offices. I understand they both have the vibrometer and the vibrophone, but not this machine. The methods in use outside of the Siegle speculum and the Delstanche apparatus have been methods of phono-massage, and not pneumo-massage. The phono-massage methods have their use not so much in the process of loosening up the sound-conducting apparatus as in stimulating that part of the nervous structures of the labyrinth lying close to the stapes. We are now learning that in plastic and catarrhal disease of the middle ear, the proximal endings of the auditory curve—those nearest the stapes—are affected often early in the disease. Often even when the hearing to the watch is quite good the patient has tinnitus. This indicates that the labyrinthum structures have been affected early. In those cases where there is loss of hearing without tinnitus, phono-massage will be of no service. The main advantage to be derived from phono-massage is in the dissipation of tinnitus. It can not restore the lost hearing.

Speaking of the necessity of a sound-conducting apparatus, I think that it is a self-evident proposition that the sound-conducting apparatus so carefully constructed and mechanically so perfect would not be there if it were not needed. I do not think it would have received so much attention from Helmholtz if it did not have its use. I admit that I have taken out the stirrup, and the patient could still hear; but I also know that the patient did not hear perfectly.

I do not mean to advocate massage separate from all other treatment of the ear. I do not think that any case of ear disease is to be treated by massage alone. In my paper I presumed that all other necessary treatment would be thoroughly carried out. One who tries to treat disease by one method without paying attention to the general as well as the local conditions present utterly fails to comprehend the science of medicine.

Speaking of severe cases, I might refer to a lady, aged 34 years, a school teacher, who since early childhood has been deficient in hearing. For eleven or twelve years she has been

constantly under treatment and constantly getting worse. Five or six weeks ago a physician advised her that an ossicle operation was the only thing to be done. Another physician expressed the same opinion. I saw her Monday, two weeks ago, and since then she has been treated in the ordinary way, and with powerful pneumo-massage to the ear. This morning she told me that she could hear her clock at two or three inches from the to-be-operated ear, a thing she has not done for six years. In the ear the membrane is adherent to the promontory, but has been detached mechanically by the two weeks' treatment.

The massage method does separate the drumhead from the promontory, and it is only a question of time when the adhesions will be removed. The Delstanche masseur, while a good instrument in its way, is not the one that I should prefer in these cases. You can not get with it the precision of motion and persistency that you desire. You can not, if necessary, keep it up for one hour at a time. You want a method that will give you an easily regulated persistent movement of the ossicles, and be able to use it as long as you desire, anywhere from five minutes to an hour, or even more.

ICE-COLD APPLICATIONS IN ACUTE PNEUMONIA.*

By THOMAS J. MAYS, A. M., M. D., Professor of Diseases of the Chest in the Philadelphia Polyclinic, and Visiting Physician to Rush Hospital for Consumption.

While cold applications in the treatment of pneumonia are by no means a new procedure, I am of the opinion that this has not yet received the consideration and extensive introduction which it merits, and in saying what I have to say to-night I trust that I am loyal to that spirit which prompts one to conservatism in the commendation of any curative measure until it has stood the test of experience. When, however, one has observed the magic changes which follow in the pneumonic condition under the beneficent influence of cold locally applied, as has been done by others as well as by myself on numerous occasions, I feel that this method has passed the experimental stage of clinical medicine, and I therefore hope that you will pardon me for appearing obtrusive when I again direct your attention to this subject.

Cold has been employed in the treatment of pneumonia for various purposes and in various ways. Jürgensen believes that the chief danger in this disease arises from the high fever, and which finally leads to cardiac failure. He appeals to the experiments of Zenker and others to show that high fever is detrimental to the fibres of the heart-muscle and to those of the

* Read September 26, 1894.

voluntary muscles. He, therefore, recommends cold principally with a view of reducing the pyrexia. It is a question, however, whether a high temperature of itself is more fatal in pneumonia than a low one; but this is a point which will be referred to later on. So far as I know Niemeyer was the first to apply cold immediately to the chest for the purpose of reducing the activity of the local inflammatory process in the lungs.

It must be seen that these different views govern the practitioner in the mode of applying this remedy. If he believes in the constitutional nature of the disease, and especially if he thinks that the high fever endangers the integrity of the heart-muscle, his principal aim is to reduce the fever at large, and to accomplish this he immerses his patient periodically in a cold bath, which is done by Jürgensen and others. If he holds that the local trouble in the lung is responsible for the high fever, and that this constitutes the vulnerable point in the disease, he will pay less attention to the general condition and make his cold applications directly over the inflamed lung.

I believe that much of the ill success which has followed the use of cold in pneumonia is attributable to the fact that it was employed according to the first method. The pyrexia of pneumonia is not the same as that of typhoid fever, or at least it does not yield to cold in the same way as that of the latter does. The former is best subdued by cold being applied directly over the affected lung as well as to the head, and general baths or spongings do not seem to be essentially indicated, and if the latter are applied they do not keep the fever down for any long period. If the fever and a great deal of the constitutional disturbance of pneumonia depends on the inflammatory process in the lung, then an abatement of the pulmonary disorder will strike at the very root of the difficulty, and it is clear too that the measure which accomplishes this must be applied continuously and persistently, and not like in typhoid fever, at stated intervals. Moreover, it is a hazardous procedure to subject a pneumonic patient to the bodily changes and cardiac strain which are incidental to the giving of a general bath. It must be remembered that the heart is always implicated in pneumonia, and is therefore a weak and easily assailed organ.

How then is the cold to be applied, and how long must it be continued? The affected area must be surrounded with ice contained in bags which are wrapped in towels. If the disease is confined to the front base on one side, one good-sized bag will suffice; but if the exudation extends to the side and back, then at least one more bag must be applied laterally and as far

back as possible. If the affection is extensive, put on as many ice-bags as are necessary to cover the whole area. Watch the morbid process, for it is very apt to migrate from one spot in the chest to another, and if it does so, follow it up with the ice bags.

The length of time for which cold is to be used must, in most cases, be decided by the amount of fever which is present. If this falls to or near the normal point, and shows a tendency to remain there, then the ice may be gradually removed. It is best, however, not to be in too much haste in withdrawing the cold, for frequently before this is off very long the temperature suddenly flies up again. If this takes place, and the temperature remains high after the ice is reapplied for some time, it is a possible indication that the inflammation has invaded a new field, and is not active in the old one. This has happened several times in my experience.

It must always be borne in mind, however, that the ice is not solely employed for the purpose of reducing the fever, but rather with the object of circumventing the exudative process and of hastening resolution in the affected part. There may be very little fever present in some cases of pneumonia, as in the aged, yet the destructive changes are going on in the lungs at a rapid rate. In senile and latent pneumonia the activity with which the ice is employed must be governed entirely by the impression which is made on the pulmonary disintegration. This must be the objective point, and not the temperature.

This brings me to say something on the fever in pneumonia as a prognostic sign. Although a temperature of 105 deg. Fahr. is generally regarded more dangerous in the adult than one of 102 deg., I really believe that this is an error. When the fever is excessive, as when it rises to 107 or 108 deg., every one admits that this is almost necessarily fatal; but it must also be granted that a markedly low pneumonic temperature, as for example 95 or 96 deg., is equally fatal. The safety point, if such there be, lies somewhere between these extremes; and within a certain range I think we can look upon this fever as an indication of the degree of vital resistance which is present in the body. If it remains between 104 and 105 deg., the prognosis is good, provided other conditions are equal; but if it is either very high or very low it is evidence of serious exhaustion and of vital inadequacy to cope with the destructive forces.

The opinion is partly confirmed by the high authority of Dr. Wilson Fox, when he says, on page 352 (*Diseases of the Lungs and Pleura*), that "the extent of the pyrexia has a less unfavorable influence on the prognosis than might be ex-

pected." Out of a total of 353 cases he shows, on the same page, that the mortality from 107 deg. to 110 deg. was 100 per cent.; from 106 deg. to 107 deg., 42.8 per cent.; from 105 deg. to 106 deg., 18 per cent.; from 104 deg. to 105 deg., 7.4 per cent.; from 103 deg. to 104 deg., 17.6 per cent.; and under 103 deg., 36.9 per cent.

What, now, is the local action of cold on the pneumonic process? This, I believe, consists in its powerful influence on the pulmonary capillaries and in its ability to resolve the exudate and infiltrate. It is well known that the most apparent lesion in acute pneumonia is an enormous distention of the pulmonary capillaries, with partial or complete stasis of the blood in these vessels, exudation of fluid constituents of the blood, and proliferation and accumulation of epithelial cells, and diapedesis of white and red blood-cells in the alveoli and bronchioles. Now, it is well known that cold has the power of contracting blood vessels, and from this action it can be understood why it should be of benefit in pneumonia. But how it can dissolve an exudate or an infiltration is not so clear to me. That it accomplishes this I am firmly convinced. For example, there is a pneumonic area which is wholly devoid of vesicular sounds, and has a flat percussion note and bronchial breathing, indicating beyond doubt that the process has passed beyond the stage of engorgement and into that of exudation or of infiltration, yet the application of ice to this spot will in a remarkably short time develop a new group of physical signs, such as crepitation, reappearance of the vesicular murmur, diminution of flatness, etc. This has not only been observed by myself over and over again, but is also dwelt on by Dr. Lees, who had an extensive experience in the use of ice in this disease, when he says (*Lancet*, November 9, 1889, page 894): "In many cases I noticed a striking arrest in the development of the physical signs," and that the ice bag "distinctly tends to repress the inflammatory process in the lung."

Is the ice treatment applicable in croupous or in acute catarrhal pneumonia, or in both forms of the disease? In my earlier experience I inclined to believe that it was only adapted to the treatment of the croupous variety, but further familiarity with the measure taught me its use in the acute catarrhal form. I have also given it a trial in chronic broncho-pneumonia and in pulmonary phthisis, but with rather indifferent results, if not with positive harm in some cases. I must admit, however, that in several cases of this kind it seemed to do exceedingly well. It must be borne in mind, too, that the ice bag is strongly recommended by the late Dr. Brehmer and by Dr. Detwiler and others in the treatment of chronic lung trouble, and with such

excellent testimony in its favor it is very probable that many of us do not yet understand the specific indications for its use.

Besides being useful in croupous pneumonia and in acute catarrhal pneumonia, it also has excellent effects in the capillary bronchitis of infants and in the catarrhal pneumonia which follows measles, diphtheria and scarlet fever.

It is also desirable in this connection to say something regarding the heart in this disease. From the tenor of much that is said and written on pneumonia at the present time, one receives the impression that more is to be feared from cardiac than from pulmonary failure. That the heart's function is impaired no one will, I think, deny. Indeed, this could not be otherwise, for the heart and lungs have a common nerve supply, are bound closely together by the pulmonary blood current, and whatever invalidates one must also affect the other; but I believe that the doctrine that pneumonia becomes fatal because the heart is unequal to the work of forcing the blood through the engorged lungs, and all that we are required to do is to stimulate and to goad this organ, unmindful of what is going on in the lungs, is as imaginary in its conception as it is fatal in its practice.

The pulmonary circulation is undoubtedly obstructed, and there is no question but that the heart chafes, frets and becomes seriously embarrassed. Dr. Wilson Fox (op. cit., p. 285) says that "one of the most important consequences of pneumonia on the circulation is the occasional occurrence of thrombosis in the pulmonary vessels leading to the affected part. This event, caused in all probability by the retarded circulation in the lung, is not uncommon, and may by extending to the larger branches of the pulmonary artery, be a source of immediate danger from sudden death, and may also, in great probability, retard the process of resolution and the subsequent convalescence." But is this any reason why we should whip up this organ in the hope that it may perform an impossible task, and stand by and do nothing to alleviate the blockade in front? Is this sound sense or physiological reasoning? No. We must discard this cart-before-the-horse theory, and make strenuous efforts to remove the difficulty in the lung, and in this way liberate the heart from its entangled situation. To accomplish this very end there is no measure more efficacious than ice, and besides removing the engorgement and even the exudation in the affected lung, it also acts as a powerful stimulant to the heart's function. Indeed, it is chiefly for its serviceable influence on the heart that the ice-bag is recommended in chronic lung diseases by Dr. Brehmer and others.

In addition to the ice, most of the patients received quinine, acetate of ammonia mixture, strychnine, digitalis, morphine occasionally, a nutritious diet, etc.

In conclusion, I beg to say that the external application of cold in typhoid fever has reduced the death rate from this disease to almost nothing, and I am sure it is not too much to presume that the same remedy, although differently applied, will do the same in the case of pneumonia. My opinion is based on what I have seen in my own practice and in that of others. In my collective report of fifty cases from various sources (see *Medical News*, June 24, 1893) there were two deaths. Since the publication of this list I have received abstracts of seventeen other cases treated by Dr. Jackson, of Brockville, Ontario, together with seven cases collected by myself, without a death, neither the histories of which, nor those of Dr. Jackson, had I time to write out since receiving the kind invitation from your Board of Directors to prepare a paper for this evening—making in all seventy-four cases of pneumonia treated with cold applications, and two deaths; or a death rate of 2.70 per cent.

Now, the death rate from pneumonia, when treated according to the current methods, is variously estimated at from 20 to 30 per cent., hence the results from the cold water treatment are at least ten times better than those which are obtained by other methods.

DISCUSSION.

Dr. Alfred Stengel—I disagree entirely from Dr. Mays as regards the heart in pneumonia. I have seen a considerable deal of pneumonia clinically, but a great deal more pathologically. I have not made a post-mortem in pneumonia in which I did not find some cardiac thrombosis. I have seen the thrombosis of such a character that it was difficult to imagine how any circulation could be carried on during the last moments of life. Of course, in some cases it is difficult to determine whether the thrombi are ante-mortem or post-mortem, but in most cases the manifestly ante-mortem character of the thrombi shows that the heart must have been seriously embarrassed. It is certainly the opinion of most authorities that the heart is seriously embarrassed, and post-mortem experiences would indicate the same thing,

Dr. J. M. Anders—I was somewhat astonished to hear the reader of the paper take the position that the fever in pneumonia was in all probability the result of the localized inflammation. The localized inflammation may, to some extent, show the degree of infection, but its presence does not prove that this not an infectious disease. I should incline to the view that the temperature is an indication of the severity of the type of infection, and not of the severity of the local inflammation.

I am always glad to hear a paper on the use of cold. Cold, whether locally or generally applied, can have but one effect in this disease, and that favorable. If applied locally, as suggested, it would undoubtedly mitigate to some extent the local inflammation, but it could not in an acute infectious disease control to any extent the course of the ailment. I do not believe that there is anything that will entirely control the course and symptoms of pneumonia, simply because it is an acute, infectious, self-limited disease. The local use of cold can not meet all the indications in a case of pneumonia. It is well enough in a mild case, where the respiration is ordinarily good. the temperature only moderately high, and there are no nervous symptoms, but in a severe case the cold or tepid bath meets many more indications and is more efficacious. One of the reasons for the bad respiration is the presence of pain, hence this should be gotten rid of early. The local application of cold does not influence the respiration of a patient suffering with pneumonia, in my experience; whereas the cool or tepid bath stimulates to deeper respiration and assists expectoration. Its effect on the nervous system can not be over-estimated. I shall not go into the subject in detail. It is scarcely necessary; but it is bad practice, I think, to rely upon the local use of cold, which meets but a single indication, when we have at hand the cool or tepid bath, which meets so many and such as are of vastly more importance than the mere combating of local inflammation to the welfare of the patient.

Dr. B. F. Stahl—I am interested in the use of cold in the treatment of pneumonia, and especially so after considerable experience with application of baths in the treatment of typhoid during the past few months. I recognize that the general application of cold or cool water is productive of rest and of better respiration, and it has a general tranquilizing influence by its reduction of temperature. I am led to anticipate that its application in pneumonia will be advantageous. I freely admit, however, that I have had no direct experience in the use of local application of cold in pneumonia. I am ready to try it in any case where it may be applied generally or in the form of a bath, and I believe that we may expect decided advantages from its use.

Dr. Lawrence Wolff—I have had some experience with the use of cold in pneumonia. A couple of years ago I employed the cold bath in the treatment of pneumonia in my hospital cases, but the results were not as favorable as with other methods. I have used the local application of cold with more advantage. Dr. Da Costa taught many years ago that the ice poultice was one of the best applications, and relieved

pain better and stimulated respiration perhaps better than any other application. It has been productive of great good in my hands.

Dr. John Aulde—My object in speaking is rather to make a suggestion to the reader of the paper in order to establish some physiological basis which may be of further value as indicating the effect which cold applications produce in pneumonia. The empirical deduction as to the value of ice in pneumonia seems to be fairly well founded, and would have been accepted ten or five years ago as very good evidence, but at the present time it seems to me that something more is demanded. It is hardly worth while nowadays to speak of "vital force," because we can go closer to life than that term would indicate.

The use of the cold bath in typhoid fever has been referred to and its virtues highly lauded. If the cold bath is useful in typhoid fever we should be able to make some observations which would give us some exact idea of the effect which it produces. It would surprise you if I were to prophesy that within two or three years some one would come before this society and advocate the use of massage in the treatment of pneumonia. It is only a few months since that a paper was published by Dr. Mitchell, of this city, referring to the wonderful effect of massage in anæmia, showing that it increased the number of red and white corpuscles.

In pneumonia we have rather a peculiar condition, different from that seen in typhoid fever. Dr. Osler has made some observations on the changes in the blood in this disease. He found that shortly after the leucocytes began to increase in number there was a defervescence, and a favorable change took place. If the number of leucocytes is large—that is, if a general leucocytosis takes place, he is able to say that the patient will recover, even if the temperature has not changed. In typhoid fever there is no leucocytosis, but it seems probable that in typhoid fever the cold bath is sufficient to produce an artificial leucocytosis. Consequently, if the cold bath is valuable in that disease it seems probable that it may produce the same effect in pneumonia, where there is a natural tendency to leucocytosis.

I would suggest that the blood be examined in cases where ice is applied. If it can be shown that the effect of cold is to increase the number of leucocytes we shall have a definite basis on which to rest our conclusions.

The President, Dr. De Forest Willard—I would ask Dr. Aulde if Dr. Mitchell did not subsequently explain the increaes in the number of corpuscles found, not by an actual increase in

the number of blood-disks, but by the fact that corpuscles lurking along the circumference of the vessels were brought into the current by the massage, just as the logs along the banks of a lumbering stream may be forced into the current?

Dr. Aulde—Of course we are not assuming that there is an increase in the number of corpuscles *de novo*. If those out of the current are brought into the stream by the contraction of the vessels it is substantially the same thing. This brings out the leucocytes that are instrumental in maintaining the antiseptic condition of the blood, and with the contraction of the blood vessels, produced by the cold, the red corpuscles carry oxygen to the tissues and take away carbonic acid and other waste products.

Dr. Mays—Dr. Aulde seems to lay great stress on the fact that leucocytes are present in pneumonia. Leucocytosis is present in many conditions, both normal and pathological. Every time you take a drink of beer or eat a beefsteak, or take bitters, leucocytogenesis is increased. I do not think that the fact that the number of leucocytes is increased is of any great advantage in the successful treatment of pneumonia.

Dr. Stengel referred to the presence of thrombi in the pulmonary blood vessels of pneumonia, and I think I must have read my paper to poor advantage if I have not succeeded in making plain my belief in the existence of this condition. Indeed, I invoke the high authority of Dr. Fox to show this. I think my intention has been misconceived by Dr. Stengel. The point that I tried to make clear was that this thrombosis leads many practitioners to try to whip up the heart to perform the impossible task of pumping blood through this thrombotic condition of the vessels in the lungs. They lose sight of the fact that the foundation of this thrombosis exists primarily in the lungs. They do not pay any attention to its removal in their treatment. The patient dies, and they believe that he dies because the heart has failed to perform its duty, while in truth death is caused by pulmonary failure.

I know that Dr. Anders has made use of cold, and I think that his results were rather favorable. He speaks of the fever as an indication of the extent of the infection. If by infection he means the amount of disease in the lung, I can hardly endorse the statement. I have in some of my cases seen high fever where there was small amount of infiltration. In one case particularly, seen three years ago, the amount of infiltration at the base of one lung was so slight as to be detected with difficulty, yet that patient had a temperature of 106 deg. and 106.5 deg., and died in eight days. I did not apply ice in that case, for I did not then know its great value. I wish that I had, for

I believe I would have saved the life of a dear friend. I infer from what Dr. Anders has said that he has not applied ice assiduously and persistently, for had he done so I think that he would not have said that he could not control the respiration in pneumonia by the application of cold. I expect in every case where ice is applied to have the temperature fall, the pulse fall, and the respirations fall. I do not think that the use of tepid or even cold baths are of service in pneumonia. The fever in pneumonia is different from that in typhoid fever. It does not yield to general cold as does the fever in typhoid. I think that if the prejudice against the application of ice would be removed this treatment would be more thoroughly tried. I think that it will be found to be the most applicable and most efficacious treatment for pneumonia. This has not only been my experience, but also that of others. It has been almost universally successful; in seventy-four cases there having been only two deaths. I do not say that this proportion will be maintained, but the treatment certainly has a great influence upon the local process in the lung. It circumscribes and aborts the exudation in the lung, and this is as much as can be expected from any measure.

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Editorial Articles.

THE NEW PROFESSOR OF SURGERY, DR. RUDOLPH MATAS.

The vacancy created by the death of Dr. Albert B. Miles in the Chair of Surgery in the Medical Department of Tulane University of Louisiana was filled on September 28, ult., by the election of Dr. Rudolph Matas, formerly Demonstrator of Anatomy.

The pleasure caused by the selection of Dr. Matas was widespread and sincere. In choosing him the faculty showed its ability to recognize talent, and at the same time strengthened itself in the esteem and affection of all classes of our community, both professional and non-professional. To all who have had the good fortune to come in contact with him, Dr. Matas has always shown the genial courtesy which is a part of his nature; to those who have appealed to him for relief from the ills of flesh, he has ever been the faithful and interested adviser who felt for his patients a deep personal interest in their afflictions.

Dr. Rudolph Matas was born of Spanish parents, on September 12, 1860, at Bonnet-Carré, in St. John parish, Louisiana. His father, Dr. N. Hereu Matas, is a prominent oculist in Brownsville, Texas. When the present Professor of Sur-

gery was two years old his parents returned to Spain; they lived in Barcelona and Paris for about eight years, during which time the young son acquired a fair knowledge of both French and Spanish. That knowledge was not wasted, but added to in later life, so that now Dr. Matas can deliver himself fluently in both languages, though English is most at his command and serves best as the vehicle of his thoughts. In his writings and conversation, it is not difficult to detect the grace and elegance of Castilian style engrafted upon the usually rugged and energetic Anglo-Saxon diction.

In 1868 Dr. Matas, Sr., returned with his family to the United States, but this time he selected Brownsville as his future home. It was in that city that Rudolph Matas learned the tongue of his native land. He afterward spent three years at Soulé's College in New Orleans, and then went to Matamoros, Mexico, opposite Brownsville, where he completed his academical education at the San Juan Institute in 1876. During his stay in Matamoros he acquired a good deal of practical knowledge in pharmacy in the drug store of his friend, Carlos Brayda. In 1877 he came to New Orleans and matriculated in the Medical Department of the University of Louisiana. At the end of his first session he entered the race for position of Resident Student of the Charity Hospital, twelve students being appointed each year. The system of appointment after competitive examination had been suspended for several years, during the very troublous times when political affairs were very unsettled. The custom was restored in 1878, and young Matas was among the first batch of students to undergo the revived ordeal. The result of the examination showed that the young student, a stranger in his native State, was more than able to fulfil the requirements of the examination. During the session of 1877-78 the student had burnt the midnight oil so often that it was no wonder that one with his natural talents should bear away the honors of the examination. The story of young Matas' prolonged and earnest application to his books and hospital work would read almost like a fairy tale to the average student of medicine. The assiduity that marked his student days has never flagged, except when utter physical prostration made it impossible for him any longer to prosecute his always arduous labors. Fortunately, nature has endowed him with a magnifi-

cent physique, which has enabled him successfully to prosecute labors that would appal and crush most men.

During the time that young Matas passed his examination, politics had a great deal to do with almost everything except the salvation of a man's soul. Some members of the Board of Administrators of the Charity Hospital did not view competitive examinations with a favorable eye, but wanted some of their student friends, with valuable political affiliations, to be appointed. Had this been done, young Matas, who was devoid of political influence, would have been sacrificed; but the late Dr. A. C. Holt, the vice president of the Board, had too stern a sense of justice to permit paltry political considerations to disturb his sense of right and wrong. He represented to his colleagues that the sacrifice of the friendless student would be a gross act of injustice, inasmuch as they, by restoring the system of competitive examinations, had committed themselves, or entered into a compact, to bestow the coveted positions upon those who had fairly proven their fitness for them. When Dr. Holt had manfully defended the cause of right, and clearly set it before them, they all, from a sense of duty, gave the positions to whom they belonged. Thus, at the very beginning of his medical career, did Dr. Matas attain his mark by merit alone.

His first year as resident student embraced the awful epidemic of yellow fever of 1878. He stood at his post while his co-laborers were being struck down on all sides. The experience acquired during that terrible visitation served him well in 1882, when, as a physician, he was called by the officials of Mier, Mexico, to treat the people of that city, which was then in the throes of an epidemic. The grateful memorials he preserves of that epidemic attest the gratitude of a stricken people, and the skill with which he battled against the fearful disease.

In 1879, while yet a student, Mr. Matas was appointed interpreter of the Yellow Fever Commission, of the National Board of Health, that went to investigate the disease in its stronghold in Cuba.

In 1881 he was appointed Medical Inspector at Vicksburg by the National Board of Health. He held this position for a year, when he was called to Mier, as above mentioned. He returned to New Orleans in the latter part of 1882, and he has

been here ever since, except for two trips to Europe and summer vacations for much needed rest. In 1886 he was appointed Demonstrator of Anatomy in his Alma Mater, retaining that position until his election as Professor of Surgery. During his incumbency he displayed the same devotion to duty that he has always shown in his work, and which he will certainly bring to his new and enlarged field of labor.

Dr. Matas is one of the founders of the New Orleans Polyclinic, his chair being that of Operative and Clinical Surgery and Applied Anatomy. Since 1886 he has been a Visiting Surgeon of the Charity Hospital, and Consulting Surgeon of the Eye, Ear, Nose and Throat Hospital since 1890.

Prior to 1883 he did much literary work as a reviewer and contributor in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, and in 1883 took charge of the publication with Drs. L. F. Salomon, W. H. Watkins, D. C. Holliday and F. Loeber, In 1889 he was elected associate editor of *Sajous' Annual of the Universal Medical Sciences*, and still fills the position. Other of his honors are as follows: Honorary president of the section of surgery in the Pan-American Medical Congress in Washington, D. C., in 1893; member of the Association of American Anatomists since 1888, member of the American Medical Association from 1886 to its dissolution, member of the New Orleans Medical and Surgical Association since 1886, and president for one year; member of the Orleans Parish Medical Society, and its annual orator in 1885, and vice president in 1890; member Louisiana State Medical Society, vice president in 1892 and president this year.

Dr. Matas' writings have spread his fame over this country and Europe. His works are many. The more important are as follows: Contributions to Buck's Reference Hand Book of the Medical Sciences, Vol. 5; Treatise on Periodicity in Disease; contributions to Keating's Encyclopedia of Diseases of Children, Vol. 1, 1889; article on Diseases of the Pleura, in Hare's System of Therapeutics; articles on various subjects in Morrow's System of Dermatology and Genito-urinary Surgery. Foremost among his orations are the following: Annual oration of 1885 before the Orleans Parish Medical Society on the Physical Basis of Crime, monograph of Iliac phlegmons before the New Orleans Medical and Surgical Association in 1885, report

of the discovery by himself of larvæ of undescribed species of dermatobia, a peculiar skin parasite that Dr. Matas himself discovered in his work here; anatomical studies from the dissecting room of the local college; address at Dr. H. D. Schmidt's ovation in 1884, clinical report on intra-venous saline infusion in the wards of the Charity Hospital from June, 1888, to June, 1891; report on the successful extirpation of the thyroid body for sacoma, address by invitation to the Chicago Post Graduate School on traumatisms and traumatic aneurisms of the vertebral artery, in which he referred in eulogy to the greatness of Dr. A. W. Smyth; treatise on the performance of circular enterorrhaphy with easily improvised catgut rings, a method invented by Dr. Matas himself. In addition to these he has written a number of less important treatises and addresses and numerous editorials and reviews on various medical subjects.

RESIDENT SURGEONS OF THE EYE, EAR, NOSE AND THROAT HOSPITAL

In the first week of next December, the executive committee of the Eye, Ear, Nose and Throat Hospital of this city will elect four resident surgeons for the year 1895. As this hospital has one of the largest special clinics in the United States, it offers an exceptional opportunity for the study of diseases of the eye, ear, nose and throat. Physicians desiring full information can obtain the same from Jos. A. Hincks, Esq., Secretary, No. 29 North Rampart Street.

Abstracts, Extracts and Annotations.

MEDICINE.

AUTO-INTOXICATION AND THE NEUROSES.

By D. R. Brower, M. D., Chicago.

The present is pre-eminently the time of the study of the etiology of disease, just as the past has been characterized by an almost exhaustive study of anatomy, physiology and pathology. In this connection the subject of infection has been the most profitable, as it has been the most interesting, of all

nvestigations; most interesting because little by little it has brought to light the knowledge of micro-organisms that produce diseases, the causation of which was hitherto inexplicable; profitable because it has resulted and will result in the discovery of the conditions that arrest their development and the agents that will neutralize their toxic influence.

Infection from without produces the various forms of meningitis, including cerebro-spinal meningitis, tetanus, hydrophobia, acute poliomyelitis, acute ascending paralysis, the puerperal and syphilitic diseases of the nervous system.

The infections which arise from within are also important etiologic factors in developing diseases of the nervous system. The principal source of this auto-infection is the gastro-intestinal tract. The micro-organisms there developed may produce simple indispositions or the graver conditions of delirium, coma, eclampsia, excessive elevation of temperature, acholia, cardiac failure and paralysis of the medulla oblongata. They bring about these results in several different ways. They may act mechanically by obstructing blood vessels of the lungs, kidneys and brain; they may develop anatomic lesions in epithelial cells, in muscular fibres and other elements, thereby producing œdema, hæmorrhage, suppuration and gangrene. They doubtless consume for their own nutrition that which is necessary for the nutrition of the individual, and they do produce toxines. Physicians have long been familiar with the toxic agents produced by fermentation in the laboratory, such as carbonic acid, marsh gas, hydrogen, ammonia and such complex alkaloids as indol-phenol and skatol, and as toxic agents may be produced in the laboratory of the chemist, so may they be in the laboratory of this great tract.

The reality of this intestinal auto-intoxication can be shown by demonstrating the toxines in fæces and in the urine, which owe their presence therein to putrid fermentation in the intestines, and diminish, *pari passu*, with diminution of the intestinal fermentation, and by the prompt appearance of grave symptoms when the progress of the fecal material is arrested; as, for example, in strangulated hernia.

These toxines are formed at all times in the ordinary gastro-intestinal tract, and the individual is saved from intoxication, first by the liver, that stands as a watchful sentinel, shutting out or destroying the poisons carried to it by the portal circulation from the digestive tract, and made [illegible] rapid elimination in a state of health of the toxic p[illegible] intestines, the lungs, the skin and the kidney[illegible] ducts of these several emunctories have all be[illegible] especially those of the urine, notably by P[illegible]

The relation of this subject to the psychoses is most important. The subject was discussed at the Fourth Congress of Mental Medicine, held at Rochelle, in August, 1893. Drs. Regis and Chevalier-Lavaure, referees, stated that they had been working on the line of autogenous poisons and had made many chemical and clinical researches to elucidate the relations of auto-intoxications to mental diseases. The toxicity of the urine was found diminished in maniacal states and augmented in melancholia. The urine of maniacs when injected into animals produces excitation and convulsions; that of melancholiacs, restlessness, dejection and stupor.

The mental disorders that arise during the course of the infectious diseases are clearly recognized as the result of pathogenic organisms, with the clinical observation that in the febrile stage the psychosis is usually an acute delirium resembling alcoholic; in the post-febrile stage, it is usually of an asthenic character, a state of mental cloudiness and confusion. The visceral psychoses are also in great measure the consequence of auto-intoxication, and they present as their clinical aspects, if the intoxication is acute, delirium; if the intoxication is slow, a state resembling melancholia, or more rarely paralytic dementia. Not only are many of these mental diseases auto-infectious, but also epilepsy, megrim, chorea and nenrasthenia, and probably others of the nervous system.

In these cases occurs a coated tongue, a foul breath, a gastric and intestinal indigestion, flatulency, palpitation, irregularity of heart's action, a peculiar complexion, constipation, and occasionally diarrhœa, all evidence of a condition of perverted function in the gastro-intestinal tract that will develop micro-organisms and toxines.

The indications for treatment are to prevent the development of the toxic products and to promote as rapidly as possible their elimination. To meet the first indication a carefully regulated diet is of paramount importance, and this must be selected with reference to the capacity of the patient. Milk and its preparations are the ideal diet, because under proper direction they introduce into the body the least amount of toxines or micro-organisms, and leave the minimum amount of waste material, but we must bear in mind that this diet contains a considerable excess of fats and a deficiency of carbohydrates, and therefore will not properly nourish all persons.

no more difficult and important question in these cases
on than the selection of a diet that will furnish
abundance, with the minimum amount of
fermentation. Each case must be care-
, and the diet adjusted to the individual

peculiarities. The patient should be weighed frequently to determine the precise condition of general nutrition.

Further, to promote the first indication, a judicious course of gastro-intestinal antisepsis is a valuable aid that is almost always required, and sterilized water is amply sufficient to produce all the results possible. The condition of gastric digestion should be carefully determined by analysis. If the amount of hydrochloric acid is deficient, antisepsis can be promoted by a combination of hydrochloric acid with bitter tonics and aromatics, such as the tinctura gentianæ comp. and tinctura cardamomi comp. If there is hyperchlorhydria then alkalies are indicated, and I frequently prescribe with benefit equal parts of salicylate of bismuth, magnesia and the bicarbonate of soda. Charcoal powder and oil of cloves are also useful agents in correcting gastric fermentation.

A reliable gastro-intestinal antiseptic is needed. Intestinal antisepsis is difficult to produce. A careful study and experience of many of the drugs recommended for the purpose have resulted in the almost exclusive use of benzonaphthol, salophen, papoid and oleum carophylli. These must be given in full doses frequently repeated and can often be combined together with advantage.

The second indication—that is, the elimination of the toxic products, is to be accomplished: (1) By judicious purgation, calomel and the salines being especially valuable; (2) by promoting renal elimination, and for this purpose again calomel stands at the head of the list; (3) by increasing the activity of the skin by baths and massage; (4) by increasing respiratory activity, as by judicious chest gymnastics and the inhalation of oxygen. The use of static electricity by insulation and by the static induced current materially aids this work of elimination.

The treatment of various diseases of the nervous system that result from auto-infection not only require the indication above mentioned to be fulfilled, but the danger done by toxines and micro-organisms must be treated, and each individual case will require special treatment.—*Medical Standard.*

INFECTION BY THE TRICHINA SPIRALIS.

Askanazy (*Centralbl. f. Bakt.*, Bd. XV, No. 7) observes that two questions await solution in regard to the process of infection by the *Trichina spiralis:* (1) How do the embryos which, according to the general view, are deposited only in the lumen of the bowel, pass through its wall? (2) How do they reach the striated muscles? In the belief that an examination of the bowel wall in cases of trichinosis would assist in the decision of both questions, Askanazy infected rabbits with the

parasite; in seven to ten days the intestines were removed and placed for fixation in Flemming's fluid. Pieces were embedded in celloidin, cut, and stained with safranin. The following facts were established:

1. The female parasite penetrates into the villi and mucous membrane generally, not deeper, however, than the muscularis mucosæ, and lies in that membrane or in a chyle vessel.

2. None of the specimens showed embryos lying free in the tissues of the intestinal wall or in its blood vessels.

3. Embryos were found in the lumen of the chyle vessel of a villus.

In one case a parasite filled with embryos projected into the chyle vessel, which also contained them, thus rendering it very probable that they had been deposited in the vessel. The investigation would appear to show that the young trichinæ are deposited in the lymphatics and are carried away by the lymph-stream. The discovery of embryos in the mesenteric glands (Virchow, Gerlach) is in accord with this opinion. The following considerations are against the old view that the embryos are deposited in the lumen of the bowel and subsequently bore their way through its wall.

1. The uncertainty with which the embryos are found in the bowel lumen, as shown by a review of the literature on trichinosis.

2. The author's examination of a great number of fresh specimens of intestinal mucus failed to show a single free embryo, even when the female trichinæ were filled with young.

3. Embryos were found only twice in the bowel lumen in a large number of sections, while the adult parasites were plentiful there.

4. As the parasite deposits a large number of eggs, embryos should be numerous in the bowel contents if the deposit took place in the lumen. Against the boring theory is the fact that nobody has yet seen an embryo lying free in the bowel wall. The rare occurrence of young parasites in the lymphatics in these sections is explained by the author on the theory that they had been rapidly carried away by the lymph-stream.—*British Medical Journal, June 16, 1894.*

NOTE ON THE ACTION OF IODINE.

The value of iodine as an absorbent has long been known. It is used to cause absorption of enlarged glands, thickenings due to chronic inflammation, and serious effusions, and this action is believed to be due to a stimulation of the lymphatic system. Perhaps the most remarkable results due to the action of a compound of iodine as an absorbent are those which were

attained by Major Holmes and Captain Cunningham in the treatment of goitre in India. They recommended that the enlarged thyroid should be smeared over with the red iodide of mercury ointment, and that then the patient should be made to sit with the neck exposed to the rays of the sun or of a hot fire for many hours. The results were extraordinary. Sixty thousand natives were treated gratuitously in two years, and a cure was almost always effected. Turner's object in presenting this communication is to offer a suggestion from the point of view of the physicist as to the mode of action of the iodine in these cases. We use iodine in physical experiments to cut off the visible rays of the spectrum. A solution of iodine in bisulphide of carbon will quench the visible rays of the sun, but will transmit the invisible heat rays.

The solution is, in fact, remarkably transparent to the heat rays; it is diathermatous. Professor Tyndall, in 1868, was the first to point this out. The fact that the action of the red iodide of mercury is much intensified by exposing the patient to the direct rays of the sun has appeared to the writer to depend upon the physical action of the iodine. Further, the fact that the red iodide is the most efficacious points in the same direction, because the red substance would also serve to transmit the heat rays only. The solar radiation would be filtered by the application, and the gland would be subjected to the full blaze of the calorific rays without the vibrations of its molecules being altered by the visible rays. Professor Tyndall made some experiments with paper reddened by the red iodide, and found that it was also highly transparent to obscure radiation; it therefore falls into line with simple iodine. If the suggestion above made is correct, it is improper to cover the diseased parts to which iodine has been applied; we ought rather to expose them freely to the rays of the sun, or, failing that, to those of a good fire.—*Dawson Turner, Lancet, May 12, 1894.—Therapeutic Gazette.*

TREATMENT OF DIABETES WITH FLUID EXTRACT OF JAMBUL E CORTICE.

Dr. Lenné (*Therapeutische Monatshefte*, May, 1894), who had previously reported encouraging results from the use of powder prepared from the fruit of *Syzygium Jambolanum*, has now tried the fluid extract of the bark, according to the method proposed by Vix. Fifteen grains were given in water three times a day from one to two hours after meals.

On February 14 to 15 the patient passed 4250 cubic centimetres urine, specific gravity 1034, containing a trace of albu-

men; 5.1 per cent. sugar (216.75 grammes); 3.1 per cent. urea (131.75 grammes); large amount of acetic acid.

Under treatment the patient's weight increased from 43.950 kilogrammes to 45.300 kilogrammes on March 17. The volume of urine at that time was 3000 cubic centimetres; the specific gravity, 1031; the percentage of sugar, 3.6 (108 grammes); the percentage of urea, 2.6 (78 grammes). The diminution in the amount of sugar was, however, not constant, reaching as high as 5.3 per cent. on February 22, and again 4.5 per cent on March 16. Lenné concludes justly that not the slightest influence of the agent upon metabolism can be recognized. For his part he thinks that the fluid extract from the bark exerts just as little influence upon the sugar-excreting process of diabetes as does the powdered fruit.—*Therapeutic Gazette.*

THERMOGENOUS BACTERIA.

Experiments carried on by Prof. F. Cohn, on the cause of the so-called "spontaneous combustion" of masses of cotton, grass, tobacco, etc., have led him to the conclusion that it is invariably due to a fermentation caused by thermogenous bacteria. No perceptible rise in temperature takes place in heaps of cotton, whether dry or moist, or even when saturated with oil, when the presence of bacteria is carefully excluded. The special micro-organism concerned in the combustion of cotton appears to be a micrococcus which is present in great quantities in the soil of cotton plantations.—*Journal of the Royal Microscopical Society, June, 1894.—Med. Corresp.*

TREATMENT OF TAPEWORM.

Ogilvie (*The Lancet*) has had successes in 13 consecutive cases with the following treatment: The patient, having been prepared by dieting for four or five days, is given the night before the vermifuge is to be administered a purgative of magnesium sulphate and tincture of jalap. If this has not acted the succeeding morning, a second dose is given at 7 o'clock. The saline purge removes the excess of mucus and permits of freer absorption of the vermifuge by the body of the worm. At 8 o'clock a drachm of the extract of male fern is given, followed by a second drachm one hour later. This is followed by a full dose of castor oil at 11 o'clock, whether the worm has passed or not. The head is carefully searched for, but an interval of four months without any of the proglostides appearing in the evacuations should elapse before a cure is surely claimed.—*N. C. Medical Journal.*

SURGERY.

THREE CASES OF ANEURISM TREATED BY VENESECTION.

Davison writes upon this subject in a useful paper, which he concludes as follows:

Bleeding in the treatment of aneurism is no innovation. It was, even according to Dr. Balfour, suggested by Hippocrates, and it formed the basis of the celebrated treatment of Valsalva,—a treatment which fell into discredit owing to the abuse of bleeding which it advised, and because, at the same time that it tended to consolidate the aneurism, it also tended to prevent this consolidation. Medical literature presents cases where spontaneous rupture of aneurisms has been followed by contraction of the sac, relief of symptoms of compression, healing of rnptured wound, and apparent prolongation of life. If such benefit can follow the spontaneous rupure of an aneurism, may not the same benefit be obtained by the harmless extraction of blood from a vein? The abuse of a remedy is not a sufficient cause for excluding its legitimate use, nor must the intelligent physician be bound by the fashion of the day, which at one time decrees abuse of bleeding and at another time its total rejection.

The dilatation of an aneurism is produced by the pressure of the blood stretching its coats, weakened by disease. If these coats retain contractile elements, it is evident that a diminution of the volume of blood within the aneurism, together with a diminution of the pressure of the blood, if carried to a sufficient extent, will enable the aneurism to contract; but the lowering of blood-pressure after hæmorrhage is only temporary, and after a short time this pressure regains its former force. Does it, then, follow that conjointly with the return of the force of the blood-pressure the aneurism will again dilate to its former extent, and thus bleeding come to be of no value? Certainly not, for in order that the aneurism may return to its former degree of dilatation it is necessary either that in a few days changes shall take place within its walls, lessening their power of resistance, or that the blood-pressure shall attain to a degree which it had not reached before; for if, before, a certain amount of blood-pressure was necessary to keep the aneurism in its over-distended state, now that it has contracted, to keep it again stretched as before would require the same amount of blood-pressure that maintained it distended, plus another quantity necessary to overcome the contractility of the walls now contracted, and therefore in more

favorable conditions to overcome resistance. It follows, therefore, that when the walls of an aneurism retain a sufficient quantity of contractile elements, the contraction which will take place on lessening the volume and the pressure of the blood after a good bleeding may, with judicious care, be maintained even after the blood-pressure has regained its former strength. In the treatment of aneurisms three principles must be kept in view—the contraction of the aueurism, the hypertrophy of its walls, and, lastly, the deposition of fibrin within its cavity.

The first indication can be carried out by a copious depletion, together with absolute rest for several months and the ingestion of but a limited amount of liquids. The second indication can be carried out by the internal administration of iodide of potassium, as recommended by Dr. Balfour, avoiding excessive doses, which may accelerate the pulse. The third indication reqnires, in addition to the above measures, a diet which, without being very rich to stimulate unduly the circulation, will at the same time be nutritive enough to produce a sufficient quantity of fibrin. The principle advocated in the treatment of aneurisms is not the impoverishment of the blood, but the temporary diminution of its volume and of its pressure, so as to enable the aneurism to contract and place it thus under circumstances more favorable for the operation of other remedial agents which tend toward its consolidation. Repeated bleedings at short intervals have been known to be positively harmful; but keeping in mind the above principle, the intelligence of the physician will indicate when and how to bleed. Judicious bleeding in the treatment of aneurisms will prove to be a valuable element, by means of which alarming symptoms of compression may be quickly removed, instant death sometimes averted, and the patient placed under favorable conditions for the prolongation of his life.—*Lancet, May 19, 1894.—Therap. Gazette.*

THE USE OF ACETANILIDE IN SURGERY.

Woods (*Journal of the American Medical* Association, July 21, 1894) has used acetanilide in twenty cases of operative wound and laceration. He finds it an admirable and curative application to internal hemorrhoids and a satisfactory dressing in the form of a suppository after their removal by the Paquelin cautery. He recommends it as an injection in gonorrhœa, using—

℞	Acetanilide	ʒi.
	Alcohol	ʒss.
	Aquæ, ad	fʒviii.

Salol is administered along with this. The same injection may be used for the treatment of sinuses. In one case physiological symptoms of absorption of the drug became manifest, an unknown quantity of the medicament having been dusted over an extensive scald.

The advantages claimed for acetanilide are that it is cleanly, odorless, antiseptic, desiccant, hæmostatic, stimulant, alterative, non-toxic practically, lasting in its effects if intermitted, does not crust, is easily removed, and that it acts in these ways when perfect cleansing of a wound is impracticable, while it is a perfect substitute for iodoform at an insignificant cost, and is not injured or altered by moisture, as it may be saturated with water and, being drained and dried, is found to be unaltered.—*Therap. Gazette.*

GYNECOLOGY AND OBSTETRICS.

SYPHILIS BY CONCEPTION.

By George Duffield, M. D., Professor of Clinical Medicine in the Detroit College of Medicine, Attending Physician to Harper Hospital, etc.

Syphilis is a disease worthy of the most serious thought and consideration by every specialist and general practitioner. The disease is on the increase, is widely diffused, and is to be found in all countries, owing to the utter lack of sanitary control. The cases seen in private, hospital or dispensary practice, and which leave our care as soon as the annoying symptoms have been relieved, either from ignorance or criminal carelessness go out to relapse and spread the disease broadcast among the innocent of the land.

In every large city there are hundreds of syphilitics with active contagious lesions who are daily in our streets, drinking at the public fountains, or using the one glass in an ordinary railroad car or steamboat, at which innocent women or children seek to quench their thirst, little dreaming that a virus ten thousand times worse than the poison of the rattlesnake lurks on the cup. I appeal to your sympathies to show you that one of the diseases with which we come in daily contact is in our midst to an alarming degree, and your children and mine may be exposed to this fearful contagion. Extra-genital syphilitic infection is much more common than is generally supposed. The cases in which the origin of the disease is a mystery, and can not be solved by the physician, often come under this form of infection.

Dr. Myles Standish, in the *Boston Medical Journal* of recent date, states that the public towel found in workshops, railroad toilet-rooms, and public wash-rooms, is often infected with syphilitic virus, and reports two cases of the disease that could be traced to this source. In the first instance a married man became infected, and though warned, infected his wife; in the second a brakeman became infected. In both the primary sore developed upon the eyelids.

"The individual with syphilis, therefore, is not only in danger of communicating the disease in marital relations, and constantly does so, but is also likely to transmit more or less of the taint to the offspring if they survive, and is likewise a constant menace to society by virtue of the contagious character of the disease."

The works of Hutchinson and others give abundant testimony to the dire effects on the progeny of those affected with syphilis:

"It must be remembered that just as syphilis can diminish the viability of the product of conception, and cause the death of the child just before or soon after birth, so it causes loss of life earlier in conception, and gives rise to frequent abortion."

As has been stated, this mortality of fetal life is not the only ill that flesh is heir to when syphilis has been acquired; and such an inheritance is a curse indeed.

The case I am about to report is still shrouded in mystery as to the mode of infection and development.

About the middle of September, 1893, a man of vigorous constitution, strong, robust, aged 30, consulted me for certain irregular, dark, hyperemic spots that had developed on the palms of his hands. At first they appeared as small, red points; they did not itch or cause any pain or irritation, and vanished on pressure, only to return as soon as the pressure was removed. The wrists, arms, face and neck were white and free from spots like those on the palms. The hands were heavily muscled, were strong and showed points of callus, the result of work on galvanized iron. The man supposed that he had been poisoned by the iron or some of the tools or chemicals that he had been handling. I advised him to rest a few days and wash his hands in hot soda-water so as to remove all stains and grease. This he did, and the spots became bright rose-pink in color and irregular in shape. As I have always been suspicious of palmar eruptions, and fearing that I had a case of syphilis to deal with, I made a careful examination of the patient's body, throat and nose, but with negative results. There was no history of having had a chancre, hard or soft, but there had been an attack of gonorrhœa nine

years before. Had the man contracted syphilis at that time, secondary symptoms would long before have manifested themselves. Being uncertain as to the condition present, I sent him to Dr. A. E. Carrier, who thought the eruption of an erythematous nature, with possibly a syphilitic origin.

About the first of November the man called on me again. There were now a good many more erythematous spots upon the palms and also upon the wrists. A few dry, scaly patches appeared upon the scalp, upper lip and eyebrows, causing the hair, moustache and eyebrows to fall out. Upon the scrotum there were half a dozen spots of the same color as those upon his hands. Upon the prepuce there was a point that was thickened. This was not seen at first; not until it was taken between the thumb and finger was it appreciable that there was any change in the tissues. It was not sensitive, but was simply an induration without erosion. There was no discoloration, no secretion from it, nor had there been.

The patient claimed that he had never noticed it himself—but I doubt his statement. He declared that he had never had any intercourse away from home since he had been married, nor had he had sore throat or a mucous patch. His wife I had known for four years. She was 27 years of age, and had had one miscarriage two years after her marriage, after carrying water and coal to the second story. She had never had a skin affection, but three years ago had a severe attack of diphtheria, since which time she has been in fair health.

On December 20 the husband told me that his wife had become pregnant, the second time since their marriage, seven years before, and wished me to call and make the necessary examination and give needed directions. Personally I was anxious to make this examination, to see whether my suspicions were well grounded as to the husband's syphilis and whether or not he had inoculated his wife. The examination was made with great care. There was no vaginal discharge and never had been; there was no history of dysmenorrhœa or displacement, no swelling of the vulva and no enlarged glands in the vulva or groins. There were no indurated points in the vagina. There was no rash, no sore throat, no loss of hair; there was nothing absolutely to suggest that the woman had been exposed to or had absorbed syphilitic virus. The pregnancy had advanced about five and one-half months, the last menstruation having taken place in the early part of July. The fetal movements had been felt and the placental bruit was plainly heard.

On January 15, 1894, the woman called at my office suffering from fever and sore throat. The tonsils were swollen

and red. All her bones ached, but more especially those of the lower extremities. She had severe headache at night. The temperature stood at 102.5 deg. The attack simulated one of severe tonsillitis complicated with rheumatism. The symptoms were suggestive of syphilitic fever, but there were so many symptoms wanting that I thought it best to wait until some positive sign should show itself. The woman was given a mild gargle, with salol and phenacetin, and in about four days the temperature had fallen to normal. With the subsidence of the fever red spots broke out on the lower part of the abdomen, which she thought resembled the spots her husband had had on his hands in the summer. In a day or two a bright red rash appeared upon the abdomen, confining itself to the skin over the enlarged uterus. It did not extend to the thorax or the limbs. It was undoubtedly a syphilitic roseola. Mucous patches appeared upon the tonsils, the soft palate, the tongue, and the buccal mucous membrane, and slight glandular enlargement in the groins accompanied the rash. Dr. H. A. Cleland saw the woman in consultation at this time and confirmed the diagnosis. He thought that the husband's initial lesion had been in the urethra—or at least that it had been hidden. The symptoms as found in the wife were proof positive of syphilitic infection. She was put upon a strong solution of mercuric chloride until marked physiologic effects showed themselves, when she was given a pill of protiodid, gr. ¼. The mucous patches were touched frequently with the solid stick of silver nitrate. In a few weeks the rash and mucous patches entirely disappeared, and there has since been no return of syphilitic manifestations.

I hoped that thorough mercurial saturation of the mother might have a beneficial effect upon the child *in utero*, which was undoubtedly the source of the maternal infection. The treatment was continued for three months, but I failed to note any effect, unless it was that the child when born was alive. Nunn says that in his experience the treatment of syphilis during pregnancy does not protect the child from congenital syphilis, but that when pregnancy has terminated, treatment is more successful.

Etienne states that if treatment be employed throughout pregnancy we may hope to obtain almost complete immunity from this infantile mortality.

In an article on "Hereditary Syphilis," W. Gilman Thompson states that "when the father only is actively syphilitic, he usually transmits the disease to the child through the spermatozoa. This is called 'conceptional syphilis.'" Etienne states that paternal syphilis is less injurious to the fœtus than maternal syphilis.

Early in April I noted that the fetal heart beats and placental bruit had become weaker, and that the movements felt by the mother were less vigorous, and therefore concluded that the child would be stillborn.

On April 7, about 3 A. M., the waters broke while patient was asleep. The pains began soon after, were frequent and harassing during the day, but at 8 P. M. the os had dilated only an inch. The pains were very hard, but they made no impression upon the cervix, which appeared swollen and unyielding. The woman had been in labor twenty-four hours and still there was little dilatation of the os uteri.

Dr. W. P. Manton was called in consultation at about 2 A. M. He found a rigid os, dilated about two fingers, but not enough for the application of forceps. Hot douches were given and an hour and half was spent in waiting for the dilatation, which would not take place, although the pains increased in severity. Pressure by the fingers inside the cervix finally caused sufficient dilatation to allow the introduction of a narrow-bladed forceps, the patient having first been anæsthetized. The bones of the child's skull were very thin and could be easily indented by the finger; possibly this soft and unresisting head was one of the reasons why the dilatation of the cervix had not gone on more rapidly. During traction the cervix was drawn so far downward as to be visible at the vulva, and required to be pressed upward under the symphysis, as it greatly retarded the advancement of the head. After half an hour's hard work, with but slight advancement of the head, deep incision of the cervix was resorted to and delivery accomplished without further delay, the child being born alive.

The child's head was very pointed and the caput succedaneum large and conical in shape. The sutures of the skull were wide open, the fontanels very large, and the bones soft and yielding. The placenta was delivered by Credé's method, and was studded with syphilitic gummata of a yellowish-white color. The cord was long and thin and was wound once around the child's neck.

The child had an eruption on its body, especially under the arms and upon the sides of the thorax. The cervical glands were enlarged and the mouth showed mucous patches. The right eye, though cleansed at once, developed a catarrhal conjunctivitis. Within ten days after the birth the child was covered from head to foot with an exanthematous rash—a syphilitic roseola.

The treatment of the child from the first has been by inunction, twenty drops of a 10 per cent. solution of mercury oleate being rubbed in twice a day with marked benefit,

although since the physiologic limit has been reached there has been considerable colic following the inunction. On the twelfth day after delivery two small gummy nodules appeared on the occiput, showing the child to be in the tertiary stage; the fontanels are still widely dilated and also the sutures.

The mother has nursed the child, and the supply of milk has been large and satisfactory to the well-being of her offspring. No mucous patches have yet appeared upon the nipples.

Perhaps the treatment of the mother by mercury alone—when she was suffering from secondary symptoms—may be criticised by some, but the effect could not have been better. Not a single syphilitic symptom has reappeared. Potassium iodide has been withheld purposely, as it was thought that the secretion of milk would be better without its use, and so it has proved.

The question naturally arises: Was the syphilis of the newborn derived from the father or the mother? It is my opinion that the spermatozoa of the male contained the micro-organism of the disease. The latest investigations of the cause of syphilis show that it is due to a micro-organism, and Klebs, Birch-Hirschfeld, Lustgarten and others have described a bacillus found in various syphilitic lesions.

In 1884 Lustgarten described a bacillus that he found in sections of syphilitic ulcers, and which he believed to be the specific agent in this disease. He described the bacillus as smaller than that of tuberculosis, and occurring in curved or straight forms, singly, in pairs and groups, but never as rods. It is never found free, but is contained in round cells. Other observers have verified the existence of the bacillus, but no satisfactory experimental evidence has as yet been adduced.

As to when the paternal syphilis was acquired is still a mystery. It was undoubtedly due to sexual transgression, and at the time fecundation in the wife took place the husband was saturated with the disease, which had never been modified by treatment. His spermatozoa must have been surcharged with the specific micro-organisms or their spores, and their toxic effect was manifested in the fœtus with terrible virulence.

Now that the mother is infected, the question naturally arises: From which source, father or child, did the contagion emanate? I think from the latter, because the syphilis of the baby is more advanced than that of the mother, and the mother's syphilis is of a lighter degree or more attenuated. Then, too, the lateness of the syphilitic fever in the mother must be considered—the fœtus was fine and one-half months old before the mother showed a symptom of infection.

Diday believes that the mother does not become syphilitic through the placenta, but through the blood of the fœtus begotten by a syphilitic man.

The large gummata of the placenta on the side of the child show almost conclusively that the latter was syphilitic long before the mother, and proved itself to be a hot-bed of infection, the micro-organisms easily passing from the diseased placenta to the innocent mother. The absence of all initial symptoms in the mother, it seems to me, is conclusive of the conceptional transmission.

The tendency and frequency of abortion in syphilitic mothers is a point of interest that should be mentioned here. Etienne states that the mortality of the fœtus in cases in which the mother has never been under treatment is enormous, reaching 95.5 per cent. Abortion occurs in about two-thirds of all syphilitic women—that is, when the women are primarily affected and have skin eruptions and mucous patches at the time of conception. If infection of the fœtus occurs during the first three months, and is not subjected to treatment, the mortality during the first few days after delivery reaches 100 per cent.

The chances for a premature discharge of the fœtus when the father alone is syphilitic are considerable, but this does not occur so frequently as when the mother is primarily affected. Neumann states that if the father is syphilitic, and the mother first becomes so in the later months of pregnancy, the hereditary syphilis in the child will be intensified.

Recent notes on 1127 pregnancies, collected by Fournier, show that the infantile mortality, when the disease is inherited from the father alone, is 28 per cent.; when from the mother alone, 60 per cent.; when from both parents, 68 per cent. Le Pileur claims that not over 7 per cent. of the children of syphilitic parents outlive the disease.

Fournier attended a family in which the first three children were born at term, robust and healthy. The father then contracted syphilis, and his wife, becoming infected, aborted three times in succession. Fournier also reports that at the Lourcine Hospital 145 out of 167 of the children born of syphilitic mothers died in the institution within six weeks after birth. From trustworthy statistics of 441 cases only 100 children who had syphilitic mothers survived infancy, while 341 perished, 335 dying during the first year of life, and only six surviving this period.

Professor Chambrelent, of Bordeaux, reports the case of a young married woman who contracted syphilis during her second pregnancy, but who had no initial lesion.

I know that some observers claim that infection of the fœtus is more rapid than that of adults, partly from the fact that the new tissues resist less, and the blood, being so saturated, carries the disease into vital organs more rapidly than in an adult.

A fœtus that develops and passes through the first and secondary stages of syphilis, and enters the tertiary period, all within 285 days from conception, displays a great shortening of the periods of the disease, and plainly demonstrates that inherited syphilis is much more virulent than is acquired syphilis in the adult.

The duration of syphilis is still a matter of discussion. Thompson puts the duration of the initial lesion at six weeks, the secondary symptoms at from two months to three years, and the tertiary period as beginning between the third and sixth years, and lasting for twenty years or more.

When the treatment has been systematically carried out for two and one-half, or better, three years, and there is no return of symptoms within six months, the patient may be regarded as cured, and he may marry without endangering mother or offspring.

The transmission of syphilis by mothers who have the disease, even though they have been under treatment, is well illustrated by Nunn, in the case of an infected woman aged sixty, whose daughter gave birth to an infant with symptoms of syphilis. The father of this infant could not be proved to be syphilitic. The case shows that syphilis is transmitted even to the third generation.—*Med. News.*

THE ARREST OF LACTATION BY COCAINE.

Painful fissures of the nipple have, for some time past, been treated by the application of cocaine, either in the form of an ointment or a liniment. It has been found, however, that when thus employed the secretion of milk is diminished and the erection of the nipple prevented. These objections have led Dr. Joire, of Lille, to use cocaine with the direct object of checking the secretion of milk when necessary. He recommends a solution of one gramme of cocaine in ten grammes of water and ten grammes of glycerine, and he advises that this should be used as a lotion to the nipple five or six times a day. He explains the arrest of secretion by the anæsthesia of the nipple which results.—*London Lancet.*

Book Reviews and Notices.

Syphilis in the Innocent (syphilis insontium) clinically and historically considered, with a plan for the legal control the disease. By L. Duncan Bulkley, A. M., M. D., etc., of New York: Bailey & Fairchild. 1894.

This memoir was awarded the Alvarenga prize in 1891 by the College of Physicians of Philadelphia. In the introductory chapter, the author defines syphilis, reviews its history, and discusses its distribution. Innocently acquired syphilis—he refers to three classes—inherited, marital and extra-genital. Following the discussion of these classes, there appears a classification of the modes of infection of syphilis, in which non-cohabital syphilis, its origin and methods of acceptance are brought out in minutest detail, suggesting close and laborious work in the isolation of all remote causes and factors in the propagation of extra-genital syphilis. In reading these pages, one is impressed with the fact that the frequency of innocen syphilis is much overlooked or over-estimated. In discussing mediate infection the author lays stress upon the propagation of paternal syphilis by means of the semen—the mother escaping the disease. The analysis of the author's own cases are interesting for their completeness in investigation, and for the interesting modes of infection.

A glance at the tables of epidemic syphilis emphasizes the truth of the fact that carelessness in surgical and obstetrical practice and the indiscriminate methods of vaccination are highly responsible. The sectional diseases of Italy, Scotland, Norway, etc., which have been confused with frambœsia, the author embraces in his grouping of endemic syphilis. Rather curiously, these find considerable discussion and space in the text of his work. We must take issue with the author in his rather strong statement that frambœsia gives evidences "which point almost incontestably to the fact that this condition is connected with or is dependent upon the syphilitic poison."

The burden of proof rests now with those who make this claim, and only recently has Dr. H. A. A. Nicholls, of Dominica, demonstrated the germ responsible for this disease, for a long time confused with syphilis.

Apropos of the extensive press comments on the dangers of the Eucharist, the author's statement is worthy of quotation: "Although this means of infection is quite possible, I have not been able to find a single case in literature."

A long list of articles of the household, etc., is discussed in detail, with cited cases of infection—all calculated to convey an awful sense of danger to the chance lay-reader, who dreads contagion.

Kissing, biting, scratching, pinching are instanced, with cases, as occasioning. Spoons, pencils, coins, pins, etc., are also remarked. A chapter (VIII) is devoted to child infection and nurse and nursing infection. Another chapter (IX) is devoted to the infection of and by professional men and their patients or subjects.

Chapter X deals with the prophylaxis and the medico-legal consideration of syphilis in the innocent.

Quite attractively does the doctor present the evidence for legal protection. He says: "Thus the army of innocents swells in size and pleads for the restriction of a disease, which, it is now believed, may sometimes be inherited even to the third generation * * * The individual with syphilis, therefore, is not only in danger of communicating the disease in marital relations, and constantly does so, but is also likely to transmit more or less of the taint to the offspring, if they survive. He is likewise a constant menace to society, by virtue of the contagious character of the disease. * * * It is quite sure that the danger of infection from syphilis and of its hereditary transmission are greatly diminished by care and treatment; but every one who has much to do with the disease in hospital or dispensary practice knows how commonly it is neglected as soon as there cease to be annoying symptoms. * * * There are continually hundreds of syphilitics with contagious lesions, who are either ignorant or careless of the dangers to which they are subjectingothers in their daily lives. * * * The disease is undoubtedly on the increase."

For prophylaxis the author proposes widespread education of the profession and the laity as to the evidences and dangers of syphilitic infection.

For the legal control, the author relegates the regulation of prostitution to a secondary place. He aims at the high, but almost impracticable plane of legal control based upon the lines employed in the more fatally contagious diseases. The conscious communication of syphilis should be made criminal, and suitable punishment meted accordingly. This, the author believes, would remove the necessity of the examination of prostitutes, who would then, through fear of prosecution, protect themselves and others. It would then force the examination of men. This would fully protect against, while it would certainly diminish the spread of syphilis. All of which we must confess would hinge upon the prosecution, which would in a

short time be confined almost to the irregular class of prostitutes and their hangers on, while the innocent community would be exposed to much the same endangerment.

To summarize: Dr. Bulkley's book shows laborious care in the detail of a thoroughly scientific work. Comprehensive as it is, it will be invaluable as a work of reference and so complete that the necessity for a similar work will be quite remote. The tables with which the book is generously supplied are interesting and carefully arranged. Though much is old in the work, the new is so well correlated that the text is full and the subject is made entertaining and certainly instructive. The arrangement of the bibliography is unique and the list of references large enough to suggest completeness. Altogether the work shows a result worthy of the effort expended upon it.

ISADORE DYER.

An Illustrated Dictionary of Medicine, Biology and Allied Sciences, including the pronunciation, accentuation, derivation and definition of the terms used in medicine, anatomy, etc., and the various sciences closely related to medicine. By George M. Gould, A. M., M. D. Based upon recent scientific literature. Philadelphia: P. Blakiston, Son & Co. 1894.

This is Dr. Gould's third venture in the making of dictionaries. His first was a modest but valuable contribution to lexicographical literature, intended mainly for students, and not intended to be encyclopedic; the second was a little pocket dictionary, intended for students only; while this, his third, stamps him as a past master in the art of dictionary making. In the preparation of this splendid book he had the assistance of a number of gentlemen well known in medical literature. The book contains sixteen hundred large octavo pages, which will give an idea of the amount of labor involved in the preparation of the work.

Dr. Gould's learning and enthusiasm are well known. He brings to his work the fruit of thorough study in all branches connected with any subject that he handles. He is not a mere observer of other men's ideas, but he is original and progressive. He has all along fought for a reform in medical terminology, adopting as his rule the general principle laid down by Prof. Whitney, in his preface to the *Century Dictionary*, that compilers of dictionaries should strive to make orthography more consistent and phonetic. Dr. Gould has introduced certain reforms in the orthography of the *Medical News*, which

he so ably edits, and in his dictionaries he has consistently carried out his plans of reform.

All dictionaries are good; but the features that make this a jewel among dictionaries are the clearness and conciseness of its definitions; its modernity, containing all of the terms used and invented in recent years, which have been marked by an unprecedented activity in all lines of investigation; its comprehensiveness, not omitting even the oldest terms; its biological terms, which students are coming to need more and more every year, for biology is growing in favor in our medical colleges, and its tables of diseases, surgical operations, bacteria, etc., which are useful in enabling the reader to take in at a glance a number of correlated facts. A number of good illustrations materially add to the value of the book.

Dictionaries are not to be analyzed. Every one knows what a dictionary ought to be, and it is sufficient to say that Dr. Gould's latest is a masterpiece. A. McS.

State News and Medical Items.

DEATH OF DR. B. A. POPE.

The physicians of the city of Dallas held a largely attended meeting to pay a proper tribute to the memory of the late Dr. B. A. Pope. His life-long friend, Dr. S. H. Stout, presided, and many eloquent eulogies were paid to the dead. Drs. Ashton, Eagon and Wilson were appointed a committee to draft suitable resolutions. The committee reported the following, which were adopted:

WHEREAS, Dr. Boling A. Pope, who departed this life in the city of Dallas on the morning of the 4th of July, 1894, and was a resident thereof for about ten years; and whereas, he was so thoroughly a scientific man, and widely known for his skill in those special branches of medical and surgical practice which he chose for his life's work, which won for him a name and fame that illustrate the annals of progressive medicine and surgery, and entwine him in the affections of his numerous patients; therefore

Resolved, That we will attend Dr. Pope's funeral to-morrow as a mark of respect to his memory, sympathy with his bereaved sons and other relatives and in honor of his professional and personal merit.

Resolved, That all the physicians present, or as many of them as may be needed, act as pall-bearers.

Resolved, That a copy of these resolutions be sent to Dr. B. A. Pope, Jr., son of deceased.

L. Ashton,
W. R. Wilson,
S. Eagon,
Committee.

Dr. Stout announced the death of Dr. Pope on the morning of 4th instant. His acquaintance began with Dr. Pope in 1863, shortly after the battle of Chickamauga, in which he was a volunteer aid to General McLaws. Dr. Pope then entered the medical service of the Confederacy, serving to the end as a special eye and ear surgeon. He settled after the war first in Memphis, Tenn., then in New Orleans, where he did an immense practice, but his health failing there, he then moved to Texas and finally settled in Dallas, where he ended his career of usefulness and honor. Dr. Pope died of septic poisoning, the finale of a general impairment of health and to his laborous indoor life.

Dr. E. A. Reeves acted as secretary of the meeting, which took place in the Windsor parlors.

Many floral tributes were sent in to-day by the friends of deceased. Dr. Pope died of septic poisoning, superinduced by gout. He had been a great sufferer, and despite the best of medical attention administered by Dr. L. Ashton he sank beneath the ravages of the disease.

HERMAN VON HELMHOLTZ.

A dispatch, dated September 8, has just announced to the world that one of its illustrious men of science, Herman Von Helmholtz, has passed away. He succumbed to a paralytic stroke from which he had suffered for the past six weeks. Advanced as he was in years his unabated mental vigor had still held out the hope that his might yet be years of activity. The shock to the entire scientific world by reason of his death will be all the more keenly felt by his numerous admirers in this country, who during his visit one year ago learned personally how little age had dimmed his intellect or marred his genial manner.

Of all men who have left their imprint on the progress of science during this century, the influence of none has extended into as many different lines of knowledge as that of Herman Helmholtz. In medicine, particularly, we owe him not merely

the numerous additions to our knowledge in physiology and physiologic psychology, but the world is indebted to his genius for that now indispensable instrument—the ophthalmoscope, an invention that will keep his memory alive more permanently than monuments and epitaphs.

His first publication, a thesis on the structure of the nervous system in evertebrates in 1842, gave proof of his ability as an observer. It was the first demonstration of the continuity of nerve fibres with nerve cells. Subsequent to this work he investigated the phenomena of putrefaction and fermentation, but could at that time not decide definitely whether these changes were only of a chemical nature or depended on living microbes. Of greater importance were his studies in animal warmth, in which the application of his thorough knowledge of physics gave to this part of physiology a more precise basis than it had previously possessed. During this time of his life he was army surgeon in the Prussian army, but found or rather made opportunity to have his name spread far beyond the domain of medicine by his essay in 1846 on the conservation of energy. While not the only investigator in this line of thought, for, in fact, he was preceded by several years by Robert Mayer, with whose work, however, he was not familiar, Helmholtz was the first to prove irrefutable by mathematical reasoning the correlation and indestructibility of energy in all its different modes of manifestation. To him hence belongs the credit of helping to lay the corner stone upon which the structure of modern theoretical physicsrests.

In 1849 Helmholtz was called to the chair of physiology in Koenigsberg, which he exchanged for the same position in Bonn, in 1855, leaving that university for Heidelberg, in 1858, where he stayed until 1871. The year 1871 ended his career as a teacher of physiology, as he was asked to take the chair of physics in Berlin. He resigned this chair in 1888, and was then appointed Director of the Imperial Physical-Technical Institute at Berlin. His university career was inaugurated by his researches on the velocity of nerve-conduction. Accustomed as we are nowadays to physical methods in physiologic work, we can hardly realize what a revelation Helmholtz' results were to physiologists of those days. One is indeed at a loss which to admire most in those two papers of 1850 and 1852—the surprising revelations concerning the mechanism of nerve-conduction, or the elegance of the methods used in that research.

In 1851 his researches on the path of rays of light in the eye led him to the discovery of the ophthalmoscope. The short precise statement of his work outlined clearly what could

be expected of this instrument for clinical purposes, and yet with the full appreciation of what he had accomplished, his essay can forever serve as a model of the modesty of true genius. Continuing his optical researches, Helmholtz next constructed his ophthalmometer, the teachings of which enabled him to compute the course of rays of light in the eye, and led to his discovery of the mechanism of accommodation (simultaneous with but independent of Kramer). His different optical researches, on the mixture of color sensations, the movements of the eyes and kindred subjects were finally collected in his "Handbook of Physiological Optics," published between 1855 and 1866, of which a second revised edition is now being reissued, but is not yet completed. This magnificent treatise, in which every fact stated has been verified by the author, unrivaled in philosophic conception and a model in the painstaking accuracy of its historical bibliography, is the physiologic foundation of modern ophthalmology.

Comparable to his work on physiologic optics are his contributions to the mechanism of hearing, collected in his "Sensations of Tone," published in 1862 and in two later editions. It would be difficult to name any other work betraying such versatility in original investigations as Helmholtz showed in his *Lehre von den Tonempfindungen*. The anatomic study of the ossicles and their joints, the physical and mathematical analysis of the timbre of sounds, the inquiries into the psychology of musical perception, broadly philosophical without being speculative, and the literary researches into the theory and practice of music of foreign races stamp the book as the work of an unique genius.

His physiologic researches, however, sufficient as they were to keep his memory alive in the annals of medicine, were but a part of Helmholtz' work. The prominence which his first masterly essay on the conservation of energy gave him in the ranks of physicists was maintained throughout his lifetime by numerous other contributions all equally characterized by unusual penetrating power guided by mathematical reasoning. Perhaps his best work was in the domain of theoretical electricity. His researches on the time relations of induction currents and on the oscillations in electric discharges have been the starting point of many of the wonderful extensions of electric knowledge of the last few years.

But he did not confine his physical work to electricity, and indeed with many chapters in the theory of light, sound and hydrodynamics his name will always be associated. Within a few years of his death he began a mathematical inquiry into the movements of the atmosphere, which meteorologists consider as a great advance.

His rare mathematical ability did not prevent Helmholtz from allowing his imagination to soar toward the solution of some general problems not confined to any one narrow line of investigation. His essays on the conservation of energy, the cosmic theory, the relation of electricity to the atomic theory (the Faraday lecture before the London Royal Society, for which the Copley medal was given him), are all marvels of a versatility, which yet was always controlled by mathematical reasoning. Nor was his safe though far-reaching reasoning any less apparent in his excursions through the treacherous expanse of psychology. Among the great philosophic achievements of the century rank highly his dissertations on the origin of geometrical axioms, as well as his discussions on the mechanism of auditory and visual perceptions and their relations to reasoning and the arts.

Not least among Helmholtz' merits are his popular lectures. It is but seldom that so much genuine knowlege on abstruse subjects has been given to the general public in such palatable shape. For in all his writings, characterized by accuracy, preciseness and terseness, Helmholtz was not indifferent to literary beauty. If most of his physical articles tax the attention of the reader to the utmost, they do so only for the reason that he could so easily present his thoughts in strict mathematical garb, and not from want of clearness in the style. In fact, Helmholtz was endowed with rare artistic taste, shown not only by his leaning in psychology toward problems relating o art, but also by the artistic finish of his writings.

His life was an uneventful one, except in scientific triumphs. His seventieth birthday, three years ago, was the occasion of ovations from the entire scientific world, which showed not only the admiration he commanded, but also the personal affection felt by all his pupils toward him. On that occasion the German Emperor recognized officially his merits, by granting him the rank of nobility. But grief did not spare him in his old age by the loss of his son, Robert Helmholtz, a promising young physicist.

In the annals of science and progress the name of Herman Helmholtz will rank forever foremost as an illustrious example of what man can do for mankind by the conscientious application of intellectual power.—*The Journal Med. Association.*

Dr. C. D. Owens, of Rapides parish, died of appendicitis, in New Orleans, on September 15, 1894. We will give a sketch of Dr. Owens in a future number.

Dr. Geo. Benner has located at Brusley Landing.

Dr. E. Dubuclet died at his home recently, near Bayou Goula.

Dr. E. J. Ponder has removed to Alexandria from Baton Rouge, La.

Dr. Richard B. Sadler, of Bastrop, La., died at his home July 27.

Dr. T. S. Jones, of Baton Rouge, La., spent his vacation in Alabama.

Dr. R. O. Hollister, of Ponchatoula, spent his vacation at Biloxi, Miss.

Dr. J. S. Perkins, of Sulphur City, La., was in New Orleans recently.

Dr. T. Y. Aby, of Monroe, La., had the misfortune lately to lose his drug store by fire.

Dr Joseph Matthews is the new president of the Kentucky State Board of Health.

The author of the "blue glass" craze died last July at his farm near Overbrook, Pa., aged 86.

Dr. W. B. Bonsall, of Lake Charles, La., has gone to Baracoa, Cuba, as sanitary inspector.

There's a hospital in Soo Chow, China, in charge of Dr. Anne Walker, a Mississippi woman.

Dr. Sholars, of Monroe, La., had the misfortune to lose a store building by fire last month.

Dr. L. C. Anderson, of Lake Charles, La., was married last month to Miss Mollie Burt, of Texarkana, Ark.

Dr. W. N. Stewart, who moved to Baldwin, La., last spring, has decided to return to his old home, Bayou Sara.

The Journal extends its congratulations to Dr. D. D. Savant, who was married to Miss Angelina Sturlese October 3.

Married, at the home of the bride, in Natchitoches parish, August 8, Dr. E. G. Lawton and Miss Cora Prudhomme.

Dr. H. L. Lewis and Miss Katie Street, of Olio, Miss., were married September 20. The Journal extends congratulations.

Dr. Frank Sherrard, a son of the late Dr. C. C. Sherrard, of Mobile, Ala., graduated from Philadelphia and is located in Mobile.

The Arkansas State Board of Health has been given power to revoke the license of any physician who is guilty of habitual drunkenness.

Mississippi Valley Medical Association.—The twentieth annual meeting of the Mississippi Valley Medical Association will occur in Hot Springs, Ark., November 20, 21, 22 and 23, 1894.

The only medical school in this country that requires a liberal degree for admission is the Johns Hopkins Medical School.

The mother-in-law of the Mikado of Japan was recently ill. She had 423 physicians in attendance, and yet she recovered. A Buddhist priest located the cause of her illness in the introduction of railways.

Richmond Journal of Practice is the new name of *The Practice*, a journal which has been published at Richmond for many years. In broadening its title it has added a corps of collaborators who will assist in the general and special lines of work.

The compiler of the most curious statistical table of the century shows that the average life of a physician in the sixteenth century was 36.5 years; in the seventeenth century, 45.8; in the eighteenth century, 49.8, and at the present time is 56.7.

Dr. W. B. Outten, in the *Railway Surgeon*, says that a medical student who failed to pass his required examination at a medical college passed satisfactorily before a local board in one of the States which authorizes such a board. The examining board consisted of a blacksmith, a barkeeper and a justice of the peace. The student said this board had little medicine, but much muscle and whiskey. He got a license to practise medicine.

HAFFKINE'S ANTICHOLERAIC INOCULATION.

In the July number of the *Practitioner* there is an official communication on this subject by Dr. W. J. Simpson, the medical officer of health of Calcutta, in which the following passages occur:

"For cholera inoculation there are two vaccines, one mild, the other strong. For a complete vaccination it is necessary to inoculate twice—first of all with the mild vaccine, which produces some pain at the seat of inoculation, discomfort, and fever for about one day; a period of five days is allowed to elapse, and then a second inoculation is performed with the second or strong vaccine. This second inoculation produces a similar form of malaise to that caused by the first. The discomfort on the whole is milder and of shorter duration than that of vaccination against small-pox. Its harmlessness was established by very careful and patient observation on medical men and scientists, who were inoculated in Europe soon after the discovery.

"It was first proposed that Dr. Haffkine should proceed to Siam, where, by inoculating whole villages, a decision might be come to as to the value of the anticholeraic vaccinations. After an interview, however, with Lord Dufferin, ambassador in Paris, it was considered that the best country for such an inquiry was the endemic area of Bengal. Lord Dufferin took a great interest in the matter, writing to the Secretary of State for India and to Lord Lansdowne, while the ambassadors Baron de Morenheim and Baron de Staal put themselves to much trouble, and recommended Dr. Haffkine and his mission very warmly to the British government. Dr. Haffkine visited London with the object of having an interview with Lord Kimberley, and explaining his system to the leaders of the medical profession in London. His reception there was of the most cordial nature. I was in London at the time, and met Dr. Haffkine on several occasions. The English government, through the Secretary of State for India, granted facilities for Dr. Haffkine visiting every part of India, writing to the government of India on the subject, who in their turn have rendered him valuable assistance. In his mission Dr. Haffkine arrived in Calcutta in March, 1893, and some time was taken up in parliamentary matters. Cholera was not very prevalent in Calcutta then, for it was an exceptional year in this respect, and Dr. Haffkine consequently accepted an invitation to Agra, where Mr. Hankin, the government bacteriologist, was anxious he should begin inoculations. In Agra he inoculated over nine hundred persons, European and Indian, among whom were a

number of European officers, including General Morton, commanding the troops in the Agra division, Mr. Neale, the commissioner, and others. From Agra he was invited to Aligarh, where he inoculated eighty Europeans and Indians. Once the inoculations were begun, the invitations from different places in northern India came in so rapidly that Dr. Haffkine has been unable to accept them all. Since his arrival in India he has inoculated about twenty-five thousand persons."

"What will interest the commissioners still more, however, are the results which have been obtained by inoculation in Calcutta. This year, as soon as the cholera season began, Dr. Haffkine came down to Calcutta, and in the course of six weeks inoculated over twelve hundred persons in different parts of the town where cholera was paevalent. The numbers and the short time since the inoculations are obviously insufficient to allow of definite comparisons being drawn, but one or two remarkable facts which have been observed where the proportion of inoculations in the locality has been larger than in others, and where a small local epidemic of cholera prevailed, arrest the attention. About the end of March two fatal cases of cholera and two cases of choleraic diarrhœa occurred in Kattal Bagan Bustee, in a population grouped around two tanks. This outbreak led to the inoculation of one hundred and sixteen persons in the bustee out of about two hundred. Since the one hundred and sixteen cases were inoculated nine more cases of cholera, of which seven were fatal, and one case of choleraic diarrhœa have appeared in the bustee. All these ten cases of cholera have occurred exclusively among the not-inoculated portion of the inhabitants, which, as stated, forms the minority in the bustee, and none of the inoculated have been affected.

"The numbers are still too small for any definite conclusions, but they are sufficient to indicate the manner in which this all-important question will be solved. To carry on these observations in Calcutta on a large scale in its most affected parts during the next one or two years would, in my opinion, solve the question, for it is obvious that under these conditions a sufficient number of facts would be collected in Calcutta to determine the amount of protection that can be given by Dr. Haffkine's anticholeraic vaccine to individuals or communities in an affected locality; and accordingly I recommend the commissioners to give the system an extended trial."—*U. S. Medical Journal.*

Humoristica Medica.

SAD MISHAP WITH ANIMAL EXTRACTS.

A humorist thus unburdens himself upon a long-suffering community:

In a number of published papers I have urgently advocated giving honestly and fairly the record of our successes as well as failures, of our blunders as well as our hits, in published reports of cases. The time has now arrived for me to put these precepts into practice, some very lamentable mistakes, not to use a stronger expression, having taught me a lesson that I shall try to profit by in the future, and which, I think, ought to be made known to the profession, in the hope that it will inure to the general good.

The blunders I wish to call attention to occurred recently in the preparation and use of the animal extracts so fortunately discovered by the late Dr. Brown-Séquard, of Paris, France, and so effectually developed by certain eminent physicians in our own country. After having carefully and diligently experimented for quite a lengthy period in the manufacture and use of these extracts, I came to the conclusion, from my results in the treatment of certain functional troubles, that I had accidentally hit upon an unusually excellent technique in the manipulation, and felt emboldened to try my hand in the treatment of some organic troubles.

One particular lot of the extract had proved so exceptionally efficient that I decided to adopt the method pursued in its preparation as a rule for my laboratory. Looking up the note of the method I had employed with it, I ascertained that in all essential particulars except one I had followed that of the high authorities now everywhere recognized in this connection. The exception had regard to the length of time given to the maceration. Instead of one year, the regulation time, I had left the material in the macerating vats for eleven months, five weeks and eight days.

My first experiment was made with two black-and-tan setter dogs, who, in attempting to take charge of some blue-grass hay in the manger of a Kentucky thoroughbred stallion, had been set upon by that spirited animal and compelled to beat a hasty retreat, each with the complete loss of an ear. These canines were named, respectively, Ardotto and Scipio. Ardotto had lost his left ear and Scipio his right. As Ardotto had become quite vicious, and was unkindly suspected by the neighbors of eating his mutton too fresh, I conceived the notion of killing him and feeding his ear to Scipio in the shape

of aurine, or ear-extract, to be made according to my improved formula.

The result was marvelous. In the course of a few weeks after Scipio began taking the aurine thus prepared, an ear began growing rapidly from the old stump, and in a short time the appendage was fully restored. If there was any difference, it looked smoother and glossier than the other, and, indeed, though not noted at the time, it was an exact reproduction of the ear of the condemned Ardotto. I failed to take into consideration at the time that the dogs were twins, that they had lost opposite ears, and that they were both black-and-tan, all these coincidences being purely accidental. However, after a short time Scipio was unluckily run over by a street car, and lost his left hind leg. Encouraged by my former successes, I began looking up a suitable dog that could spare a leg, or a leg that could spare a dog, with the view of preparing a quantity of legine, in the hope of restoring as before the lost member. The first dog brought was a strong, bench-legged cur, with a shaggy, well curled tail. After the carcass had been divided ready for committing to the vats, it somehow failed to meet the fancy of my assistants as well as myself, so we threw it aside and substituted an animal that appeared to be a vigorous cross between setter and Newfoundland, using the right hind leg in the preparation of the extract.

An enterprising young friend, however, took it into his head to treat a bob-tailed dog belonging to his mother, with a preparation of tailine, in the hope of restoring the missing member, and requested permission to prepare the extract in my laboratory from the tail of the rejected cur. To this I cheerfully consented.

After macerating our materials with scrupulous regard to the period we had adopted as our rule, viz.: thirteen months, five weeks and eleven days, my assistants went into the laboratory early in the morning, before it was fairly light, to get the legine to begin on Scipio's leg. Unfortunately in doing so they cracked the glass jar containing it. The jar in which my young friend had prepared his tailine stood next to it, but was thought by them to be empty. Into this they hastily poured the legine and brought the jar into the operating room, where the mixture was administered to Scipio.

At first things went on most gratifyingly. A leg began growing rapidly from Scipio's stump, and in a short time it was thought best to turn him out for exercise so that the new joints might be made supple. When he was brought out it was observed that the hair on his tail was becoming rather coarse and stiff, and it was noticed, too, that his tail had begun to

turn over his back. At first, however, it was thought that this roughness of the hair was due to the fact that he had not been in a situation to have the toilet of his tail properly attended to, while the curling was attributed to pressure against the walls of the narrow kennel in which he had been confined. Both the curling of the tail and the state of the hair grew worse daily, and an investigation which was now set on foot developed the mistake by which the legine and the tailine had become mixed.

In a short time Scipio's tail had become markedly bushy and ugly, and eventually became curled so tight over his back that half the time his hind feet were lifted clear off the ground. This led to the discovery that the extract from some animals is prepotent as compared to others, for evidently the tail-developing elements of the cur had predominated over those of Scipio. But poor Scipio's misfortunes did not end here. We had made the legine from the right leg of the mongrel, and the result was that a right leg grew on Scipio's left stump, and the dew claw was on the wrong side. Furthermore, Scipio had always been a right-handed accelerator, that is, he had been in the habit of lifting his right leg whenever he felt an inclination to moisten hat-racks, door-posts and the like, and by a streak of ill fortune the same had been the case with the mongrel. So, when it became necessary for Scipio to discharge the renal secretion both legs would begin bouncing up in the most tumultuous and unsymmetrical way, and this, with the tilting of the hind-quarters due to the tight-curling of the tail, made poor Scipio at such times a picture of confusion, shame and chagrin that could not but touch a tender spot in the bosom of the most unsympathetic.

Imagine the consequences if I had been treating a sensitive young lady, say a beautiful blonde, who had happened to lose her nose through infection from the kisses of too ardent a lover, and a similar blunder had been made! Imagine that noseine derived from the black, broad and flat proboscis of some glossy son of Africa had been used in the treatment, and worse still, if worse can be, that some one making hairine from kinky shearing from the same source had got the extracts mixed as we did. I draw the veil!

Half the seigniorage in the national treasury would not suffice to meet the damages, especially if the jury should happen to take its cue from a verdict in a recent noted case at the national capital. I only venture this allusion in order to suggest the measure of gratitude that is due me for making this humiliating concession purely for the good of the profession, and bravely regardless of the fact that well-nigh universal success characterizes reports throughout medical literature.—*Lukianos, in The American Practitioner and News.*

MORTUARY REPORT OF NEW ORLEANS.

FOR SEPTEMBER, 1894.

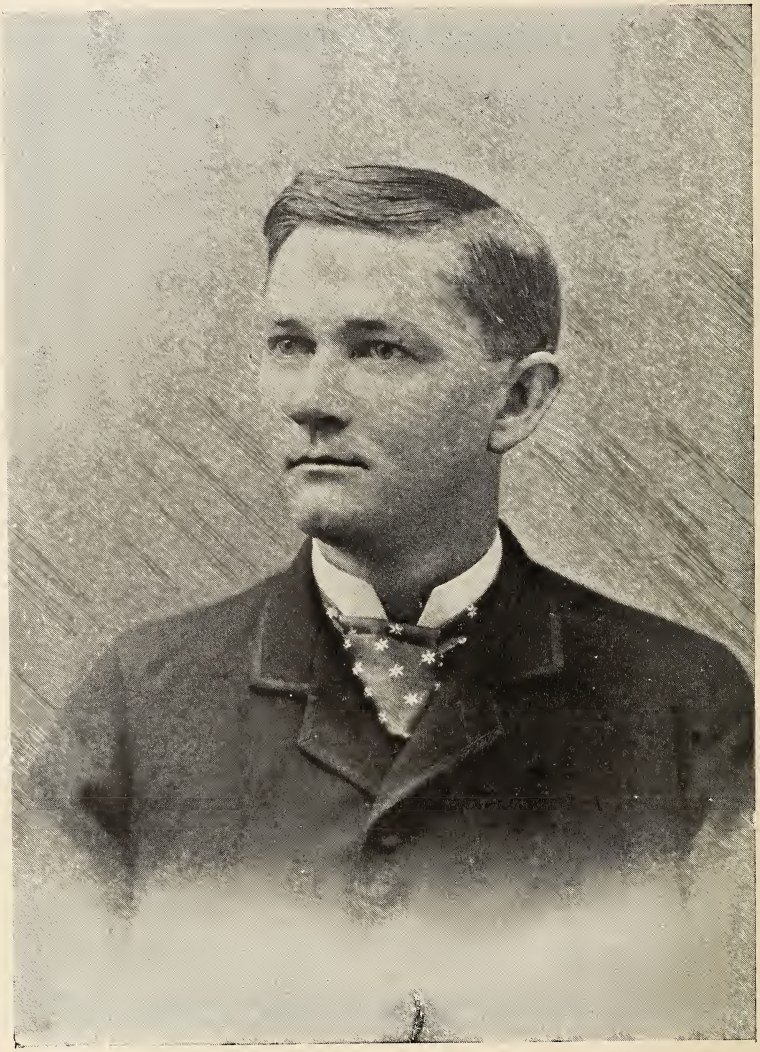
CAUSE.	*White.....*	*Colored...*	*Male.....*	*Female....*	*Adults ....*	*Children.*	*Total .....*
Fever, Yellow							
" Malarial (unclassified)	6	7	7	6	10	3	13
" Intermittent							
" Remittent	4		3	1	3	1	4
" Congestive	2	3	3	2	5		5
" Typho	6	5	4	7	8	3	11
" Typhoid or Enteric	4	2	4	2	6		6
" Puerperal	1	1		2	2		2
Leprosy							
Small Pox							
Measles							
Diphtheria	8	2	8	2		10	10
Whooping Cough	2		1	1		2	2
Meningitis	7	1	3	5	3	5	8
Pneumonia	8	7	7	8	6	9	15
Bronchitis	2	6	5	3	3	5	8
Consumption	39	35	37	37	74		74
Cancer	12	2	4	10	14		14
Congestion of Brain	4	3	4	3	2	5	7
Bright's Disease (Nephritis)	10	7	12	5	16	1	17
Diarrhœa (Enteritis)	18	8	8	18	11	15	26
Cholera Infantum	4	3	4	3		7	7
Dysentery	6	5	8	3	9	2	11
Debility, General	2	1	1	2	3		3
" Senile	14	5	9	10	19		19
" Infantile	3	6	1	8		9	9
All other causes	155	97	151	101	165	87	252
TOTAL	317	206	284	239	359	164	523

Still-born Children—White, 28; colored, 29; total, 57.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 20.61; colored, 35.56; total, 24.70.

L. F. FINNEY, M. D.,
Chief Sanitary Inspector.



DR. ALBERT BALDWIN MILES,
Died, August 5th, 1894.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XXII. NOVEMBER, 1894. No. 5.

Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

BIOGRAPHICAL SKETCH OF DR. ALBERT B. MILES.

BY WM. ELLIOTT PARKER, ASSISTANT HOUSE SURGEON CHARITY HOSPITAL, NEW ORLEANS, LA.

Dr. Albert Baldwin Miles was born in Prattville, Ala., May 18, 1852, being the son of Benjamin Franklin and Sarah Albertine Miles. In 1857 his father moved to Union county, Ark., and became engaged in agricultural pursuits, and in 1861 moved to Rusk county, Texas, as he was in poor health. They lived there until 1864, when the doctor's father and mother died. His uncle, Mr. John B. Tatum, then took charge of him and he moved to El Dorado, Ark. He attended the schools of that town until 1871, when he entered the University of Virginia. In the spring of 1872 he had a severe attack of pneumonia and was compelled to leave the university. Dr. Miles was always a hard student, and would not let trifles interfere with his studies. Since the doctor's death, his brother told me the following story: When a boy at boarding school he was studying one evening, when a boy of his own age and size came in and deliberately tried to disturb him. The doctor asked him to stop, but the boy did not do so. The doctor told him that after his lessons were prepared that he would whip him. After a time the boy left and the doctor finished his studies. The next morning, true to his promise, he gave him a sound thrashing. From boyhood it had

been his intention to study medicine, so he entered the medical department of the University of Louisiana in the autumn of 1872, and in the spring of 1873 was appointed resident student of the Charity Hospital through the influence of his friend, Dr. P. C. Boyer. In April, 1875, he graduated and was the valedictorian of his class. He was at once appointed associate demonstrator of anatomy, and was appointed demonstrator the following year. Just after he graduated he was elected as a visiting surgeon to the Charity Hospital and was appointed chief of clinic to Prof. Samuel Logan, who was at that time professor of anatomy and clinical surgery. While a resident student he was assigned to the wards of Drs. Logan, D. W. Brickell and Frank Hawthorn, and during that time they formed an attachment for him that lasted until they died. In April, 1877, he was elected assistant house surgeon of the Charity Hospital and continued to hold this position until 1881, when he resigned to accept the position of house surgeon to the Hotel Dieu. April 4, 1882, he was elected house surgeon of the Charity Hospital and filled this position with marked ability until his death. In 1885 he resigned the position of demonstrator of anatomy in the university after having filled it for ten years.

During this time he had a remarkable record in that he never failed to meet his class. In 1886 he was elected Professor of Materia Medica and Therapeutics in the university, and continued to fill this position until the end of the session of 1892–93, when he was elected Professor of Surgery to succeed Dr. Logan, who died in January, 1893, and whose place in the faculty he had filled to the end of that session. As a teacher his manner was simple, and he was considered one of the best lecturers that has ever been connected with the university, and he was beloved by all of the students. He was always kind to and considerate of the younger members of the profession, and helped many of the more needy ones financially as well as with his good advice. He became specially prominent as a surgeon, and had those two things that are necessary for any man to become a great surgeon, viz.: a steady hand and a clear head. He was always cool and collected during emergencies, and the more difficult the case the

better did he operate. His judgment was remarkable, and his opinion was always highly valued by his confrères.

He had great success with cases of gunshot wounds of the abdomen, and wrote several articles on that subject. Among his successful cases was one with sixteen perforations of the ileum and three of the mesentery, and another with fourteen perforations of the ileum. He successfully ligated the right subclavian inits third portion, for a gunshot wound of that vessel, after applying a temporary ligature to the first portion to control hæmorrhage while he exposed and tied the wounded point. During the past winter he successfully ligated, simultaneously, the external iliac and superficial femoral for traumatic aneurism that extended to Poupart's ligament.

Although he wrote with ease he made, for a man of his prominence, very few contributions to medical literature. While Dr. Logan's chief of clinic he reported many of his cases, and later wrote a number of articles, among which was "Tracheotomy in a case of bronchocele," "Epithelioma and its treatment," "After treatment of bronchotomy," "Report of the case of remarkable control over muscular movements," all of which were published in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, and "A case of gunshot wound of abdomen with sixteen perforations of the ileum and three of the mesentery," reported in the *Philadelphia Medical News.*

Two years ago he read a paper before the American Surgical Association on "Thirteen cases of gunshot wounds of the abdomen, with remarks," which was subsequently published in the Annals of Surgery. His paper on "Chloroform vs. Ether," read before the Orleans Parish Medical Society in 1887, and published in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, met with favorable comment from the medical journals throughout the country. His address at the last meeting of the State Medical Society was one of the ablest papers that has ever been read before that body, and to his personal influence was largely due the success of that meeting and the passage of our present medical law. For several years he was an editor of the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL. He was a member of the American Surgical Association, American Medical Association, vice

president of the Southern Surgical and Gynecological Association, ex-president of the Louisiana State Medical Society, and a member of the Orleans Parish Medical Society. At the last meeting of the Southern Surgical and Gynecological Society he was asked to prepare an address, to be read at the next meeting, on "The Life of Warren Stone." Fortunately he had completed this address and it will be read

His consideration for the feelings of others is well shown by the following story: When a boy of 15 or 16 years of age he was at school at a place about forty miles from Monroe. One day he was sent to Monroe to attend to some business, and among other things that he had to do he consulted some lawyers. One of them suggested that he should leave his saddle bags in his office while he attended to his other commissions. He did so, and about 2 o'clock was ready to start home, so went to the office to get his saddle bags, but found that the office was locked and that both members of the firm had gone home to dinner. The one that he had seen lived about a mile from town, so he went to the house of the other, who lived only a short distance. The doctor rang the bell and the old gentleman came out with a napkin tucked in his neck. The doctor explained the circumstances to him and asked for his saddle bags, saying that he had forty miles to ride and would like to start. As he handed him the keys to the office the old gentleman said: "Young fellow, I thought you had too much sense to interrupt a gentleman at his dinner." Time went on and the young boy became a great surgeon. Two years ago a message was delivered to the doctor while at his dinner asking that he come to his office to see an old gentleman who was very anxious to see him. He went and found the old lawyer, who had come down to consult him about a serious surgical trouble. The doctor operated successfully and the old gentleman was very grateful. As he told this story to two intimate friends one of them asked if he had mentioned he occurrence of his boyhood to him. He replied, "No, I did not want to make the old gentleman feel badly." How few of us there are who would have allowed such an opportunity to pass by!

He was a good and true friend and frequently went to great inconvenience for his friends.

His executive ability is well shown by the high stand that the Charity Hospital held among similar institutions. He planned the ambulance house and started our excellent ambulance system, and suggested to the board and assisted in planning the out-clinic buildings, the building for women and children and the new amphitheatre, but did not live to see it completed. He was largely instrumental in the founding of and was the first Dean of the faculty of the Charity Hospital Training School for Nurses.

In July, 1894, he contracted typhoid fever and died August 5. He was never married. Five brothers and one sister mourn the loss of a devoted brother, the medical profession of the South has lost one of its greatest surgeons and the State of Louisiana one of her most public-spirited and most charitable citizens.

The following resolutions were adopted by the Orleans Parish Medical Society on the death of Dr. A. B. Miles:

WHEREAS, by the untimely death of Dr. Albert B. Miles this society has lost a distinguished member whose brilliant career presaged a still more brilliant future; one who had, in the early prime of his manhood, attained the highest professional rank through his fixedness of purpose, by the full discharge of every duty devolving upon him, and through his unerring judgment and pre-eminent skill in that branch of medicine which he had chosen to pursue; and

WHEREAS, in him not only this society, but the whole medical profession of our State and city, as well as this entire community, have been deprived of a man whose renown is widespread and indisputable, whose reputation shed a lustre upon his calling, and who is endeared to all his friends through his pure, lovable and high-minded qualities; therefore, be it

Resolved, That this society deeply deplores his loss, and that we extend to his bereaved family our sincere sympathy in their great affliction; and be it further

Resolved, That a copy of this report, suitably engrossed, be sent to the family of our late associate, Dr. Albert B. Miles, and that it be spread upon the minutes of this society in a space especially set aside for that purpose, and also that it be published in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

R. M. WALMSLEY, *Chairman.*
H. S. COCRAM.
L. SEXTON.

ON THE SERUMTHERAPY OF DIPHTHERIA.*

By P. E. ARCHINARD, M. D., New Orleans, La.

Since the discovery of the Klebs-Loefler bacillus, and its confirmation as the etiological factor in diphtheria, a number of valuable discoveries have been made which have greatly advanced our knowledge in the pathology of that disease, among which, the most important perhaps, has been that of Roux and Yersin, of the Pasteur Institute of Paris, in 1888 and 1889, who demonstrated that the symptoms of diphtheria were not caused by the actual presence of the bacillus in the economy, but were due to the absorption of a poisonous substance secreted by those micro-organisms. To this substance—a toxalbumen, they gave the name of toxine.

Their demonstration consisted in injecting to animals the filtrate of a bouillon culture of the Loefler bacillus, absolutely free from micro-organisms, and thus producing all the symptoms of the disease, in the same way as if a pure culture containing the live bacilli themselves had been introduced. They found also that animals who had not died from the effects of those injections were not susceptible of contracting diphtheria even when inoculated with large doses of virulent culture containing or not the bacilli.

Some time after this, Behring and Kitasato in Berlin, announced their discovery that cultures of the tetanus bacillus kept for some months could be injected in small doses to animals without causing death, and that by a careful repetition of these injections they had made animals refractory to even large doses of virulent cultures. They further asserted that the serum of the blood taken from those refractory animals when injected subcutaneously to susceptible animals conferred upon the latter immunity against the disease. Their experiments repeated upon a variety of animals and then upon man invariably gave satisfactory results. Applying their discovery to diphtheria they found that in the same manner animals could be made refractory to this disease, and that their serum, as in the case of tetanus, gave immunity to others.

Starting from these revelations Roux made prolonged in-

*Read before Orleans Parish Medical Society, October 13, 1894.

vestigations into the subject, and his results as given out in an exhaustive and brilliant paper read at Budapesth last month, in the bacteriological section of the Eighth International Congress of Hygiene, are highly deserving of attention and study, and will if corroborated, as they can not fail to be, mark a new era in the management and treatment of this dreaded disease. His article has for title "A Contribution to the Study of Serumtherapy in Diphtheria," and the essential portions can be summarized as follows:

Bouillon cultures of the diphtheria are kept for months at a temperature of 37 deg. C. in order to allow the organisms to secrete as much toxine as possible. The cultures are then filtrated through unglazed porcelain filters and kept at ordinary temperature in well filled vessels, tightly corked and protected from light. One-tenth cc. of this filtrate will kill a guinea pig weighing one pound in 48 hours. To immunize animals, following the suggestions of Behring for tetanus, one-third part of a Gram's iodo-iodine solution is added to one part of toxine culture and the mixture is immediately injected under the skin of the animal, proportionally to its weight. This gives rise to a slight elevation of temperature, but is otherwise well borne by the animal. In a few days the injection is repeated and gradually larger doses of the mixture are given, or the amount of iodine solution therein contained is diminished. At the end of several weeks, when the experiment is a success, large doses of pure toxine cultures have no effect on the animal and it is then said to be immune.

For his purposes Roux chooses horses because they resist the toxine injections very well and also because a large quantity of clear serum can easily be obtained from them for a number of times by incising one of the jugular veins. He gradually gets them refractory or immune by injecting into them every few days progressively larger and larger doses of the toxine culture. At the end of two or three months, when the animal is able to withstand very large doses of virulent toxine, without any local or general manifestations, and on the day of an injection he abstracts a large quantity of blood from the jugular vein and collects the easily obtained clear serum. This serum when well prepared possesses a preservative

power equal to 50,000 or 100,000; that is, a guinea pig injected with ½ cc. of a virulent toxine culture will remain unaffected by it if twelve hours previously it has been injected with 1-50,000 or 1-100,000 part of ½ cc. of the serum. Again, 1-10 cc. of this serum mixed with 1 cc. of toxine culture when injected in a guinea pig produces no evil effect. And lastly, animals injected first with a virulent toxine culture and several hours afterward only with the serum are also protected, provided the dose of the serum has been sufficiently great. This same preservative power is possessed by the serum against injections or inoculations with the bacillus itself.

The substance which gives to the serum its preservative powers has been called antitoxine, and the immunity it confers is developed quickly and lasts a few days, or at most a few weeks only, the contrary of the immunity conferred by injections of small doses of toxine, which is very slowly developed and is more permanent. The antitoxine serum, when mixed with toxine culture, does not destroy the latter, but its active principle saturates it, and when the mixture is injected in animals the leucocytes are stimulated and thus become proof against the deleterious effects of the poison. When, through previous experiments with other virus or through disease, the leucocytes are enfeebled and unable to react, the mixed injections afford no protection.

The horse serum containing the antitoxine, when prepared as stated above, in well-filled sterilized vessels, can be preserved for a long time in the dark at ordinary temperatures; dried in a vacuum it can be carried for long distances, and on dissolving it in eight or ten times its weight of pure water it regains its protective powers.

What has just been said with regard to the preservation of animals when they are inoculated subcutaneously holds equally good when the inoculation is made by means of the live bacillus applied directly to the abraded surface of the skin or mucous membrane. When the guinea pig or rabbit is injected with 1-10,000 part its weight of serum and the animal afterward inoculated by means of a culture of the bacillus applied to the abraded surface of the mouth, throat or any other mucous membrane, the temperature of the animal

shortly afterward rises slightly, the contaminated surface becomes swollen and red, and a false membrane is formed, but already on the second day the pseudo-membrane becomes loose and the redness and swelling of the part disappears and convalescence is established. The same thing happens if the serum is injected immediately at the time of the inoculation. Even injected twelve hours after the diphtheric inoculation, 1-10,000 to 1-1000 of the body weight of serum will stop the disease in a short time. Should the quantity of serum injected be too small, however, the animal apparently gets better, but dies later on of cachexia.

In the mixed forms of diphtheria—that is, when on bacteriological examination the false membranes are found to contain not only the Klebs-Loefler bacillus, but the steptococci in large numbers in association, the efficacy of the serum treatment is less apparent and recovery does not take place unless larger and more frequently repeated injections are administered. In practice those cases are recognized by great involvement of the lymphatic glands and by suppuration, and are found chiefly in cases complicated with measles and scarlet fever.

After repeated and at all times satisfactory experiments on animals, Roux began the experiment on children in the diphtheria pavilions of the "Hopital des Enfants-Malades" in Paris. From the 1st of February to the 24th of July, 1894, 448 children admitted in the hospital were inoculated with the serum without distinction made as to the form or duration of the disease, and of these 109 died, or 24½ per cent. During the same period of 1890, in the same hospital with the same treatment less the serum, the mortality had been of nearly 56 per cent.; in 1891 the mortality was of 52½ per cent.; in 1892 of 48 per cent.; in 1893 of 48½ per cent., a mean for those four years of 51¾ per cent.

In the "Hopital Trousseau," during the same period of 1894, when the experiments with serum were being carried on at the other place, there were 520 admissions and 316 deaths, or 60 per cent.; so that *prima facie* there was a saving of more than half in the death rate by Roux' method.

As will be noticed by the above figures the mortality from diphtheria in the Paris hospitals is very great. This is accounted

for from the fact that most of the worst cases in the city find their way to these hospitals, whereas the large portion of the benign cases are treated at home. As an evidence of this it is sufficient to state that in 121 cases of the 448 cases spoken of above it was found necessary to perform tracheotomy.

If we exclude from our 109 deaths as above, the cases in which the operation was perfomed we have a mortality of 12 per cent. instead of 24½. In the Trousseau Hospital without the serum the death rate falls from 60 to 32 per cent. In tracheotomized cases treated with serum the death rate is 46 per cent., without serum 70 per cent.

Again, if from our cases we exclude those cases where streptococci were found associated with the Loefler bacilli in the throat, instead of 12 per cent. the mortality would be of 7½ per cent. And if again we deduct from these those cases which died within twenty-four hours after admission, and therefore before the serum treatment could have had any good effect, we have only a percentage of 1¾ fatal cases. In the cases treated without the serum the mortality of pure diphtheria cases unassociated with streptococci was of 32 per cent.

To substitute figures, 120 cases of pure diphtheria with Klebs-Loefler bacilli alone, treated with serum, gave a mortality of 9, of which 7 died within twenty-four hours after admission. Of the two remaining cases, one showed at the autopsy tubercular peritonitis, and the other after doing well for three days developed an eruption of measles and died on the eighth day. Nine cases in which the Loefler bacillus was found associated with the small size undetermined coccus sometimes found with it gave no deaths.

In the cases where the bacillus was found associated with the streptococci 34 per cent. died, notwithstanding the serum treatment; in cases without serum treatment 87 per cent. died.

It may be interesting here to state that in all cases in animals as well as in man, the antitoxine serum injections are absolutely harmless. The quantity of serum injected for the first time was 20 cc. and the second time, generally on the second day, 20 or 10 cc. The injections were repeated or not, according as required. The minimum of serum throughout in one case was 20 cc. and the maximum 125 cc.

From the above, which is only part of a large number of interesting experiments and investigations, it is easy to judge of the value of serum injections or better vaccinations, and as already stated, if these facts are corroborated fully by subsequent investigators, it opens a wide field for the battling against and extermination of dreadful contagious diseases with the hope of ultimate success. And the discoverers of serum-therapy will deserve to have their names inscribed alongside that of the immortal Jenner and illustrious Pasteur as true benefactors of the human race.

LUMBAR PUNCTURE FOR THE REMOVAL OF CEREBRO-SPINAL FLUID.

The author's conclusions in a paper read at the last meeting of the Neurological Association were as follows: (1) The method is simple, easily practised and rather attractive. (2) It is in itself usually without danger. (3) By it we certainly can draw off cerebro-spinal fluid. (4) The quantity removed at short sittings has been from 1 to 1½ ounces in adults. (5) This, without doubt, represents the amount of free fluid usually present in the lower vertebral canal even when occluded above. (6) In internal hydrocephalus the relief, if any, is but very temporary. In the common form due to tuberculous meningitis, the result is not worth the trouble, while in the closed or sacculated forms it must rather do harm than good. (7) As a diagnostic means—*e. g.*, in suspected meningeal hæmorrhage, it is valuable. As an index to pressure, it may also be worth nothing. (8) It is worth further trial: (*a*) As a passing relief in brain-tumors not complicated by hydrocephalus; (*b*) as a substitute for trephining in progressive dementia; (*c*) in certain spinal troubles; (*d*) and possibly as a means of applying medication directly to the meninges. (9) In conclusion, it may be said that while admissible in all cases of brain pressure, there is as yet no established indication for this procedure except for diagnostic purposes.—*Am. Medico-Surgical Bulletin.*

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Editorial Articles.

ANTITOXIN TREATMENT OF DIPHTHERIA.

All civilized communities are now agitated by the developments that have recently taken place in the treatment of diphtheria. Not only are professional men aroused, but the laity takes a keen interest in the well written reports that have appeared in the daily press from time to time. There is a great wave of excitement rolling over all places that have been ravaged by diphtheria. The sufferings of victims of that fearful disease, and its high mortality, have inspired all persons with a great dread of it.

It is, therefore, not surprising that the announcement of the discovery of a valuable remedy against the disease should arouse widespread interest.

Paris and Berlin are the centres from which anxiously expected news comes. In the former city, Roux is the hero of the hour; in the latter, Behring.

The medical world has its fads and fashions just as the rest of mankind. The present subject that engrosses its attention can hardly be put down as a passing fancy, for the reports that come in from all sources point to the conclusion that in immunized blood-serum we have a powerful and, in all but

hopeless cases, an almost certain cure for one of the most formidable diseases. Behring published a book that dealt with the subject most exhaustively. Koch's tuberculin, though it was a disappointment, prepared the way for Behring's serum method; and if statistics can be relied on, serum-therapy has come to stay.

The figures furnished by Dr. Adolf Baginsky (*New York Medical Record*, October 6, 1894) certainly speak strongly in favor of the new method. In the Kaiser and Kaiserin Friedrich Children's Hospital, Berlin, the mortality under old methods of treatment was 40.04 per cent.—that is, nearly one-half of the little patients died. Under the serum treatment the general mortality was reduced to 14.37 per cent., and in selected cases, seen early in the attack, the mortality was not over 10 per cent.

This ratio is much less than that ever observed in even mild epidemics under older methods of treatment. Among Baginsky's fatal cases there were several tuberculous children, and others suffering from an intercurrent attack of scarlet fever; these could hardly be taken as fair test cases. The course of the nephritis was sometimes unaltered and sometimes very favorably influenced. The antitoxin had no bad effect upon the heart. It sometimes caused an eruption on the skin, resembling measles or scarlatinal patches, but not accompanied by a rise of temperature.

The anitoxin is administered for two purposes: (1) To secure immunity; (2) as a therapeutic agent after the disease has begun. Dr. Louis Fischer, of New York, says that, while giving antitoxin, it is not customary to neglect the aid given by drugs usually employed. The immunity conferred by the antitoxin usually lasts about four months, after which time it is well to repeat the injection. The antitoxin seems fairly to have established its claims as a prophylactic and as a remedy.

In Berlin two kinds of "serum" are being used. They are both good, and vary only in strength, as they are made by rival firms. One is the "Behring-Ehrlich Heilserum," and the other is the "Aronson Heilserum." In Paris there is only one source of the coveted serum: Roux' laboratory. Dr. Archi-

nard's paper, published elsewhere in this number, will give a clear idea of affairs in Paris.

A consular report from C. W. Chancellor, United States Consul at Havre, France, gives some concise information on the subject under discussion. He says that Roux has been unable to meet the demand for the serum, and he has had to confine himself to sending to the provinces only a sufficient quantity for urgent cases; and this state of affairs is likely to continue for some time. The demand for the serum is enormous, and the difficulty of procuring some correspondingly great. Here in New Orleans two efforts are being made to secure some of it. The funds that are being contributed are growing rapidly in size; but in spite of the enthusiasm of those interested, it is to be feared that many weeks must elapse before any of the precious serum can be obtained.

In the *Berlin Kl. Wochenschrift*, No. 30, 1894, Dr. G. A. Smirnow has an article which is worthy of more than passing notice. He made a number of experiments for the purpose of determining if he could produce artificially in normal or diseased serum the properties possessed by the serum of immunized animals. His first experiments (*Am. Medico-Surgical Bulletin*) consisted in mixing normal serum with different quantities of peroxide of hydrogen, and injecting the mixture into different animals; no positive results, however, could be obtained by this method. Positive results were obtained with electrolysis. The changes effected in the serum with electrolysis are as follows: At first gas bubbles begin to develop at both electrodes, then albuminous coagula commence to form at the negative pole, and fluid becomes slightly turbid, but remains clear around the positive pole. The serum, after complete preparation, was injected into animals, but the results were negative. Then Smirnow began to investigate whether it would not be possible to produce curative properties in the serum against certain diseases by electrolysis, if it contain the toxines of that disease. His first experiments with diphtheria showed that the toxines could be changed by electrolysis into antitoxines, and could be used with good results in animals. He injected rabbits with a diphtheria culture, and began with his antitoxin treatment twenty-fours afterward. In two or

three hours a pronounced rise of temperature took place. One injection was usually sufficient for a complete cure. Smirnow thinks that, according to his method, it would be possible to prepare much stronger antitoxines than by the method of immunization, and that these can be used with excellent results upon human beings.

Though the present facilities for producing immunized serum are much too small to supply the demand, we may confidently look forward to a bountitul supply in a few months, for stations are being established in many large cities, and in time immunized serum will be as easy to get and as much an article of commerce as vaccine points.

RESIDENT SURGEONS OF THE EYE, EAR, NOSE AND THROAT HOSPITAL.

In the first week of next December, the executive committee of the Eye, Ear, Nose and Throat Hospital of this city will elect four resident surgeons for the year 1895. As this hospital has one of the largest special clinics in the United States, it offers an exceptional opportunity for the study of diseases of the eye, ear, nose and throat. Physicians desiring full information can obtain the same from Jos. A. Hincks, Esq., Secretary, No. 29 North Rampart street.

Abstracts, Extracts and Annotations.

MEDICINE.

THE DIETETIC AND HYGIENIC TREATMENT OF CONSUMPTION.

By T. J. McGillicuddy, A. M., M. D.

About nine years ago I first became thoroughly convinced of the great value in certain chronic diseases of dietetic treatment. Before that time I was, like many others, too credulous as to the power of drugs alone as curative agents in all diseased conditions. The good results so fondly hoped for and expected from that line of treatment did not always appear, and the results were often discouraging and unsatisfactory. In the ordinary text-books no special stress was laid upon the value

of dietetic methods except in diabetes and a few other conditions. At that time I had a patient in whom I was especially interested.

He was thirty years of age, and had been a splendid type of physical manhood, an athlete, and a genial companion. As a result of boarding-house cookery, however, he had become fearfully emaciated, and already presented the physical signs of consolidation at the apex of the left lung. Added to these was a slight hacking cough. Three prominent professors to whom I took him made the diagnosis of phthisis, and gave a very gloomy prognosis. The drugs prescribed by them had no beneficial effect. Dr. George B. Fowler then saw him and gave a favorable prognosis. Along with suitable medicinal treatment he recommended a temporary diet of hot water, carefully chopped beef, and stale white bread. The patient's emaciation was immediately checked, and he began to gain strength. Other articles of food, which were both nutritious and easily digested, were gradually added to his dietary, and after following this line of treatment for a few weeks he made a complete recovery. At this time his ruddy cheeks and elastic step were in marked contrast with his former pitiable condition.

The recovery of this patient under dietetic treatment made a great impression upon me, and served to direct my attention at once to the study of dietetics in disease. At that time there was seemingly considerable prejudice, as well as lack of knowledge, among the members of the profession with whom I conversed, as to the value of the dietetic treatment of phthisis. The dangers of a diet of beef were harped upon as if nothing else caused indigestion.

To understand how to treat consumption from a dietetic standpoint, we must first consider what consumption really is. Consumption is a disease of malnutrition in which a change has taken place in the chyle or in the mesenteric glands, thus leading to a want of vital matter in the constitution. This is usually the result of bad food, impure air, and an irrational mode of living. The lung structure may be still further weakened by inflammatory or other causes. In acute cases there is often a preceding catarrhal pneumonia. Consumption develops most commonly in strumous or scrofulous subjects—struma being an exhausted constitutional state, and it is simply another name for starvation and bad hygiene.

The role which the tubercle bacilli play in phthisis is a secondary one; there must first be a weakening of the constitution. Although I have seen apparently healthy children born of tuberculous parents, they are far more often tuberculous, showing an hereditary constitutional vice.

Tubercular consumption is not a local, but a constitutional

disease, and calls for general treatment. Tubercle bacilli do not and can not cause consumption in a perfectly healthy individual. They only induce disease in persons with lowered vitality, who thus become susceptible to their influence. This vulnerability is generally induced by wrong living, poor food, bad personal hygiene, and causes which lead to exhaustion of the nervous system. Bacterial germs may be found latent in some of the tissues of the body. In consumption they can not develop in the tissues of the lung until there are a weakening and decay of its substance. They live and multiply only in diseased tissues.

When fermentation occurs during the process of digestion different bacteria develop quickly, and in many cases are absorbed into the lymphatics and blood, causing a catarrhal state, and this is probably the first factor in phthisis. Practically, "a tendency to consumption" means that there is a kind of starvation of the system, and this condition is best relieved by attention to diet and personal hygiene.

Consumption is the great destroyer. It causes thousands of deaths every year in this city alone, and therefore any improvement that can be made in its treatment ought certainly to be welcomed. The disease is not only communicable and preventable, but in its earlier stages, and if not too extensive in all stages, it is curable. That it is not necessarily a fatal disease, and that it is curable in all stages, I have seen abundant evidence. While making autopsies at the deadhouse connected with the Almshouse and Workhouse hospitals and the Hospital for Incurables on Blackwell's Island, I have seen cases where there was cicatrization in the apex of the lungs, showing that the consumption had been arrested either by nature or the interference of art. It is said that persons may have hereditary tendencies to consumption, but, as a rule, it is only a weakened constitution that is inherited. It is generally ignorant feeding and wrong-living that causes the disease in these individuals.

Correct alimentation in this disease is of the greatest importance as a remedial agent. To secure healthy, rich blood for the repair of diseased tissues we must have proper food and a good digestion. Usually the appetite is either depraved or is almost completely lost, so that the amount of nourishment taken by consumptives is often very small. If they have their own way and follow the cravings of a capricious and diseased appetite, they will take very little wholesome food. These diseased cravings for indigestible food must be removed before we can expect much improvement; they are indicative not only of an unhealthy state of the digestive tract, but of the whole system.

In the dietetic treatment of this disease there must be a definite plan pursued, and there are some important points which we must ever keep in mind. We must procure an effective elimination, not only of the waste products of the body, but of the diseased tissue itself. First we must prepare the digestive tract and the tissues of the body to receive and assimilate the nutriment, and then we must select the most nutritious food and so prepare it that it will be readily assimilated. Consumption is too often considered to be a local disease and treated as such. We must remember to treat the whole system, which is in a pathological condition. The most rational method of securing elimination through all the channels of the body is by stimulating the activity of all the emunctories by the ingestion of a large quantity of hot water, and by hot sponge-baths, followed by a vigorous rubbing of the skin. This plan of treatment to be effective must be systematically carried out, and both physician and patient must steadfastly avoid that complete dependence on drugs which converts the wisest method of treatment into blind empiricism.

The causation of a disease should be carefully studied, and then by treating the diathesis the consequent disease can be prevented or removed. Most diseases depend for their propagation upon defects of nutrition. These being removed the disease disappears. We must remove the cause, otherwise the disease will persist in spite of all treatment, and to do this a perfectly clear diagnosis is necessary. It is the bringing up of the vitality of the patient that leads to recovery, as it is lowering of the vitality that is the first factor in producing disease. Wherever there is vital energy there is resistance to disease. It is a well known fact that nature has the power to cure in most cases if we give her the materials to work with, and at the same time stimulate the activity of the emunctories sufficiently to remove the poisonous waste.

The diet for the consumptive must be a scientific diet, based on a knowledge of what the different kinds of food do for the organism. We must provide, first, for the oxidation and elimination of waste products, and secondly, for scientific alimentation with readily absorbed and readily assimilated nutritive materials of the highest grade. There are many factors necessary for the successful treatment of consumption—rest, mental and physical, pure dry air, gentle exercise in the sunshine—all are important; but these are as nothing if the nutrition does not receive proper attention. A knowledge of dietetics is far more essential to success than a knowledge of drugs in the treatment of either acute or chronic disease. A careful study of the physiology of digestion and assimilation and of the composition and value of the different foods clearly shows us the means by

which we are to construct a diet of the greatest utility to consumptives. It would seem as if heretofore there had been a great lack of definite knowledge as to the construction of diet lists. The usual fault is that there is too great a variety for each meal, and much of it is comparatively difficult of digestion. The best argument in favor of the more enlightened dietetic treatment of consumption and of other chronic diseases is to be found in the clinical results. We now know, through a study of physiological chemistry, what foods are of high and what of low nutritive value; what ones are easily digested and assimilated; what require special gland elaboration before their nutritive elements can be utilized; what foods readily ferment, and what are the causes of this abnormal change.

Of especial value are the proteid or tissue-building foods, and the one which stands at the head of the list, because of its utility in this disease, is beef. It is difficult to show the importance of the selection of a correct amount of the different classes of food. If a certain class is taken in excess there is imperfect assimilation, and disease slowly but surely results. I have known fatal diabetes to result from excessive indulgence in raisins. Oatmeal mush, fermenting in the intestines, is a common factor in the production of nephritis. Malassimilation and the imperfect oxidation of waste products from overfeeding and bad cookery are at the foundation of most of the cases of consumption. A vegetable diet contains an injurious amount of the carbohydrates and too little of the proteid element, which, in this combination, is difficult of digestion. That a meat diet, with a small proportion of carbohydrates, is the best food for consumptives has been frequently demonstrated clinically. Milk has not as great a food value as meat because of its greater difficulty of digestion, its proneness to ferment from the sugar it contains, its lack of reparative material—not four per cent. of proteids—and the great danger of its being impure. Milk may fatten and keep the patient plump but fat persons sometimes have tuberculosis, and much of ,the fat we see is unhealthful.

Bearing in mind the best proportions of the three classes of proximate principles—viz., that the amount of proteids taken should exceed the amount of starchy food and fat—it is proper to consider how these proportions can be obtained in a most nutritive and assimilable form, so that while the nutrition is brought to the highest point elimination may not be hindered. In the beginning of the treatment the patient should eat nothing sweet, sour, or fried, and starchy and farinaceous foods should be entirely prohibited, with the exception of a small quantity of stale bread or boiled rice, until the digestive and lymph channels are entirely free from the irritating products of fer-

mentation. In consumption there is always a feeble digestion and frequently a low-grade catarrhal and inflammatory state of the digestive tract and the glandular appendages. The internal administration of hot water will tend to remove this condition and restore the parts to their normal state. It is not so much that large quantities of food should be taken, but that it should be thoroughly assimilated. The meat should be lean, juicy beef from the centre of the round; and, after all the fat and fibre have been removed, it should be cut into smatl pieces and passed twice through a perfectly clean "Perfection" or "Enterprise" chopper; or it may be scraped or even chopped on the block by the butcher. This minute subdivision by grinding or chopping makes it most digestible. Many patients have bad teeth, which frequently infect the food. If the meat is not thoroughly masticated the stomach certainly can not prepare it for absorption. It should be kept sterile by handling it with perfectly clean hands only and by cleansing with boiling water every implement it touches. The pulp should now be pressed very gently into cakes from half to three-fourths of an inch in thickness. If they are made too thick they will be difficult to cook, and they should not be pressed too firmly together, as this makes them less digestible and less palatable. The cakes should then be carefully broiled over a clear coal fire, or over one free from smoke and blaze, and they should be turned frequently to retain the juice. If desirable, they can be seasoned with a little salt, pepper or butter.

Another method of cooking the beef pulp is to gently simmer it with a small quantity of water upon the back of the stove for about twenty minutes, or until the meat has turned from the raw red to a delicate pink color, with a brownish exterior. It should not be allowed to boil, as this coagulates the albumen, turning it a gray color, and making it difficult of digestion. This dish is commonly known as "Scotch collops."

When solid food can not be taken on account of fever, properly made beef tea, beef peptonoids, or peptonized milk may be given for a short time; but the ground beef in small quantity is preferable, and can hardly be called solid food. With this meat diet a small quantity of dry, stale bread, two days old, may be taken. It should not exceed in bulk the amount of meat eaten. After a time some vegetables can be added in small quantity—a mealy potato a little boiled rice, boiled hominy, sago, tapioca, or farina gruels; but our main dependence must be upon the beef. When there is a strong craving for more variety, the dietary may be extended by adding tender steak, lamb, mutton, turkey, game or chicken, French peas or string beans. The succulent vegetables—celery, lettuce, dandelions, cauliflower, and spinach—are sometimes useful, as

they assist in overcoming the constipation that is frequently present. The idiosyncrasies of the patient should be studied. Many have aversions to certain wholesome foods, but these can be usually overcome by a little judicious training. There are whole families who can not taste milk in any form. I have a patient, a young man of twenty, who can never taste tomatoes—even the odor of sliced tomatoes being sufficient to make him sick. There are other things also, such as asparagus and cauliflower, which it is impossible for him to eat, and like many others, he can not eat Lima beans or yellow beans. Articles having a decided odor are exceedingly distasteful to him. He has never eaten butter, and can not take it in any form, either fresh or salt, without it causing excessive nausea. These neuroses, as they may be termed, of the gustatory nerve are often really psychoses and are extremely common. They have frequently to be considered in the treatment of consumption. Many of our ordinary articles of diet are taken as the result of an acquired taste. This is particularly the case with tomatoes, Lima beans, oyster-plant, parsnips, carrots and turnips. Many persons can not eat butter or bread, even when extremely hungry, without being nauseated. Again, some individuals never eat salt while others take inordinate quantities. In these cases there is always digestive derangement, and generally decomposition of starch, saccharine and fatty articles of diet. In the foregoing regimen these have been excluded to a great extent. If constipation be present, a little Turkish rhubarb or, better still, a small glass of senna tea, with an aromatic such as fennel to obviate griping, or a teaspoonful of table salt in a glass of water, may be taken on going to bed. Bad cooking and indigestible food, like cheese, pastry, baked beans, corn, lobsters, clams, pork, greasy macaroni, sausage, cabbage, pickles, porridge or mush, hard-boiled eggs, salads, veal, doughnuts, nuts, raisins, raw onions, cucumbers, fruits and impure milk, should be carefully avoided. To this may be added strong tea and coffee, especially the latter, and all fried foods.

As regards liquids, the patient may be allowed to drink a cup of properly prepared, thick, home-made beef tea, or the expressed juice of beef every two or three hours, if very weak; otherwise only at meals. Peptonized milk, or milk and Highland water, or cocoa, or very weak tea, may also be taken for a change, but without sugar.

The patient should have a table to himself or eat alone, otherwise there will be a temptation to indulge in articles not permitted. When the appetite increases very much, four meals may taken daily if needed, but at regular hours, the last one not to be later than 7 o'clock. It is not well for the physician to be strict in regard to diet, nor prejudiced against

certain foods, as individuals vary. The meals should be simple, and confined to a few articles, the less the better.

Elimination of the diseased products is of extrme importance in all acute and chronic diseases. If the diseased materials are allowed to remain, the growth of bacilli will be correspondingly great. When the vitiated matter is removed by elimination, the disease can not be so severe, as then there is an asepsis which prevents bacillary development. The eliminating organs should be stimulated, and hot water is the blandest and most efficacious means of accomplishing it. A glass or two of hot water should be taken an hour or two before meals, and half an hour before retiring, and enough fluid, preferably water, with the meals to assist digestion and absorption. It would be well if hot water shops were as common in this country as in China; they would to a degree be a substitute for the liquor stores, and would accomplish the same purpose in removing internal cravings and stimulating the patron without intoxicating him.

After elimination the next important step is to build up, when possible, the diseased and broken-down lung tissue. This is accomplished by stimulating the manufacture of pure, fresh blood. To understand thoroughly the dietetic treatment of disease, it is absolutely necessary to know perfectly, not only the composition of the different foods, but the changes they undergo when taken into the system. We are omnivorous, and if we indulge to excess in any indigestible or special kind of food for a lengthened period of time we overtax the system and disease is the result. Almost all chronic diseases are developed in this way, and this is the most common predisposing factor to acute disease. The kinds of food which are generally taken in excess are the starchy, saccharine and fatty. These foods, however, are more easily oxidized than the proteids.

In consumption, there being an excess of waste, we must be careful to get the proper quantities and proportions of proteid and carbohydrate foods, and have the waste products completely oxidized. When fresh meat is taken there is an increase of the red corpuscles—the oxygen carriers—but there is a limit to the quantity of food that can be oxidized. Ordinarily, we take too much carbohydrate food, and our meats (proteids) are, except in the largest cities and among the more intelligent, usually improperly cooked—most generally fried. It is the taking of excessive quantities of indigestible and stimulating foods that causes disease. To maintain the highest standard of health, more meat than of vegetable should be taken. Carnivorous or meat-eating animals seldom have con sumption, while it is quite common in the herbivorous or vege-

table-eating animals. The greater "vitality" or activity of the former as compared with the latter is worthy of note.

The fallacies of a purely vegetable diet are most commonly demonstrated by the bedside of the patient. Such a diet requires a greater amount of oxygen and more extensive elaboration by the glandular structures of the body, and results in an excess of waste, which must be excreted. I have seen nephritis developed by the excessive indulgence in cereal and fried foods. Milk, although universally recommended, is not a good exclusive diet for a consumptive. It is all right for small children and babies, who simply require to be kept warm with fattening food. I do not disapprove of it because a large percentage of cows are tuberculous, but experience has taught me that a meat diet is preferable for adults. It is a concentrated and most nutritious food, and withal is easy of digestion. In Japan there are hardly any cows, yet the people are in good health.

In treating consumption we should give more attention to the liver than to the lungs. We should restore the biliary secretion to a healthy standard, both as to quality and quantity. From our standpoint the liver is the most important organ, for by its defective elaboration of food products nutrition is impaired, and anæmia and disease result. Overfeeding and improper feeding tend to imperfect elaboration and elimination by giving the liver and kidneys too much work to perform.

I do not entirely discard milk in all cases, but I think too much reliance has been placed upon it alone as a reconstructive tissue food. There are many who say they can not take milk, but the stomach can be trained to receive it and in a short time to relish it. A very small quantity should be given at first. It should be remembered, however, that milk has been shown to contain a number of parasites and bacteria.

There is a strong tendency to lose sight of the great underlying principle in medicine, that vital force depends solely upon the nutrition of the tissues, and can only be increased by improving the nutrition. The words "starvation" and "self-poisoning" from a clinical standpoint are the most important words of all those in the domain of medicine. Both of them signify "decay," and decay is *death*.

Climate and medicines alone will not often cure consumption, although they may tend to prevent it. In this disease the increased digestion of nitrogenous food is our sheet anchor, and when this is inadequate there is no arresting the progress of the malady. There are certain forms of consumption which, when well advanced, are beyond dietetic or medical aid, but there are other and more common types which are readily curable. Even in cases where the lungs are much involved the

progress of the disease can be permanently arrested. While nothing gives such good results as careful dietetic treatment, aided by medicines, a careful preparation of the digestive tract and its appendages should not be omitted. This not only removes catarrhal and inflammatory states, but gives tone and strength to the muscular and nervous system, stops diarrhœa, nausea and fever, restores the appetite, and increases and enriches the blood supply. Climate is often a great aid to such treatment, and when combined with other hygienic treatment brings back health and vigor to many a hopeless consumptive. Where much lung tissue has been destroyed, it frequently arrests the disease, even though it is impossible to entirely cure it.

Pure Atmosphere.—All dietetic, general, tonic, or other treatment is useless unless there is a plentiful supply of pure air. Pure air is a great stimulant to the appetite and digestion. The rooms occupied by the sick one should therefore be carefully ventilated without producing draughts, and in cold weather should be filled with a genial warmth. The patient should be out of doors as much as possible when the weather is not too severe.

Exercise.—Gentle exercise, without fatigue, has a very beneficial effect upon nutrition by stimulating the action of the heart, accelerating the circulation, and increasing the respiration. It thus increases the oxidation of waste products and leaves room for the assimilation of nutriment. For the weak, a daily carriage ride is beneficial, and for those who can not afford this the street cars can be utilized. Boat rides on bays, lakes or rivers, and sea voyages are also often beneficial; but the sick one must be well wrapped up. For those who are able, walking in moderation is a very useful form of exercise.

Bathing.—The skin should assist in the work of elimination and protection. Cold sponge baths to the chest have a salutary effect on the lungs, but must be immediately followed by friction with a coarse towel. A hot sponge bath, with a little kretol added, should be taken at night, and the body should be vigorously rubbed afterward. If there is a tendency to "catching cold," the body may be well rubbed with some nutritive oil.

Apparel.—Flannel undergarments of a thickness suitable to the season should be worn. It would be difficult to get them too thick for our severe winters. In cold weather the stockings should be of wool.

For cleanliness, a soap and water or hot salt water bath should be taken at night before retiring. This should be done in a very warm room, and at least twice a week if no other baths are taken.

The following cases are interesting in this connection, and illustrate the value of this method of treatment:

Miss K. D., 25 years of age, consulted me eight years ago. She had a troublesome cough, was chilly and feverish, and had some pain in the chest. Her appetite was poor, she had night sweats, and there was considerable emaciation and weakness. On physical examination, I found a catarrhal condition of the apex of the left lung. She had been living upon a very innutritious and indigestible diet and sleeping in a room without proper ventilation. She had always worn cotton undergarments even in winter. Under careful dietetic treatment she made a perfect recovery, and remained well until last February, when, as a result of a return to her careless habits of eating and an exposure to cold, there was a return of the cough. This has again left her, and she is now perfectly well.

Mr. B. D., twenty-five years of age, a business man, first consulted me six years ago. He had at that time specific disease and consolidation of the upper portion of the right lung. There was severe cough with abundant muco-purulent expectoration containing tubercle bacilli. He had fever every afternoon, and very severe night sweats. The tongue was heavily coated; there was entire loss of appetite, and constipation was present. Under careful dietetic and medicinal treatment he recovered, and is living in good health, although there is diminished respiration and expansion of the chest on that side. He has been refused as a risk by two life insurance companies on account of the condition of his lung. He looks well, never coughs now, and says he is "all right." He does a large amount of hard work daily.

Miss N. O. H., twenty-two years of age, a school teacher, when seen four years ago gave the following history: She had had gastro-intestinal catarrh and anæmic dysmenorrhœa, and had always suffered from "cramps" at her menstrual periods. She had been extremely anæmic and emaciated since having had an attack of bronchitis. She had been under the care of several physicians, two of whom had told her that the uterus should be dilated and straightened. Her cough was very severe, and accompanied by copious expectoration containing an abundance of tubercle bacilli. One of her sisters had died of consumption, and she was considered by her relatives as already doomed to perish with the same disease. For a considerable time she had been subsisting chiefly on carbohydrate food, following the cravings of a disordered appetite. Her ordinary diet had been fresh bread, butter, strong tea, cake, pickles, lemons, raw fruit, and salt in very large quantities—a teaspoonful at a time. Under dietetic treatment, with special attention directed to the improvement of the general health,

she gained four pounds the first week. Her attacks of mental depression, which had been severe, entirely disappeared, and in a very short time her health was completely restored.

Miss N. S., twenty-one years of age, I first saw six years ago. Part of the lower lobe of her left lung had already been destroyed by a tuberculous ulceration about three inches wide and five inches long. Dead portions of two ribs, four inches long and as black as ebony, were protruding from her side. The fingers could be passed between them and the ulceration. Her diet had consisted principally of bananas and cream puffs, for which she had an inordinate craving. Wholesome food was extremely distasteful to her. Under strict regimen of hot water, chopped beef and stale bread, with a local antiseptic wash and a digestant internally, the necrosed portion of the ribs dropped off and the ulceration healed in a week. She is now in good health, although very careless at times about her food.

Miss M. N., twenty-six years of age. Her father's failure and death compelled her to work for a living. When I first saw her, four years ago, she had been under the treatment of some of the best known physicians of Brooklyn. The prognosis given to her relatives was that she might live a month or two at the very longest. After a physical examination it seemed to me that the prognosis was not so grave. I found a cavity occupying the whole of the upper half of the right lung, while the lower portion was completely consolidated. In the left lung the respiratory murmur was diminished, and there were mucous râles. There was a very troubesome cough, with profuse and purulent expectoration. Respiration was so greatly embarrassed that she could not converse without stopping frequently to gasp for breath. Her pulse was rapid, small and weak, and the tongue was heavily coated.

She had been living upon an almost exclusively vegetable diet. Her breakfast had consisted usually of coffee and fresh rolls. She had been engaged as cashier in a large retail drug store, and her dinner, which she had usually eaten in the neighboring bake shop, had been generally indigestible and of poor quality. Her supper had also been scanty and innutritious, as she had often been too fatigued to eat. She had never received any advice as to diet from other physicians. I placed her upon a diet consisting largely of ground beef, with a small quantity of farinaceous food. and with hot water as an eliminative. She almost immediately began to improve, and two years afterward I found on physical examination that the consolidated lower half of her right lung had resumed its function, while the left lung was entirely sound. During the heated term last summer she began to decline, and died last November. Under careful

dietetic treatment her life had been prolonged, she had continued at her work, and the disease had been arrested for a considerable time.

Mrs. W. N. V., thirty years of age, was taken ill six years ago with bronchitis, and since then a cough has persisted, and for the last two years has been very harassing. There have been at times chilliness and fever, with loss of appetite and night sweats, exhaustion and emaciation. Three years ago she had a pulmonary hæmorrhage, and every time she coughed she "brought up blood for days." The disease is confined to the right lung. Two years ago she had several sudden and profuse hæmorrhages, and was extremely weak for a long time afterward. The last hæmorrhage was in July, 1893, when I began to treat her by dietetic measures alone. She followed the plan of treatment rigidly. She has had no hæmorrhage since, and she finds that the more closely she follows the regimen laid down the better she feels. There has been a great change for the better in her appearance; her cough and expectoration have already disappeared, her cheeks are fat and rosy, the appetite is now excellent, and she sleeps well.

Many similar cases could be enumerated, but the foregoing are sufficient to show the success of this method of treatment. *New York Medical Journal.*

BLOOD FINDINGS IN A CHILD WITH PSEUDO-PERNICIOUS ANÆMIA BEFORE AND AFTER TREATMENT WITH ARSENIC.

The author reports a very interesting case of pseudo pernicious anæmia, *i. e.*, combination of pernicious anæmia and myelogenous leukæmia, in a child treated with arsenic. Before, during and after the treatment the blood was subjected to most careful examination. The results of these pathologico-anatomical researches are of great significance to the practitioner because of the extensive and just recognition arsenical therapy at present enjoys in the treatment of blood diseases.

The myelocytes, which are generally found in myelogenous leukæmia, were greatly augmented after the exhibition of the remedy named. Their number increased from about 2.5 to almost 7 per cent. Among the red, nucleated blood-corpuscles, the number of undeveloped increased from 14 to 24 per cent., while the number of developed blood-corpuscles, lymphocites and normoblasts was decreased. The relation was very pronounced during the last day of life when the undeveloped, nucleated blood-corpuscles rapidly decreased, while the

number of normoblasts increased. The number of nucleated red corpuscles with pale periphery had also increased.

Even though it is plain that no decided conclusions as to the manner of action of arsenic can be drawn from the observation of *one* case, still the careful researches of the author deserve attention from the side of the practitioner because of the interest it awakens in the subject, and because of its extremely practical value in the treatment of blood diseases.—*American Medico-Surgical Bulletin.*

WHEN MAY SYPHILITICS MARRY?

In a late paper Dr. W. S. Gottheil, of New York, attempts to answer this question, according to the following conclusions:

1. Syphilitics may not marry;

(*a*) During the entire primary stage, from first appearance of the chancre to the entire disappearance of the induration and the inguinal adenopathy. This stage will last at least six months. Secondary symptoms will almost always appear during its continuance, and it will run into the next one. If they do not, a further delay of twelve months is necessary to await them.

(*b*) During the entire secondary stage, the period of the general eruptions, multiple mucous patches, adenopathies, alopecias, etc. This stage lasts at least twelve months, and is rarely prolonged over two years. But it is not the time so much as the generalized character of the disease manifestations, showing persistent infection, and prolonged contagiousness, that marks its limits.

2. Syphilitics may marry:

(*a*) When the disease is in its tertiary stage. This stage lasts from the disappearance of the general symptoms to the end of the patient's life. He may or may not have symptoms of the disease or its sequelæ, but it is no longer contagious, and he can not communicate it to his partner.

(*b*) When a period of one year has elapsed since the appearance of the last symptom of the disease.—*Atlanta Med. and Surg. Journal.*

ABDOMINAL TUBERCULOSIS IN CHILDHOOD, AND ITS TREATMENT.

Frederick Taylor *(Brit. Med. Journ.)* states that the gastric tuberculosis in children is rare, but that intestinal tuberculosis is common. The latter may be associated with

tubercular peritonitis, with caseation of the mesenteric glands, with general tuberculosis, or local pulmonary tuberculosis. In this last case it is often secondary to the pulmonary lesion, resulting from the swallowing of sputa. Infection from the ingestion of milk of tuberculous cows is generally accepted. Whether children of tuberculous mothers are infected through the milk or the air is a mooted question. Caseation of lymphatic and mesenteric glands has been found 100 times in 127 cases of tuberculosis in children, or in 79 per cent. Suppuration of these glands and perforation may set up general purulent peritonitis.

Tuberculous peritonitis occurs in two forms—in one the peritoneal surface is covered with miliary tubercles, and a quantity of serum is secreted so as to constitute a real ascites; in the other the tuberculous process results in the matting together and adhesion of coils of intestine, associated with enlargement of the mesenteric glands, and possibly the formation of abscesses, tuberculous ulceration of the bowel and perforation, so that adjacent coils of the intestine communicate with one another. The result of this combined matting, adhesion and glandular swelling is the formation of a more or less definite tumor which can be felt to occupy a certain portion of the abdomen. The omentum may be similarly infiltrated, and form a band lying transversely across the abdomen at the upper part; and a similar infiltration may also affect the connective tissue about the remains of the urachus and obliterated hypogastric vessels. The tuberculous tumor in a large number of cases occupies the lower part of the abdomen, corresponding to the hypogastric and two iliac regions. Undoubtedly in most of these cases ascites is not present.

The medical treatment consists in rest, nourishing food, cod-liver oil, and inunctions of mercurial ointment on the abdomen. Of late, many cases have been treated with laparotomy with remarkable results.

In discussing the paper, Marsh remarked that from a surgical standpoint three conditions are observed:

1. Cases in which the peritoneal sac contains much free fluid.

2. Cases in which the fluid is encysted, forming movable, elastic tumors, either so soft as to resemble ovarian cysts, or so hard as to suggest sarcoma.

3. Cases in which no fluid is present, the exudate being fibrinous.

Well-authenticated cases show that in a large proportion of these cases operative interference is followed by the arrest of the tuberculous process and a return of good health. This

has occurred where the abdomen has been simply opened, inspected, and immediately closed so that the rationale of the procedure is not yet understood.—*Gaillard's Medical Journal.*

SCORBUTUS IN INFANTS.

Northrup and Crandall (*New York Medical Journal*, May 26, 1894), after the study of thirty-six carefully tabulated cases of this disease, come to the following conclusions:

1. Scurvy may appear at any period of infancy or early childhood, but is most common between the ninth and fourteenth months.

2. The lesions are hæmorrhagic in character, due probably to diapedesis. The most characteristic are subperiosteal hæmorrhages. Hæmorrhages into the muscular tissue, into the skin and mucous membranes are more or less constant.

3. It occurs in every grade of the social scale, but is more frequently among the rich than among the poor. The neglected child who eats everything at the table may become rachitic or marasmic, but he obtains enough fresh food to protect him from scurvy. It very rarely occurs in asylums and hospitals, because in recent years feeding in such institutions has been more rational than in many private families.

4. Lack of fresh food is the most important cause. The use of the proprietary foods and condensed milk produces more scurvy than all other causes combined. Even fresh milk in small proportions is not sufficient to insure protection.

5. Anæmia and malnutrition are almost invariably present. A peculiar sallow complexion is common.

6. Scurvy is frequently superadded to rachitis, but in a considerable number of cases no evidences of rachitis are present. So-called acute rickets is in most cases, probably in all, rickets complicated by scurvy.

7. Pain is a constant symptom; it develops early, and is usually intense.

8. A varying degree of immobility of the extremities is common, and is frequently so marked as to simulate paralysis. This pseudo-paralysis disappears with the subsidence of the scorbutic symptoms.

9. Subcutaneous hæmorrhages, as well as hæmorrhages from the cavities of the body, are very common, but are not necessary to a diagnosis of the scurvy.

10. The conditionof the gums is characteristic. They are purplish, soft, spongy, and bleeding, and frequently show decided ulcerations. When the teeth have not been erupted, changes in the gums are usually slight or entirely absent.

11. Painful swelling of the lower extremities is the most constant symptom. The upper extremities are rarely involved. The thigh is effected more frequently than any other region.

12. Children suffering from scurvy commonly present the following symptoms: anæmia, intense pain on motion, spongy, bleeding gums, swelling of the lower extremities, usually the thigh. There may also be purpura or ecchymoses, discharge of blood from the various cavities of the body, and pseudo-paralysis.

13. Scurvy, when untreated, is a very fatal disease; when recognized and properly treated, a rapid and complete cure is usually effected. The result of antiscorbutic treatment is, in fact, one of the most certain means of diagnosis.

14. Scurvy may be mistaken for rheumatism, stomatitis, rickets, sarcoma, osteitis, and infantile paralysis.

15. Scurvy is a dietetic disease, and must be cured by dietetic treatment. Fresh milk, beef juice and orange juice are the most effective remedies.

WHEN IS THE ADMINISTRATION OF THE SULPHATE OF STRYCHNINE CONTRA-INDICATED DURING GESTATION?

By T. Ridgway Barker, M. D.

[Read September 12, 1894, before the Philadelphia County Medical Society.]

In presenting this subject for consideration and discussion this evening it is not my purpose to depreciate or undervalue the great benefit the sulphate of strychnine is capable of rendering in a majority of the cases of pregnancy.

The claims made for it by my friend, Dr. Duff, of Pittsburg, who has devoted himself with much enthusiasm to the study of this drug in its relation to obstetric practice, are not, I think, without justification; but with the estimable conservatism of a seeker after scientific truth, he leaves the subject open for further study and research, awaiting until time and a wider experience shall prove its merits.

In a paper read before the South Side Medical Society of Pittsburg, and in one presented to the American Association of Obstetricians and Gynecologists, in 1893, he gives his clinical experience.

At the forty-fifth annual meeting of the American Medical Association, recently held at San Francisco, he again calls the attention of the profession to the value of strychnine, and points out that it renders abortions and premature deliveries less frequent by giving tone to the uterine muscles and nerves, as well as by its general tonic influence.

These statements are beyond question correct in the vast majority of instances; but he who would avoid error and misfortune must bear in mind that every rule has its exception, and that the latter, though often overlooked, is no whit less important than the former.

The sulphate of strychnine I have given to a score or more of women during gestation with the happiest results, and so general was the improvement in their condition that I began to think that there was no exception to this rule, but I was not long left in doubt, for, as the following case reported will show, I met the exception in a most unexpected but none the less pronounced form.

Mrs. G., primipara, aged twenty-nine years; white; general health good. Last menstruated in October; previously regular. Suffered greatly from morning sickness and distressing nausea for nearly four months, which was uninfluenced by internal medication. There was besides these symptoms, costiveness and a more or less irritable bladder. The appetite was poor, and loss of flesh was quite marked as the pregnancy advanced.

In the early part of the sixth month she first complained of a sense of weight felt in the abdomen and pelvis; this was soon aggravated by soreness and pain which persisted throughout the day and night. The nervous depression in this case was all out of proportion to the severity of the symptoms, and seemed to trouble the patient more than almost anything else.

There was no kidney trouble of any kind nor evidence of swelling of limbs or face. The heart was normal save a slight anæmic murmur.

The blood was deficient in red-blood cells and showed a condition typical of that found associated with pregnancy. The woman, when married, weighed some one hundred and thirty pounds, but now was much emaciated. The vagina and cervix were normal and the uterus in good position; there were no adhesions.

To judge from the size of the abdomen and the activity of the fœtus, development was progressing favorably. There existed, however, double ovarian tenderness, which denoted congestion of a pronounced type, and to this I ascribed in part the great mental depression, though, of course, much depended upon the anæmic blood supplied to the nerve centres.

Deeming this case one suitable for the administration of sulphate of strychnine from a careful analysis of the above objective and subjective symptoms, I determined to place the woman upon one-twentieth of a grain, twice a day, with the hope that it would stimulate a healthy nerve action and relieve,

as has been claimed, the uterine irritability which threatened to result in an abortion.

I reasoned that the nervous disturbances was due to anæmia of the central nervous ganglia and involved the sympathetic system as well.

That the uterus threatened to expel its contents because the nerves controlling its muscular coats were in a state of hyperæsthesia dependent upon insufficient nutrition. With this idea I placed my patient upon the drug, which experience had proved to be the best suited to overcome just such a condition as I found present.

With what result? Within thirty-six hours the uterus became more rebellious; its muscular contractions increased rather than lessened in violence, and recurred with greater frequency. The dull pain which had persisted for several days now became acute and intermittent, and radiated from the umbilicus to the loins.

An abortion was undoubtedly threatened, and might almost be considered inevitable. The sulphate of strychnine was promptly discontinued, as it had undoubtedly only made matters worse, causing a passive uterine contraction to become active, and thus augmenting the expulsive uterine forces.

A sedative mixture containing morphine, chloral and bromide of soda in solution, was ordered to be taken every hour and the patient put to bed and directed to keep perfectly quiet. In a few hours the pains were allayed and the uterine contractions became feebler and recurred at longer intervals. These signs gave rise to a hope that the patient might yet escape an abortion.

Twenty-four hours elapsed with no return of the contractions. The prospect seemed to brighten, but only to give place within another twelve hours to a sudden and aggravated attack of pain, followed by strong uterine contractions which, acting upon the cervix, soon overcame its constricting fibres, and an abortion was the result. In a few hours the whole uterine contents were expelled, much to the regret and disappointment of both physician and patient.

Thus ended one case of gestation in which strychnine may be said to have been the exciting cause of the abortion. Here we have what Duff probably refers to when he remarks in his paper, "I am not unmindful of the fact that I have seen apparent evil results from its administration in a few cases."

In looking over the history of the case reported, one can not fail to be impressed with the fact that here was an instance where had one known the exception to the rule, he would not have given strychnine, since clearly it was contra-indicated.

Instead of its acting as a sedative to the hyperæsthetic nerves through its tonic influence, it played the role of an excitant, and thus brought about the very result most to be deplored—namely, an abortion.

Some may take exception to the size of the dose (one-twentieth of a grain), twice a day; this, I grant, is not a small dose, but at the same time it is one I have frequently given with the best results, and I have found that a much smaller dose fails to be beneficial.

I do not, therefore, think that the amount administered made any material difference. That strychnine requires to be given during gestation with much more care than has heretofore been exercised, I think is very evident. Moreover, when there exists great mental depression, associated with symptoms of distress and pain, referable to the pelvic region, with involvement of the uterus, I think the administration of strychnine is contra-indicated, for under such conditions it is more than likely it will act as an irritant and not as a sedative, and so will tend to produce an abortion, the very danger one is struggling to avoid.

Strychnine, then, it would appear, is indicated in cases of gestation which require a powerful nerve tonic, but contra-indicated when such cases are complicated by pronounced pelvic disorders of a nervous type.

THE EFFECT OF CREASOTE ON THE VIRULENCE OF THE TUBERCLE BACILLUS.

This investigation was undertaken with a view to finding out whether, when creasote is given by the ordinary methods, it acts by any restraining influence it exercises over the growth of the tubercle bacillus or whether its action be not rather due to its powers of improving the digestion, and so aiding the assimilation of food.

Creasote is given at Victoria Park in one of three ways: (1) as an inhalation, (2) by the mouth, (3) by means of the creasote chamber. The first two methods need no comment; the third consists simply in placing a patient in a small room in which creasote (commercial form) is heated till the air is saturated with the vapor. This latter method was initiated as far as I know by Dr. Chaplin, assistant physician to Victoria Park Hospital.

An attempt was made at first, by constantly examining the sputa of patients taking creasote, to see if anything could be learnt from alteration in the morphology of the bacillus. Some

twenty cases were examined twice a week for two months, and differences in the numbers and formation of the bacilli noted and compared with cases not treated with creasote—this plan was, howevr, abandoned because the number of bacilli bore little or no relation to the patient's health, and no distinction could be drawn, either in number or morphological appearance, in the bacilli of those cases treated by creasote and those taking other drugs.

The next method adopted was that recommended by Professor Delépine, namely, that of injecting tuberculous sputum into the leg of the guinea pig. A regular sequence of lesions is the consequence. The glands are affected in order, then the abdominal viscera, finally the lungs. At the end of about three weeks the animal succumbs. Such is the normal course of things. Anything that interferes with the virulence of the organism should interfere with the rate of growth of the bacillus, and the virulence of the bacillus can be gauged by the extent of the lesion produced.

To take the first series of cases (that is, those taking creasote by inhalation alone), injections into guinea pigs were made before any treatment was begun, and again after the patient had been two months under treatment by creasote in this form. No difference was observed either in the time the guinea pigs lived or in the extent of the lesion, in either case whether before or after treatment with creasote. Twelve such cases were tested with no result as to diminution of virulence.

In the second method of administration of the drug, that by the mouth, the results were much more satisfactory. Even in small doses (M ij, t. d.) after two months' treatment the guinea pig lived seven weeks, instead of dying at the end of the third. A second specimen of sputum from the same case was injected into the leg of a guinea pig, and the animal killed on the fifteenth day—this before creasote treatment was begun. All its organs were found affected with tuberculosis. A second inoculation made after two months' treatment gave the signs of tuberculous infection only in the popliteal, inguinal, and lumbar glands, where the animal was killed on the fifteenth day. As the dose of creasote administered internally was increased, so the virulence of the poison was proportionately diminished. Thus, in the case of a patient taking 6 minims of creasote three times a day, the guinea pig lived nine weeks after the second inoculation; in another case in which the dose amounted to M x twice a day, the animal lived twelve weeks. Twelve cases were experimented on, and certainly in eleven of these it was abundantly proved that the greater the dose the

greater was the diminution of the virulence of the poison; the animals, however, invariably died of tuberculosis in the end.

I have only three cases treated by the third method—that of the creasote chamber. In the first case, with the inoculations made in the usual way, after treatment for two weeks by this method, the inoculated animals lived eleven weeks. A guinea pig killed on the fifteenth day showed tuberculosis only at the seat of inoculation and in the popliteal and inguinal glands. In the second case, after two months' treatment by this method, the guinea pig lived fifteen weeks. In the third case the animal died of septicæmia. Certain supplementary experiments were made. Two guinea pigs were inoculated with tuberculous sputum in one leg. Into the other 10 minims of creasote were injected. This was followed by the injection of 5 minims twice a week. A third animal was used as a control experiment. One guinea pig succumbed at the end of a week from cellulitis due to the creasote. Tubercle bacilli were found only at the seat of inoculation. The second pig lived sixteen days, and then succumbed to cellulitis. Here, again, bacilli were found at the seat of inoculation, and nowhere else. The control animal killed on the sixteenth day had extensive affection of the glands, spleen and liver. These experiments were repeated twice with practically the same results, only that the doses of creasote were smaller, and the animals lived longer.

A guinea pig was injected with tuberculous sputum, and the disease allowed to take its course up to the fifteenth day. Creasote was injected in doses of five minims every other day. In four such cases the drug had no effect whatever, the animals dying tuberculous about the twentieth day. If, however, creasote injections were begun at the end of seven days, it was possible (three cases) to keep the animal alive for a month or six weeks; the cause of death was cellulitis from the creasote, the tuberculous lesions not having extended beyond the limits of the lumbar glands.

To sum up the conclusions arrived at:

1. In the first series of cases—those that were taking creasote simply as an inhalation, in addition to such drugs as cod-liver oil and the hypophosphites—no effect on the virulence of the disease was noted.

2. In the second series, in which creasote was administered by the mouth, in doses ranging from two to twelve minims three times a day, though, when the smaller doses were given the diminution of the virulence was slight, yet, when the larger amounts were reached, there was an extremely marked diminution of the virulence.

3. In the third series it may be pointed out that, though it is impossible to dogmatize from such a small number of cases, the animals lived longer than in any other instance.

4. Creasote injected under the skin in tuberculous guinea pigs, provided the disease were not too far advanced, had a markedly restraining effect on the poison.

In conclusion, I must express my indebtedness to the staff of the Victoria Park Hospital for their kindness in allowing me to use material taken from their cases in the wards, and especially to Dr. Arnold Chaplin for the use of tuberculous sputum from his patients treated in the creasote chamber.

The president (Dr. Woodhead) agreed that it might be that the virulence was attenuated. Professor Delépine had made similar observations, and Dr. Wood and he had also obtained similar results, but using heat instead of creasote as the attenuating agent.—*British Medical Journal.*

PAPAIN AS A REMEDY FOR TENIÆ.

By Roberts Bartholow, M. D., of Philadelphia.

The apparently successful use of papain in a case of *tænia solium* is the occasion of this letter. The remedies most successful in the expulsion of this parasite are so disagreeable and so difficult to take, for the most part, that it is desirable to have some agent free from these objectionable features. I have happened lately to know of a case in which an immense *tænia solium* was expelled during a course—it at least may be sa d—of papain, when various effective remedies had been taken in vain. The unfortunate host had been passing segments for several weeks when the first efforts were made by his physician to procure the expulsion of the worm. There were tried successively the "Gardner Extract of Pine Needles," a terebinthinate preparation having some reputation as a teniafuge; naphthalin; pumpkin seeds; decoction of pomegranate root, and Tanret's pelletierin; croton oil, etc.; but they all failed to expel the parasite or indeed any considerable number of segments. The harsh remedies irritated the mucous membrane, and the repeated failures discouraged the patient. Under these circumstances, by my advice, he began the use of papain, taking ten grains three times a day after meals. This ferment, although of vegetable origin, has properties similar to those possessed by pepsin and pancreatin, and it has, also, been employed successfully as a remedy for tapeworm, especially in children.

The theory of its action entertained was that, having a sol-

vent action on albumen, it must destroy the worm, which is an albuminous substance. The result in this case is clearly adverse to this theory, for in a few days after it was begun segments passed in considerable numbers—so many as twenty-three in one day—when the patient, finding the parasites much affected, without further delay, on his own account, took a dose of the pine-needle extract and followed it with two ounces of castor oil. Apparently this experiment was also a failure, for the day passed without any result, and in the evening the contents of the stomach were evacuated. At 8 P. M. some abdominal pain was suddenly felt, and in a few minutes an immense *tænia solium* was passed complete. This formidable parasite was found by actual measure to be twenty-five feet in length. It seems in a high degree probable that the papain exerted a toxic action on the worm, causing it to relax its hold on the mucous membrane, for, as usual under such circumstances, it was discharged in a mass, coiled up and motionless, but when hot water was poured over it the motion of uncoiling began, showing that it was stupefied.—*Med. News.*

ELECTRICITY AS A DISINFECTING AGENT.

The employment of electricity, if present indications are worth anything, will soon be in practical use for the disinfection of the water supply of cities and towns and secondarily that of sewers.

Not long since an experiment was tried in the town of Brewster, N. Y., in the presence of prominent public health officials, which proved eminently satisfactory.

The apparatus consists of a number of tanks with a capacity of from 2000 to 3000 gallons, a twenty horse-power boiler, a fifteen horse-power engine and a four horse-power dynamo. This whole outfit, costing less than $5000, can be run, it is said, at an expense of four dollars per day.

Such an apparatus as this is found sufficient for a city of 30,000 population. The disinfecting fluid conveyed into the sewer, it is asserted, will instantly kill the germs of all kinds of contagious diseases, including those of cholera, diphtheria, scarlet fever, measles and typhoid fever. A glassful of the drainage from the outlet of a sewer upon which the apparatus had operated, when submitted to a chemical test, indicated the presence of large quantities of ozone, which is one of the most powerful of germicides.

The basis of this plan is water. With a plentiful supply of this in a city and an apparatus of sufficient power there seems no reason why this system would not work well.

The question of disinfecting cities is of vast importance. We are threatened every year with pestilence, and a sure preventive would save countless lives and much suffering. Anything which promises such a result should be examined without prejudice and reported upon for the consideration of the people, all of whom are interested in the public health.

It would be interesting to know whether the action of thunder storms is that of a disinfecting agent or whether the rain which descends during a heavy thunder shower contains enough ozone to disinfect our water supply or sewers. We fear such would not be the case to any appreciable degree, but there is doubtless more or less purification of atmospheric conditions after an electric storm.—*Times-Register.*

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

Since the publication in the *British Medical Journal* of several cases successfully treated by the diphtheria antitoxin we have received numerous inquiries as to the possibility of obtaining the curative substance. We are advised that at present it may be obtained from Messrs. Minter, Lucius, and Beunig, Höchst-am-Main, Frankfort, or from the Institut Pasteur, Rue Dulot, Paris, the dose being 10 cc. injected under the skin. The British Institute of Preventive Medicine will, it is hoped, shortly be able to supply it to medical men who apply for it. A word of warning is necessary, as otherwise much disappointment may result from its use. We are informed by one who has specially studied this point that the "antitoxins" already in the market differ considerably in strength, and that whereas some prove very efficient, others by no means fulfil what is claimed for them. Thus some antitoxins are ten times as efficient as others. We must remember that the making of antitoxins is yet in its infancy, and that the strength of a solution can only be measured by experiments on guinea pigs. The mode in which it is estimated is by finding out the dose of diphtheritic poison which will kill a guinea pig of a certain weight in a certain time. The strength of the curative serum will be estimated according to the dose of serum necessary to protect an animal into which ten times the fatal dose of diphtheria poison has been injected subcutaneously. The standard solution or immunity units being a serum 0.1 cc. of which will protect a guinea pig inoculated with ten times the fatal dose. If a dose ten times smaller, or 0.01 c.c., will protect, the serum may be said to contain ten immunity units; whilst if 0.001 cc. protects, it contains 100 immunity units.

It is evident that this is a rough way of estimating the strength of a curative serum, and, moreover, the question is still further complicated by the fact that we do not accurately know as yet how much serum is necessary to cure the disease in a child or adult. The importance of further clinical and experimental study on this subject can hardly be over-estimated, and can only be undertaken by men highly skilled in clinical medicine and bacteriological science. In every case of diphtheria or suspected diphtheria treated by the curative serum the following points must be attended to: 1. The bacteriological examination of the membrane must be made, and the diphtheria bacillus isolated. 2. The treatment must be carried out with curative serum of a well-ascertained strength, the age and weight of the child, the day of the disease, the dose injected, and clinical manifestations accurately noted. 3. The bacteriological examination must be made at intervals until the respiratory passages of the patient are found to be free of the diphtheria bacillus.—*British Medical Journal.*

INJECTIONS OF SULPHATE OF SPARTEIN AS A PRELIMINARY TO CHLOROFORM ANÆSTHESIA.

In a communication to the Société de Biologie (*Sem. Méd.*, August 11), Langlois and Maurange gave the results of researches made by them on this subject. Dastre and Morat had recommended the use of atrophine combined with morphine for the prevention of the cardiac failure which sometimes occurs during chloroformization, the inhibitory action of the pneumogastric nerves on the heart being in this manner lessened. According to the authors, the same object may be attained by the combination of sulphate of spartein with morphine. Manometric tracings from a rabbit showed the difference at the beginning of chloroform anæsthesia when the animal was under the influence of spartein and when it was in its natural state. In the former case respiratory disturbance is caused by the contact of the chloroform with the nasal mucous membrane, but the heart speedily regains its natural rhythm. The diminution of the excitability of the vagus is not very marked after weak doses (3 centigrammes) of spartein; still it is already perceptible. In the dog, besides the regularity of the cardiac tracing, the authors noted the persistence of the arterial pressure, which keeps at a height of about 10 deg. during profound narcosis. Langlois and Maurange have already employed the method referred to 120 times on the human subject. From 3 to 4 centigrammes of spartein and 1

centigramme of morphine are injected fifteen minutes before the administration of chloroform is begun. In many of these cases the patients suffered from heart disease or had to undergo prolonged operations such as laparotomy, herniotomy, reduction of dislocations; in all of them the heart beats continued full and perfectly regular.—*N. Y. Med. Journal.*

WHAT CASES SHALL WE SEND TO COLORADO?

Dr. J. N. Hall (Texas Sanitarium): As this is quite a fair though slightly biased statement of the indications pointing to the higher altitude of Colorado, it is deemed worthy of an extensive *résumé*.

1. *Phthisis.* (*a*) The great benefit is obtained only when sent in the incipient stage. (*b*) Those cases in which digestion is fair do the best. (*c*) Little advantage to fibroid phthisis.

2. *Acute Pneumonia.* Do badly if sent before resolution has occurred.

3. *Emphysema.* Is generally contraindicative of heights in general, and Colorado is no exception.

4. *Chronic Bronchitis.* Especially when bronchorrhœa is present does splendidly.

5. *Dyspnœa.* Generally peaking this symptom is really intensified by altitudes anywhere.

6. *Pleurisy.* Cases requiring tapping so commonly show tubercular trouble that they had better be sent as early as possible after the tapping, as prophylactic measure.

7. *Asthmatics.* Advantages to these patients as a class very questionable.

8. *Diseases of Circulatory Apparatus.* High altitudes is a menace to all such subjects.

9 *Chronic Malaria.* These cases do well, as they will in any non-malarial climate.

10. *Gynecological and nervous cases.* No advantage to these.—*Am. Pract. and News.*

BACTERIOLOGICAL EXAMINATION OF BLOOD AND TISSUES.

Inghilleri (*Centralb. für Bakteriol.*) gives a new rapid double staining method for the bacteriological examination of the blood and other tissues, including the study of phagocytosis and parasites of malaria, which he claims to excel not only in quickness but in precision. A cover-glass preparation (by the usual methods), or a section prepared from the tissue,

is placed in chloroform for 30 minutes, and afterward stained in the following fluidum: 1 p. c. solution of rosin in 70 p. c. alcohol, 40 parts; saturated aqueous solution of methylene blue, 60 parts, the specimens being gently warmed in the fluid for 2 to 3 minutes; after which they are ready for immediate observation (for example, blood, etc.), or after dehydrating, clearing and mounting as usual.—*Br. Med. Jour.*

ERGOT IN LARGE DOSES, AGAINST NIGHT-SWEATS.

Dissatisfied with the results obtained with the means usually employed in phthisical hyperidrosis, the author conceived the idea of trying ergot in large doses, on account of its well-known vaso-constructive action. His success surpassed his expectations. With the large majority of his patients, freshly pulverized ergot, administered at bedtime in doses of 5 grammes (1¼ drs.), completely arrested or, at least, greatly diminished the sweats. Of course, a single such dose did not always suffice to obtain the desired effect, in which case it was repeated in an hour. After a few days this treatment was suspended, to be resumed three days later. Some of the author's patients took the stated dose even for fifteen consecutive days without any inconvenience. Only exceptionally was the drug found to be powerless against the night-sweats. *Sem. Med.—Med.-Surg. Bulletin.*

A NEW METHOD OF PRODUCING THE IODINE REACTION IN AMYLOID DEGENERATION.

Dr. Galeotti soaks the amyloid sections in a solution of iodide of potassium. He then rapidly washes them in distilled water and places them in chlorated water. The potassium salt is nearly exclusively retained by the amyloid substance, so that the substitution of chlorine for iodine, and the liberation of this second halogen only occurs in the degenerated areas, which alone become colored. In this manner very effective preparation can be made, showing plainly the smallest amyloid particles.—*Lo Experimentale.—Gaillard's.*

SURGERY.

AN EXPERIMENTAL INVESTIGATION INTO THE CAUSATION OF CANCER.

I brought before you, gentlemen, in a former paper, certain positive results obtained in the course of an experimental

study of the causation of cancer. I propose now to give you a short account of the continuation of a series of experiments upon the same subject. A double purpose will thereby be served, for it will show that, so far as I am concerned, the experimental side of the cancer question is limited, whilst the time of other investigators will be saved by stating the directions in which my work has failed. In the present series of experiments I assumed that a protozoon was present in cancer, and I have endeavored to trace it from the tissue forward into the soil, and thence onward into the animal. I have endeavored to prepare each animal, as far as possible, for the reception of the germ by the methods which clinical experience has taught us to be the most favorable for its production or for its development. With this object in view, very old or very young animals were selected, and of varieties as far as possible removed from the wild type, for it is well known that fancy breeds are more delicate and are more prone to new growths than their wild fellows.

Mr. Haviland has come to definite conclusions in regard to the frequency with which cancer occurs in different localities. His results were arrived at entirely by statistical methods, and it therefore appeared to be worth while to ascertain whether they could be checked by experiment. In his book on *The Geographical Distribution of Disease in Great Britain*, Mr. Haviland says: "In the counties having a high mortality from cancer we find that the tributaries of the large rivers rise from soft, marly, or otherwise easily disintegrated rocks, and then fall into sheltered valleys, through which the main rivers flow. These rivers invariably flood their adjacent districts during the rainy season, and have generally their water colored by the suspension of alluvial matter. The Thames counties, characterized by their tertiary soil and frequently flooded river, form, as it were, a typical cancer field."

Dr. Fiessinger, who practises at Oyannax, a small town in the Department of the Ain, situated on the banks of the Ange and the Sarsouille, in a similar manner has traced out a series of cases of cancer occurring almost in the form of small epidemics. He points out that these outbreaks are particularly liable to occur on the banks of streams and at the edges of woods, though he does not, like Haviland, attribute them to the soil, but thinks that they are associated with the insects which abound in such situations. Lastly, those who had the good fortune to hear Mr. Shattock's recent Morton lecture will not have forgotten Mr. Law Webb's most interesting case, where his parents seem to have suffered from the infective nature of cancer possibly transmitted through the agency of water.

Acting upon these hints, I obtained soil from the valley of the Warwickshire Avon about ten miles below Stratford, from the Thames at Oxford, from the Ouse at Bedford, and from the Kennet at Malton, in Yorkshire—all places of evil reputation, according to the statistics of Mr. Haviland, on account of the frequency with which cancer occurs in their neighborhood. In each instance soil was taken from a low-lying district near the river after a heavy rainfall when the floods had recently subsided, and from land situated below the town so that the soil might be saturated with as many impurities as possible.

The soil of the Avon was taken from that part of its course which is marked in Mr. Haviland's first series of maps in the deepest blue—that is to say, where the mortality from cancer is more than seven for every 10,000 females living. The soil had been under cultivation for many hundred years; it was subject to seasonable floods, the flood water being usually discolored by alluvium. The surrounding country is flat, so that the floods do not easily run off.

The soil from the Thames was taken from a point just opposite the mouth of the Cherwell, in one of the wettest Februaries of late years, when the rainfall in Oxford had been 0.72 inch above the average. The mortality of this part of the Thames valley is given by Mr. Haviland's amended statistics as 4.5 annually for every 10,000 females living between 1851 and 1850; the district is therefore marked in this map a lighter blue.

The soil from the Ouse was taken in that part of its course where the mortality from cancer was about the same as that of the Oxford district.

The soil from Malton was sent to me by my friend Dr. Colby, who believes that cancer is increasing in the district for which he is the medical office of health. Dr. Colby took the soil from a field which is liable to be flooded by the Yorkshire Derwent. Mr. Haviland showed in 1875 that the Pickering District, which immediately adjoins Malton, and is served by the same river, had a cancer mortality of more than 7 per 10,000 females living in it, and it is shaded in the deepest blue in his map.

The soil thus obtained seemed to fulfil all the conditions required by Haviland for the successful propagation of cancer. I did not, of course, for an instant expect to find any cancer germ in this soil, nor did I look for it. I merely assumed that it might be, or might be made to become the habitat of a hypothetical cancer organism. After assuming, for the sake of experiment, that such a germ existed, and that a part of its

life was passed in earth, the next step was to provide the organism. Carcinomata of various kinds were therefore taken directly from the operating theatre; they were freed as far as possible from healthy tissues, were ground up in a mincing machine, and afterward braised in a mortar with normal saline solution. The pulp was then placed in the glass receptacle of a steam spray producer, and the soil was subjected to the action of the spray for about ten minutes at a time, though it was often difficult to obtain a contiiuous spray for so long, as the nozzle got clogged. The rest of the cancerous pulp was afterward thoroughly incorporated with the soil, which was then spread in tin trays to a depth of two inches, and the soil thus prepared was repeatedly moistened with sufficient water to keep it damp without making mud of it. Cages of open wire-work were put upon the soil, and white rats were placed in the cages, so that their feet and tails remained in constant contact with the earth.

Each animal was fed daily with bread moistened with half a drachm of tincture of belladona to prevent as far as possible any secretion of sweat. I hoped by this means to put the rats into the most favorable conditions for the absorption of cancer germs should they exist. Wasmuth, however, has shown that the healthy uninjured skin of man and animals is permeable to microbes, which enter between the sheath and shaft of the hairs, but not through the orifices of the sweat and sebaceous glands, and as this may be assumed to be true for the hypothetical parasite, the precaution of administering belladonna was futile. The rats from time to time were sprayed with cancer pulp, and throughout the experiment care was taken to keep the mucous membrane of their vaginæ in a state of slight but chronic irritation by the daily application of lin. iodi, so as to prevent, if requisite, a *locus minoris resistentiæ*. I hoped by these means to provide a suitable soil and a suitable receptive medium.

It will be sufficient to give details of the rat living upon the soil from Bedford, for what was done to one was done at different times to all. It was treated with scirrhous glands on January 9, with scirrhous breasts on January 14, 30, and 31, and on February 4, with a colloid on February 21, and with rabbits' livers containing coccidia on June 8, 1893. Five other rats underwent the same treatment. They lived upon the soil for about eleven months each; four were killed, and two died, one from cold, and the other at the post-mortem examination was found to have a large tapeworm lying free in its peritoneal cavity. A careful necropsy was made in each case, but in no instance could a trace of cancer be detected in

any of the organs or tissues either by the naked eye or microscopically. The lungs of two of the rats which had been subjected to the spray were found to be shrunken, and their edges were studded with dense white nodules. The centre of each nodule was softer than the outside, and consisted microscopically of round cells of the type of ordinary granulation tissue, whilst the external portion was formed of the pulmonary alveoli blocked with cells apparently derived from the epithelial lining. There was a considerable quantity of extravasated blood in the vesicles, and the red corpuscles were in many cases undergoing disintegration. Numerous spheroidal and granular cells, such as are common in irritated epithelium, and exactly resembling those found in the segmentation cavity of an incubated hen's egg, lay in the blocked vesicles. They were in all probability eosinophile leucocytes. The deeper portions of the cortex of the nodule consisted of newly-formed fibrous tissue. The explanation of these appearances in the lungs seems to be that as a result of the irritating action of the spray, or of substances introduced by the spray, there was congestion leading to an extravasation of blood into the alveoli; further irritation led to multiplication of the epithelial cells lining the pulmonary alveoli; finally there was a fibrillation and contraction of the newly-formed inflammatory products. In other words, there were set all the changes leading to the condition known as "pseudo-tuberculosis, the results of a defensive or phagocytic inflammation.

Assuming that cancer is produced by an organism, it is clear that the organism must gain access to the body unless it be held that the host was born with the germ—an untenable hypothesis. It is probable that such a germ would only grow and multiply in those bodies whose tissues afford it a proper food supply. The only way in which such a parasite could effect an entrance into the body is by the respiratory or digestive tracts, direct inoculation of a wound, or by implantation into the skin or mucous membranes. Messrs. Ballance and Shattock have shown that cancer can not be produced by feeding experiments; my own results proved that it can not be introduced through the mucous membranes. Have demonstrated the extreme difficulty with which cancer can be inoculated from without, and even the positive results which they have attained do not appear to be absolutely free from fallacy. It seemed, therefore, that cancer might possibly enter the body through the respiratory passages, and might then travel to the tissues most suitable for their growth and development, as is the case with many infective organisms. The rats were therefore sprayed in the manner I have

described, and their mucous surfaces were kept in a state of chronic irritation, for cancer occurs where epithelial cells, or rather tissues, are undergoing degenerative changes.

Another question which arises out of a consideration of the etiology of cancer is, how is the disease distributed? The conclusions arrived at by Surgeon Hehir and by the great Italian school of scientific medicine in regard to malaria appear to have a certain bearing upon this question. Ague certainly, and cancer possibly, are produced by specific organisms of the nature of protozoa, which gain access to the body from without.

The disease can not be inoculated in either case, or, in other words, in neither disease does the organism when once it has been introduced into the body leave it again in a condition fitted to reproduce the disease. Malaria, however, differs from cancer in its termination. In malaria there is no tendency on the part of the parasite to kill its host; in cancer the disease usually progresses steadily towards a fatal issue. This at once marks a difference between the two organisms, and it may lead to a better knowledge of the distribution of these diseases. In a very able paper, which appeared in the *St. Thomas' Hospital Reports* for 1892, entitled Specific Diseases Considered with Reference to the Laws of Parasitism, Dr. Payne points out (p. 86) that if death is a usual or frequent consequence of any parasitic disease, it raises the presumption that the vitality of the infected organism is not destroyed, or even that the continuance of the species may be favored by this event. Many difficulties at once offer themselves in regard to the parasitic theory of the origin of cancer, if it be considered from this standpoint. The disease is too exclusively human for any wide distribution to be effected by the disintegration of the host's body such as takes place in anthrax, the plague, or typhus. It is possible to assume that the hypothetical protozoon causing cancer is only one stage in the development of a higher organism—that is to say, it is one stage in the alternation of generations which is so frequent in the lower forms of animal and vegetable life, and it is this point which I have endeavored to elucidate, but so far without success. It is, of course, possible too to assume that the cancer germ is exclusively human in its proclivities, as appears to be suggested by the ease with which Hahn and von Bergmann are reported to have transferred cancer from one part to another of a cancerous patient's body, though here again their experiments are open obviously to another interpretation.

The "cancer organism," which was described by Dr. Ruffer in his earlier papers, appears to be exclusively human in this

sense, for, after grafting cancer upon the irritated mucous membranes of animals, I have succeeded in obtaining appearances which resemble these bodies, and which I have not yet found as a result of the simple irritation of tissues, or after the grafting upon them of such normal epithelial cells as those on the anterior surface of the cornea. In the rabbit the structures resembling Ruffer's "cancer" bodies are intracellular, and are also found between the cells, but they entirely disappear within a week of the introduction of the cancerous tissue, and I have not yet ascertained what becomes of them. They are, perhaps, destroyed by the cells which they have invaded. If this be so, and assuming that such bodies are the cause of cancer—an assumption which is still gratuitous, for it has to be proved—we have an explanation of our inability to produce the disease artificially in animals. It may be that the "cancer bodies" are merely phases in the degeneration of cells, and that, as the changes become more marked, these striking appearances disappear.

The result of my experiments is negative as regards the propagation of cancer, but interesting preparations have been obtained showing the various forms of cell degenerations. Many of these degenerated cells have been described by different writers as parasites. They are met with, as I shall show next week at the Oxford meeting of the British Association, in normal epithelium which has been slightly irritated, and I am therefore bound to confess myself an unbeliever in any of the "cancer bodies" which have yet been discovered. No evidence has been adduced to show that they are other than the results of cell degenerations, modified, it may be, by the conditions under which they occur, but not differing essentially from the changes which take place in cells as a result of chronic irritation. The cause of cancer has still to be discovered, but we are one step nearer to it if by a process of exclusion we are able to say that it is not due to any one appearance or group of appearances met with in carcinomatous cells. —*British Medical Journal.*

PERSONAL EXPERIENCE IN THE TREATMENT OF STRANGULATED HERNIA.

By John Ashhurst, Jr., M. D.

Looking over my records I find that I have operated on nineteen cases of strangulated hernia, and in addition have operated on two cases of irreducible omental hernia, not strangulated.

Of the nineteen operations for strangulated hernia, fourteen were for inguinal hernia, confirming what every one knows—that inguinal is the most common form of strangulated hernia, and the one that most frequently calls for operation. One of these cases was in a child, operated on at one of my clinics and at once removed by the parents, and the further history of that case I do not know. Of the other thirteen patients, ten recovered and three died. The deaths occurred in cases where a fatal termination might have been expected, and were not due to the operation. In one case the hernia had been strangulated for five days and the patient was pronounced diabetic. He died of gangrene after the operation, dependent upon the diathetic condition and upon the prolonged strangulation. The second death occurred in a woman of 78 years. The strangulation was very tight, and the bowel was gangrenous at the time of operation. Rupture occurred at the sulcus corresponding to the line of constriction, and death took place from exhaustion in the following twenty-four hours. The third death occurred in a man of intemperate habits, who had a hernia strangulated for thirty hours and who had been subjected to forcible taxis before admission to the hospital. So forcible had been the taxis that it had resulted in rupture of the bowel in two places. At the operation the scrotum was found enormously swollen and black from effused blood. Twelve inches of the bowel were gangrenous, and the gut presented two openings. I removed the bowel and performed a circular enterorrhaphy, but the patient died thirty-two hours afterward from cardiac failure, without evidences of peritonitis. It is evident that in none of these cases was the result in any way due to the operation.

Four times have I operated for strangulated femoral hernia, with three recoveries and one death. In the fatal case the patient died in a collapsed condition thirty-six hours after the operation. I have no particulars of the case, but there was no evidence of peritonitis.

I have had one case of strangulated umbilical hernia which terminated fatally. The patient was 80 years of age, and the strangulation had existed for a number of hours. The patient died of peritonitis, which, as we all know, is particularly apt to occur as a complication after umbilical hernia, incisions into the upper portion of the abdomen being more apt to be followed by peritonitis than incisions in the lower portion.

The youngest patient on whom I have operated was a child 2 years of age, with inguinal hernia. This case ended in recovery. The oldest patient wns the woman 80 years old, with umbilical hernia, just referred to.

Among cases of special interest I would mention one of the inguino-crural variety, where the hernia after coming down through the inguinal canal does not pass into the scrotum, but turns up in the line of Poupart's ligament and passes outward along the groin. It is usually complicated, as it was in this case, with an undescended testicle. In this case the hernia had been down six days when I operated. I was able by taxis to reduce a portion of the tumor, but finding that there still remained a hard mass which could not be reduced, I thought it right to open the sac and determine the exact condition. I found that the hard lump was a testicle in a gangrenous state, either from a twist in the cord or, as seemed more probable, from the taxis which had been practised rather violently before the patient's admission to the hospital. I excised the testicle and the patient recovered.

I have operated in two cases of irreducible omental hernia. In these cases a tumor had been present in the tunica vaginalis for a long time, and while there were no symptoms of strangulation, the weight and bulk of the tumor gave great annoyance, and the patients were exposed to the risk of a portion of the gut coming down at any time. I, therefore, felt justified in operating in these cases, cutting away most of the omentum after securing its neck between two ligatures.

The points of special interest in the treatment of strangulated hernia which I would suggest for discussion are, as regards resort to taxis, its limitations and the aids to its performance, and then as regards operative treatment, the particular mode of performing the operation, more especially as regards the direction of the deep incision, in regard to which some difference of opinion prevails, and as to the advantages and disadvantages of Gay's method as modified by Fergusson, and as to the advantages or disadvantages of Pettit's plan of operating without opening the sac.

The Limitations of Taxis.—I feel obliged to say that, while I have reduced a good many strangulated hernias by taxis, while I think that it should be the surgeon's first thought, and while if practised with care and skill it is a safe method and one which will usually succeed when resorted to in time, yet I must express my belief that in the hands of an inexperienced practitioner, who sees but few cases of hernia, taxis is an unsafe procedure. Under such circumstances I think that the patient would be safer with the operation of herniotomy than with taxis, for herniotomy is not a very difficult operation and not very dangerous if performed with caution, whereas taxis, while seeming to be very simple, yet if employed with great per-

sistence and force may lead to the most serious consequences. My own cases of herniotomy which resulted fatally had been mostly subjected to prolonged taxis. Taxis, therefore, I think has its limitations, and should be resorted to with great gentleness and with great caution, except in the hands of those surgeons who are sufficiently familiar with the anatomy and treatment of strangulated hernia to feel that they may use the method more freely and more systematically. It is, of course, known to the Fellows of the Academy that its founder, the late Professor S. D. Gross, maintained that very few cases of hernia required operation. He prided himself that he was able to effect reduction by taxis where others had failed; and such was undoubtedly the case. In the hands of a man like Professor Gross, taxis was a safe procedure, but in the hands of the ordinary practitioner I believe that the line of safety for the patient will often be found in herniotomy rather than in a prolongation of taxis.

It is scarcely necessary to say that when taxis is employed it should be done with gentleness and with system. The ordinary method of pushing at the hernia is very uncertain, and is not only apt to do harm, but is almost sure not to do good. The rule that the last portion of the bowel which has come down should be first returned is very valuable and should always be borne in mind. Then I find what I am in the habit of speaking of to students as a kind of conjoined manipulation a very useful mode of applying taxis, and I think the safest. The neck of the sac is grasped by the thumb and fingers of one hand, while the other hand, spread out, exercises a combination of pushing and squeezing; and then by a kind of alternating movement, slightly relaxing one hand while with the other the pressure is increased, if the hernia is reducible at all, it will go up. If no gurgling is heard in a few minutes it is not likely that the taxis will succeed.

As regards the aids to taxis the older surgeons resorted to many modes of assisting taxis, but in modern times surgeons have pretty much come down to two or three. Even the warm bath, which was much resorted to formerly, I think is seldom employed at present. At the Pennsylvania Hospital our practice is to put the patient in bed, apply ice over the hernia, and give a moderate quantity of opium. When the resident physician is not able to reduce the hernia by gentle taxis this course is followed until the surgeon has been summoned. It often happens that when the surgeon arrives he finds that the hernia has been reduced spontaneously or disappears under the slightest touch. If this fails our rule is to administer ether and again employ taxis, and in this way the hernia can usually be reduced.

Before administering ether we have an understanding with the patient that if taxis does not succeed then the operation is to be resorted to.

Another manipulation which is of great importance is to draw down the hernia a little before beginning the upward pushing movement, the object being to disengage the portion of bowel which is nipped by the source of constriction. The plan known as Seutin's I have never seen of avail, and I can hardly conceive of a case where it would be required in which it could be used successfully. This plan consists in endeavoring to introduce the finger or thumb nail into the constricting ring, which is then stretched; this could be practised only in very thin persons, and where it could be done I think it probable that taxis would succeed without it.

With regard to herniotomy, the first question that will have to be decided is the extent of the external incision. Some operators make a large incision, extending over the entire length of the hernial tumor. Others endeavor to effect the operation through a very small incision, as in Gay's method. My own plan is to make the external incision three or four inches in length and over the neck of the sac. As regards the particular method of making the incision, whether by pinching up the tissues, transfixing, and cutting outward, or by cutting down from without, I really think that there is no choice. My own practice is to employ the latter plan. Having gone through the skin and fiscia, the surgeon, of course, takes up the tissues cautiously, dividing them on the director. The next question is whether or not the sac shall be opened. I agree with the English rule, that where it is justifiable to resort to taxis it is proper to endeavor to reduce the hernia without opening the sac. I have often tried to do this, but have been compelled to open the sac, as the constriction has been in its neck. In making the deep incision the tip of the left forefinger should be pressed against the source of constriction and the hernia-knife passed flatwise; this is then turned in the proper direction and the deep incision made with a gentle sawing motion, assisted by pressure of the finger below. I am satisfied that the rule of the English surgeons, to make the incision directly upward in inguinal hernia, is the correct one. While in a certain number of cases the surgeon can say this is a direct, or this is an oblique hernia, yet in other cases the relation of the parts is so confused that he can not be absolutely certain which form of hernia he is dealing with. In the one case the internal epigastric artery will be on the inside and in the other on the outside. The safe rule, therefore, is to make the incision directly upward and in the line of the long axis of the body. In femoral her-

nia the deep incision should be made upward and inward. It is only in this direction that we are safe from doing injury and certain to reach the source of constriction, this being where the falciform process and Gimbernat's ligament join. The only danger from hæmorrhage when this plan is followed is from an abnormal distribution of the obturator artery. To avoid wounding this, a good plan is to adopt Mr. Erichsen's suggestion to blunt the edge of the hernia-knife by rubbing it on the handle of another knife, or, as suggested by Dr. Wyeth, to keep the point of the knife pressed against the pubis.

In umbilical hernia the safe line of incision is in the median line and directly downward. The operation is likely to be followed by peritonitis under any circumstances; but I think that there is less danger if the incision is made in this way, on the general principle that wounds in the lower portion of the peritoneum are less likely to be followed by peritonitis than those above. In the case on which I operated the hernia was of long standing, but the strangulation was recent, from the protrusion of an additional portion of bowel. There I followed the judicious rule of not attempting to reduce the whole hernia, which would have required an extensive dissection, but simply relieved the strangulation and returned the part recently protruded.

With regard to the method of dealing with the contents of the hernia, I think that all surgeons agree that if the bowel is healthy it should be returned, but that if gangrenous it should be left in the wound and a false anus formed. If a distinct sulcus is found I think that it is a good rule not to reduce the bowel, so that if it should give way the extravasation may be outside of the peritoneal cavity. As regards the omentum, I think that it is a safe rule to cut it away pretty freely. If it is perfectly healthy it is proper to return it, but if there is doubt it is safer to remove it.

With regard to after-treatment, I am sure that the safest mode is not to make any attempt to get the bowels opened. Some surgeons are in the habit of giving a dose of oil immediately after the operation, and some even before the operation; but this seems to me to be injudicious. I put the patient on the use of opium and belladonna for a few days, gradually diminishing the dose, and usually the bowels move spontaneously in five or six days.

The number of cases which I have brought before you is limited, but they represent a sufficient variety to perhaps be available for the discussion of some of the points suggested.—*Times and Register.*

THE LOCAL TREATMENT OF ORCHITIS WITH GUAIACOL.

MM. Balzer and Lacour state that they have successfully treated several patients affected with orchitis by means of guaiacol applied locally. They at first used the pure substance, but dilution was found necessary, owing to its irritant action on the scrotum. They now find that a 1 in 6 guaiacol-vaseline ointment applied twice daily on the scrotum (from three to five grammes each time), with a three-thickness compress and a T-bandage over all, soon overcomes the pain and reduces the temperature to normal. M. Chauffard states that he has always employed, with great advantages, against blennorrhagic epidymitis sodium salicylate, giving six grammes (one and a half drachms) per diem. I myself gave a trial recently to the U. S. Ph. tincture of pulsatilla (two minims every two hours), but the result was disappointing. What I do find most comforting to patients is the wearing from the first of a Horand-Langlebert suspensory bandage. This apparatus effectually splints the painful gland and enables the sufferer to get about without pain, even during the acute stage—a no mean advantage in the case of a business man. Apropos of guaiacol, Dr. Ferrand, of the Hotel Dieu, reports the excellent analgesic effects derived from the local use of equal parts of that substance and glycerine in sciatica and the intercostal pains occurring in phthisical patients. In every instance the cessation of pain was almost immediate, and although it recurs, a fresh application soon gives relief.—*Gaillard's Medical Journal.*

A NEW ROLE FOR BACTERIA.

M. Tischutkin maintains that the so-called carnivorous plants are incapable of digesting albumen; but that their sole characteristic property resides in their ability to absorb albumen which has been digested by bacteria. These are the conclusions which he draws from a careful study of the subject:

"1. The disintegration albuminous compounds by the secretions of carnivorous plants is due to the growth of micro-organisms, principally bacteria.

"2. Micro-organisms possessing the power of dissolving albuminous compounds always vegetate in the secretions of completely developing carnivorous plants.

"3. The disintegration of the albumen does not commence at the moment of secretion of the fluid, but only after micro-organisms have developed in sufficient numbers in the secretion.

"4. The micro-organisms found on the leaves of carnivorous plants come principally from the air, though they may be derived from other sources.

"5. The name 'carnivorous' plants is to be understood in the sense that the plants only assimilate the products which the lower organisms have set free.

"6. The role of the plant itself is only to furnish a medium in which certain organisms may live and develop."—*Med. and Surg. Rep.*

TRANSMISSION OF HUMAN CANCER TO ANIMALS.

In a communication to the Société de Biologie, Boinet (*Sem. Méd.*, June 13, 1894,) presented a report of researches made by him on this subject. He made, with the necessary antiseptic precautions, sixty inoculations on animals (rats, guinea pigs, rabbits) of various malignant tumors (scirrhus, encephaloid of breast, epithelioma of lip, umbilicus, penis and uterus, lympho-sarcoma of testicle). The results were as follows: In a series of forty intraperitoneal inoculations, made chiefly in rats, generalization of the cancer took place only in one case. A month after intraperitoneal inclusion of a fragment of cancer of the penis from a man, a large rat was seized with complete paraplegia and marked diminution of sensibility. Eight days later the animal died, and on *post-mortem* examination two fragments of the tumor which had been inoculated were found in the peritoneum, and some small nodules on the surface of the liver. Moreover, two cancerous masses as large as cherry stones had developed above the tendinous centre of the diaphragm; they were adherent to the bodies of the dorsal vertebræ, which were secondarily invaded to such an extent as to produce marked deformity of the spinal column. Compression of the cord with consecutive paraplegia had been the result. Histological examination showed that these secondary nodules contained cancerous cells similar to those in the growth which had been inoculated. In a series of fifteen subcutaneous inoculations the results were uniformly negative, the inoculated fragments being absorbed. Subcutaneous injection (in a rabbit) of the juice of the lypmpho-sarcoma of testicle, however, caused the development of a cancerous nodule as large as a haricot bean at the point of inoculation. Injection of the same material into the pleura of an old rat caused the formation of a large cancerous nodule in the corresponding part of the lung. From these facts Boinet draws the conclusion that human cancer is transmissible to animals. The inoculations are best made

into the deep parts of the peritoneal cavity, under the liver or in the neighborbood of the tendinous centre of the diaphragm. In none of Boinet's experiments did a positive result follow inoculations made into the thickness of glands (breast, testis) or into mucous membranes near to the natural orifices. Cancer of the breast of a bitch was inoculated without effect in the peritoneum and subcutaneous cellular tissue of rats, rabbits and guinea pigs.—*British Medical Journal.*

GYNECOLOGY AND OBSTETRICS.

THE RELATION OF TIGHT LACING TO UTERINE DEVELOPMENT AND ABDOMINAL AND PELVIC DISEASES.

By Chas. Graham Cannaday, M. D., of Roanoke, Va.

This subject is of special interest to the general practitioner as well as to the gynecologist, while to the race it is of serious importance, so serious as to be already displaying its deleterious results in characters so vivid as to call forth the gravest apprehensions from true philanthropists.

Sommering, of England, almost a century ago, published an article bearing directly on tight lacing and its effects, and recorded no less than one hundred articles by different authors on the subject; since his time, to attempt a classification of all works touching on this subject would entail no trifling expenditure of time and patience.

The importance of tight lacing, as it exists in civilized countries, as an etiological factor in pelvic ills, has been lost to view in the mad rush for scientific research and inventive methods. That those countries most progressive in art, science and gynecology—Germany, United States of America, England and France—should have failed to thoroughly awaken concerted interest in such an important causative factor of disease is to be wondered at as much as the perpetuation by the patrons of progress and refinement of so uncomfortable and harmful a relic of barbarism. In the latter case this is attributable in a vast majority of the cases to ignorance, the victims being novices in anatomy and strangers to physiology; females consider it a light jest when they are informed of its injurious effects.

I shall try to faithfully portray the evil effects of tight lacing, both as a factor in the causation of disease, and as an obstacle to that normal condition of affairs which offers the greatest resistance to the invasion of disease; at the same time con-

trast the well developed conditions and freedom from pelvic ills in those who do not practise tight lacing, with those frail constitutions, barrenness and invalidism found in its patrons.

Tight lacing is not confined to those who wear corsets, for the clothing may be worn so tight as to do practically the same harm, though in a less degree, by its gradual compression.

Tight lacing is not the only cause that may produce maldevelopment of the uterus and appendages, and occasion diseased conditions, but it is one of the chief factors.

It must be remembered that the uterus and appendages are covered almost entirely by peritoneum, which is susceptible to injury from slight causes; that the construction of the vessels supplying the blood is of such a nature as to favor either anæmia or congestion, in proportion to the degree of compression exerted. To keep in mind, also, the mobility of the uterus and the plasticity of the bones and tissues, with the increased supply of blood the parts should receive, enables us more clearly to comprehend the effects of pressure on an organ requiring rest and freedom to develop during the important transformation of the girl into womanhood. It is at this time, or earlier, that parents allow their girls to commence the use of corsets and use their own ideas, which are generally not moderate, as to the degree of constriction.

The corset, as usually worn, is so constructed as to exert its greatest pressure from above the brim of the pelvis downward, compressing the abdominal wall and contracting the lower parts of the thorax and pushing inward the costal cartilages, until the seventh and eighth are in close contact—often the eighth overlaps. The liver, being placed above the maximum of constriction, and having the half cubical form, is not displaced downward, but acts, in connection with the unyielding thoracic walls, as a potent means of displacing downward the displaceable organs. [Symington.] Gibson, in 1883, in his *Illustrations on the Chest*, has considered it as readily displaceable, though this must be exceptional. The maximum of constriction occurring, as it does, in the direct neighborhood of the stomach, must seriously affect this viscus. When the stomach is distended, the pylorus is below, and the splenic portion above, the constriction forming the hour-glass stomach at times found in this class of cases—the pylorus being much larger and reaching to a point corresponding to a line uniting the spines of the iliac crests. The duodenum is found near the same lines. The jejunum, ileum and mesentery are crowded into the pelvis along with the transverse and ascending colon. The cul-de-sac of Douglas is filled with the small intestines, which help to antevert the uterus when the rectum

is loaded with fæces; also, when the bladder is distended and the rectum empty, the uterus is retro-posed, after displacing the folds of intestines from the posterior cul-de-sac.

The compression is of so considerable a degree as to seriously interfere with the peristaltic action of the intestines; and by impairing their sensitiveness, constipation is produced in a large number of cases. Compression of any part in proportion to its intensity, just in that degree interferes with physiological functions.

From what has been said, we learn—

1. Uterine development is greatest from 11 to 15 years of age.

2. Tight lacing is usually commenced about the period of the beginning of uterine development.

3. Corsets, as usually worn, produce both displacement and compression, and are worn through the entire day as tight as can be borne.

4. Displacement and compression interfere with nutrition and development of the pelvic contents more seriously than is generally supposed.

5. Badly developed female generative organs offer diminished resistance to the invasion of disease, and render physiological work defective and necessarily painful.

The uterus is normally freely movable and readily displaced by pressure; with the finger on the os, it can be elevated one and a half to two inches. If the dorsal semi-prone, lateral or knee chest position be assumed, we find the fundus gravitating to the dependent part. The bi-manual method is mainly effective by reason of this mobility.

The ligaments of the uterus are composed of such tissues as favor stretching. Compression, continued daily on compressible organs as the uterus and appendages, first diminishes the blood supply by lessening the caliber of the blood vessels; and secondly, by diminishing the rapidity of the flow, the pressure at night being relieved, weakens the walls of the capillaries, rendering them inefficient carriers of the pabulum so necessary for physiological performance of development, and equally well does it render imperfect the attempts by certain systems to transform certain conditions of physiological organs into a state of inertness, viz.: Certain canals, bodies, etc., that should be obliterated.

What would be expected were we to bandage a limb tightly from infancy? The vascular supply of the uterus is more easily interfered with by compression than a limb or foot. Hence we must admit a certain degree of mal-development of any organ which is subject to abnormal compression during its period of development.

Among the Africans, Indians, Chinese, and, in fact, all of the nations who do not practise tight lacing, we find the minimum amount of pelvic diseases, the most perfect pregnancy, confinement amounting to little pain or inconvenience, and satisfactory puerperium with the absence of complications. Generally speaking, those who have practised in the rural districts for the well developed and healthy, and subsequently in the city for the delicate, badly nourished and poorly developed, where tight lacing is practically universal, will be thoroughly convinced that there is an explanation to be found in some way for the frequency of female ills, in the latter, in contradistinction to its absence in the former. The great interest which has centred about gynecology in the last score of years, the frequency and severity of pelvic diseases in the female at present, in comparison with the pre-corset era, is a fact for serious consideration, and the increased sterility in high social life is not to be lightly considered.

In comparison with uncivilized nations, customs of distorting development, ours far exceeds, and the deleterious results are not to be predicted by any moderate calculation. If Darwin's theory of natural selections is regarded as teaching the truth, we may, in the future, expect our fair sex to have waists as small as wasps, and generative organs incapable of performing physiological functions.

That the girl who has practised tight lacing sufficiently long to hinder development of uterus, is relieved by a course of electricity, massage and gymnastics, properly and timely applied, is offered as additional argument supporting the claim of this paper. It is believed that mal-development of the uterus is necessarily bound to be present in every woman who practises tight lacing to any considerable extent prior to maturity of the uterus and appendages, and it remains to explain how this mal-development conduces to diseased conditions and renders physiological functions of organs incomplete and painful.

Peritonitis—parametritis and perimetritis—may all be described under one head, as they are generally considered as implicating chiefly the peritoneum, which is composed of pavement epithelial cells, basement membrane, connective tissue and vessels, and secretes a serous portion of the blood through stomata that exist between the epithelial cells. That localized inflammation or thickening often exists in the female pelvic peritoneum, and seldom occurs in any other portion, renders it highly probable that pressure so interferes with its nutrition, by diminishing the blood supply, as to render it peculiarly liable to inflammatory attacks from slight

causes. Hence we frequently find the fundus uteri retroverted and bound down by adhesions, or anteverted or anteposed and adhered in virgins. The writer met several cases of this kind, and in each instance tight lacing had been persisted in from twelve years of age. If long-continued friction in old hernial sacs produces localized thickening and adhesive peritonitis, it must be expected the same to result from tight lacing in the pelvic peritoneum; and to this more than to any other may be attributed the increasing frequency and severity of pelvic pain in females accustomed to tight lacing.

Displacements of the uterus find their main cause in tight lacing. We find neither displacements of the uterus, nor many diseased conditions for that matter, of the generative organ in other of the mammalia than mankind. Displacements of the human uterus, however, are very frequent. Frankel found backward displacements present in 18 per cent. of women examined by him.

As tight lacing produces mal-development of the pelvic contents as well as displacing all displaceable parts, a résumé of what has been said in reference to displacements must convince all that tight lacing is one of the most potent factors in its causation.

Menstruation may be affected in many ways by this custom. Amenorrhœa may be the result of a poorly developed mucosa and its adnexa, together with faulty developed ovaries; a condition which, unless corrected, may lead to atrophy. Or we may have congestion with profuse and long flows, or dysmenorrhœa, which is due mostly to mal-development both of the nervous system and muscular and cellular tissues, rendering them inadequate to the physiological labor required. Cancer, so frequently occurring in civilized nations, must have its explanation in some custom peculiar to such civilization. There are embryonic cells in the uterus that remain through life; they are considered the cause of epithelioma of the cervix, and the cervix, in 98 per cent. of cases, is the seat of cancer, local irritation being its chief generator; tight lacing produces irritation by pressing down the cervix against adjacent parts. According to Hart and Barbour, "up to puberty, the mortality for carcinoma of the sexes is the same. Afterward, the relative proportion of female to male deaths gradually rises till it attains its maximum about the age of sixty years, after which it falls away again."

Miscarriages are frequently due directly to this cause and indirectly to mal-development of the female generative organs, proving their incapacity to nourish the embryo. Lacerated

cervix, weak and inefficient contractions of the uterus in labor, protracted puerperium, the result of sub-involution, may usually find their true explanation in this source. The increased frequency of endometritis, sterility, stenosis, erosion and artesia of the cervix and os, the varied aches and pains referred to the pelvis, must be largely attributed to this cause. A large per cent. of the growths, cysts, etc., peculiar to the female pelvis, can be traced to mal-development.

Doran has shown that the parovarium is nothing more nor less than nine or ten vertical tubes, six or seven of which have been obliterated and remain as fibrous threads—the remains of the Wolffian bodies. These tubes are lined with cubical or broken-down epithelium, and are lost in the hilum of the ovary below, while the horizontal tubes from which they originate above may be traced to the side of the uterus, forming the canal of Gartner.

It is no longer a disputed point that Coblentz' para uterine cysts, as well as papillomatous cysts of the hilum, parovarium, and cysts of the broad ligaments, have their origin in these unobliterated ducts and the remains of the Wolffian bodies. Mal-development must necessarily account for this condition of affairs. Waldemyer shows a section of the ovary—Pfluger's ducts that have not developed as they should have into Graafian follicles, and which may be the point for the origin of an ovarian cyst.

Fibroids and most solid tumors have their etiology in mal-development of the sexual organs. Their occurrence chiefly after puberty and not after the menopause, together with the frequent occurrence of various tumors in the same uterus or appendages, all tend to corroborate the position taken in this article. Time and space will fail me to follow this farther, but the field is a large one.

The great benefit obtained in pelvic ills from electrical treatment is due to its effect as an aid to development. The pain every woman feels, who has practised tight lacing, on leaving off her corset, is due to the effort of the parts to return to their normal position.

The hand of the Chinese esthetic, with its long and curling nails; the savages of the east coast of Australia with a bone the thickness of a man's finger and six inches long, transfixing the nasal septum; the natives of Corn Islands, off Mosquito Coast, in Central America, with beards of tortoise shell dangling from an artificial hole in the chin and lips; the Botocudo Indians, the Esquimo and Thlinkeet of Alaska, and many tribes of Africa, by puncturing their lips, nose, ears and chin and applying weights and dilators, resulting in frightful deformities, may have their eccentricities and

absurdities; but their evil effects will not compare with those of tight lacing.

The artificial, flattened and elongated occipital portion of the head by bandages worn on infant's heads by the ancient natives of Peru, approach more nearly those of tight lacing in their injurious effects than of any other.

This article is intended to call serious attention to the evil effects of tight lacing, and to urge upon the profession to take some steps that may inform the laity as to the true effects of such fashion; also to present a solid professional front, antagonistic to such a deleterious custom. The fact of tolerating such a custom as tight lacing, which originated in mediæval times, classes us with the uncivilized and barbarous. "Seest thou not what a deformed thief this fashion is?"—*Virginia Medical Monthly.*

A CASE OF PAROTITIS WITH METASTATIC METRITIS OF THE PREGNANT UTERUS, RESULTING IN THE MISCARRIAGE OF A THREE MONTHS FŒTUS.

By Charles W. Rook, M. D., Quincy, Ill.

On January 30, 1892, I visited Mrs. M. G., aged 30 years, whom I found had been suffering for two days from an attack of double parotitis. Two weeks before I had prescribed for her little daughter, aged 5 years, who was then suffering with double parotitis, from which she recovered without complications. Mrs. M. G. was not only suffering from the usual local symptoms of parotitis, but also from the pain and distress of a threatened miscarriage, she being pregnant between two and three months. Labor pains were frequent and expulsive in character, accompanied by free uterine hæmorrhage. The hæmorrhage was arrested by vaginal douches of hot water and the pain with morphine.

After the arrest of labor pains and hæmorrhage, the uterus presented during the next six days no other indication of involvement in the inflammatory process than that of being quite sensitive to pressure. During this time the subjective distress attending the intensely swollen state of the parotid glands was so great that the patient gave but little notice to the uterine complication.

On February 6 the uterus was observed to be larger and more sensitive, but not attended by a return of the labor pains. Two days later the uterus was as large as it should have been in the sixth month of pregnancy, the symptoms of metritis being well marked.

The inflammation in the parotid glands now began to subside and in a few days had entirely disappeared. On this date,

February 8, other organs and tissue adjacent to the uterus became involved in the inflammatory process. Voluntary control of the bladder was lost and intestinal peristalsis much diminished. Involvement of the ovaries could not be determined because of the sensitive condition of the pelvic tissues.

February 10, general peritonitis present. This condition, attended by great abdominal distention and pain, continued without any apparent change until the 18th inst., at which time there occurred a sudden return of the labor pains, with escape of the liquor amnii, and on the following day of the fœtus and placenta. With the latter occurred quite a free hæmorrhage, which was certainly beneficial in its effect upon the highly inflamed organs.

On February 23 voluntary control of bladder and bowel was obtained and convalescence succeeded without further complications.

For valuable aid in the medical care of Mrs. G., I am indebted to my friend, Dr. E. B. Montgomery.

It may be of interest to note that about a year after her recovery Mrs. G. again conceived and was successfully delivered December 17, 1893, although the infant, a female, died twenty minutes after birth from atelectasis pulmonum.

The Index Medicus has enabled me to examine many references to the metastasis of parotitis, but as yet I have found recorded only one case in which the pregnant uterus was the seat of the metastasis.

The case is reported by F. D. Haldeman, M. D. (Jour. A. M. A., Vol. VII, p. 545, May 14, 1887), as follows:

"Mrs. D., 20 years of age, in the seventh month of pregnancy. She was taken with the mumps on April 1, 1886. April 5 the swelling suddenly left the parotid glands and she became very nervous and weak; complained of pain over the hypogastric region. Dr. Klinker reports that at this time her temperature was 104 degrees, pulse 120 and feeble. There was pain and tenderness over the womb, with constant vomiting. Her fever continued high throughout her illness.

April 10, active labor pains set in and she was delivered of a seven months' fœtus, which had evidently been dead several days. The placenta came away, and with it a very profuse and offensive discharge. The patient became delirious and died April 12.

All writers on parotitis refer to a possible metastasis to the testicle, mammæ, labia and ovaries. Niemeyer and Constatt include the uterus, while a study of parotitis, such as can be obtained from current medical literature by aid of Index Medicus, will show that nearly every organ and tissue of the body has figured in the metastatic complications of parotitis.

VOMITING IN PREGNANCY: TERRIBLE EXAMPLE. WHAT SHOULD HAVE BEEN DONE.

By Charles E. Page, M. D., Boston, Mass.

Perhaps there is no period in a woman's life when nature, that is the living organism, takes the bit in her teeth, so to say, more arbitrarily, with the design of having the machine run about right, than during the early weeks of pregnancy. Women, as well as men, at other times may riot in high living, eat freely, and all sorts of dishes, at all hours of the day, with comparative impunity; but when this wonderful process of the beginning and growth of a new being is inaugurated the woman is likely to be brought to book. Instead of, as she has been doing, eating for three (that is, eating often as much as three persons of sedentary habits actually need), she is reminded—or would be if the family doctor were fully competent to instruct her, and did his duty in the premises—that she must now only "eat for two," a moderate portion for herself, less or more according to her activities, and a tiny morsel for the tiny germ that is to be nourished. Really, the first indication of nausea or lack of appetite, not to say vomiting, should warn the prospective mother that she is getting a little ahead of her stomach, so to say; and, then, all she has to do is simply to sip a few swallows of moderately hot water occasionally during the day, fasting, to make short and easy work of restoring the balance to the system. I have never known a single case of failure when this plan has been intelligently carried out. As for the length of time for this stomach rest the question is as simple as this: Take all the time needed, whether it be the skipping of a couple of meals or fasting for a couple of days. Wait till the stomach is tranquil and the patient hungry; but hunger or no hunger the tranquil stomach must be secured, and this without the employment of any bulldozing method, as with "the usual remedies addressed to the stomach," which never, in the true sense of the term, cure the disorder; and when they seem to be working the best the most mischief may be brewing. The pregnant woman who is by artifice helped to swallow a great deal more food than her system requires for its best nourishment is helped into a fat, logy, easy-going state, when she should be encouraged to an appropriate degree of physical training. Instead of sitting about spending most of her time making no end of baby clothes which, usually, are far in excess of the little one's actual needs, she should avoid the sitting attitude as much as possible; train moderately but sufficiently—the surplus fat off, needed muscle on—and thus become aggressively healthy, in the only way that has ever been discov-

ered. The fewer and simpler the little garments the better for the baby; while the avoidance of sedentary habits is the mother's best safeguard against disease and possible disaster. Of course, the thought which naturally arises here in the reader's mind is that it is practically useless to expect the average woman to enter into the true hygienic scheme for high health; but it makes not the least difference in the argument as to the proper treatment for vomiting in pregnancy, be it "black," brown, or any other complexion of vomit. The stomach must have rest, and enough of it, while the fluidity of the blood must be maintained; and there is nothing in creation that fills this want except fresh, soft water, of which enough must be swallowed to fulfil the requirements of the system.

The amount will vary from a pint to three half-pints, in the course of the day, in quarter-cupfuls, moderately hot so long as the incipient nausea is present; after this symptom has disappeared it may be taken fresh, in littles, at every occasion of faintness at the stomach, as a cooling and soothing douche, until the patient or her family physician feels that a moderate amount of simple food will be a fair risk, so to say. Then the proper thing is for the patient to try and get the correct gauge as to her digestive capacity, and to abide by it.

Of course the matter of dress comes in for consideration; and while some women manage to pull through quite well in spite of even tight corsets, none but gets punished ultimately for this and all other sins against nature; while in some cases there is no such leeway. However, it was not the original idea of the writer to enter into the question of the proper regimen in pregnancy, as to all the detail of it, but simply to say enough to make certain principles appear in evidence, as a prelude to citing the terrible example which appeared in a recent issue of one of our standard medical journals, although there was no indication that the correspondent himself had learned the slightest thing from his sad experience.

Here is the case: The woman was young, about one month advanced in pregnancy, and on a certain day was seized with nausea and vomiting. There was no certainty in the minds of the parties concerned as to the existence of pregnancy, as she had gone but a few days over her time, and "the usual remedies addressed to the stomach were administered with only slight palliation of the annoying symptom." The remedy suggested by the writer—the brief fast, with moderate hot water sipping—would doubtless have proved a radical cure, as it has in very many similar instances; but there is no history given indicating that this young woman adopted other than the prevailing practice, namely, to force or tempt the appetite at a

time when the organism was saying in the most emphatic language, "Give me a rest, I beg of you a rest." It is not, therefore, strange that this victim of ignorance went from bad to worse and again sent for the doctor. An examination was made and revealed an impregnated uterus. What then? "Remedies were immediately addressed to this organ (sic), including cocaine, which had also been given *per os.* No abatement was at any time noticeable, and although her previous health had been perfect it required no prophetic vision to foresee the result if the vomiting was allowed thus to continue. Abortion was at once determined upon, pending which the ominous coffee-ground vomit appeared. The operation was hastened and speedily terminated without the least untoward result, hæmorrhage being practically *nil.* The vomiting soon ceased, as was expected, and, as she was cheerful and apparently doing well, I left feeling assured that recovery was only a question of a very short time." But, as is so frequently observed in brilliant "cures" effected by measures that on their face represent a direct violation of the laws of life, the patient died! "Within six hours," says the doctor, "I was again summoned, being informed by the messenger that vomiting had returned. On my arrival I found the black vomit pouring forth almost incessantly and the nausea uncontrollable. Everything possible was done without the slightest amelioration of the dangerous symptom, when finally, from sheer exhaustion, she died the following morning." Here was a life destroyed, and here is the lesson, evidently the only lesson, learned by the destroyer, who closes his pitiful story as follows: "This, in my opinion, serves to emphasize the statement of Dr. ——, that nausea and vomiting in a pregnant woman, with the ejection from the stomach of coffee-ground fluid, denote an alarming and dangerous condition." Pray heaven that many others may learn that *this kind of treatment* is alarming and dangerous, and that its prevalence fully accounts for the rise of the mental scientist, faith-cure and other quack remedies.—*Philadelphia Polyclinic.*

Book Reviews and Notices.

An International System of Electro-Therapeutics: for Students, General Practitioners, and Specialists. By Horatio R. Bigelow, M. D., and thirty-eight associate editors. Thoroughly illustrated. In one large royal octavo volume, 1160 pages, extra cloth, $6.00 net; sheep, $7.00 net; half Russia, $7.50 net. Philadelphia: The F. A. Davis Co., publishers, 1894.

This is the largest work on the subject of electro-therapeutics published in the English language. Every year sees the advent of some new "system" on some medical subject, consisting of contributions from men who have made themselves prominent in their special lines. The time has passed when one writer on electricity could tell in one small book all that the medical profession knew about electricity. This new science has advanced with giant strides; and now, instead of being a medical curiosity handled by charlatans, it is one of the most valued allies of the cultured physician and surgeon. The appearance of Bigelow's "system" serves as an index to the advanced state of electrical science. In the 1100 pages comprised in this volume, the contributors have covered every field of special or general medicine. A large amount of space is deservedly given to a thorough description of the different varieties of electricity and the best models of apparatus used in daily practice by those who appreciate the importance of this valuable therapeutic agent. Chapters on electro-physiology, electrical diagnosis, and cataphoresis bring us to the application of electricity in the treatment of diseases. The headings will give an idea of the wide scope of the work: Intestinal Occlusions treated by Electricity; Diseases of the Alimentary Tract; Diseases of the Liver and Kidneys; Gout and Rheumatism; Diseases of Lungs and Heart; Diseases of Uterus and Appendages; Cancer of Uterus; Facial Blemishes; Diseases of Skin; Diseases of Nose, Naso-pharynx, Pharynx and Larynx; Ophthalmology, etc. The whole field of medicine, surgery, gynecology, etc., is covered, and each part of it is handled by a man (or woman, for two of the contributors are Mary Putnam Jacobi and Henrietta P. Johnson) who is a recognized authority on the subject discussed.

Dr. Bigelow's "system" contains a vast amount of information on the subject of electricity. Every contributor has sifted out the literature on his special branch, and preserved about all that bears upon the application of electricity in medicine and surgery. It is a handy guide for ready reference on electricity, a complete text-book, and, in general, a well digested presentation of our present knowledge of electricity.

A. McS.

Transactions of the American Dermatological Association, Twentieth Annual Meeting, September 5, 1893. Official report of the proceedings, by Geo. T. Jackson, M. D. New York, 1894.

The report of this association comes in pamphlet form and is characterized by the fulness of the reports of the discussions

on the leading papers. Dr. Morrison's paper on "Cosmetics," and Dr. Bronson's paper on "The Treatment of Itching" are especially notable. A number of clinical reports, with a few colored plates, make up the balance of the publication. Dr. Morrison's paper might bear a further consideration at our hands because of the customary neglect of the subject embraced. Here the fact is strongly elucidated that the use of cosmetics should not be relegated to the hands of the charlatan or the drug clerk. Blemishes are often as objectionable as skin diseases themselves, and in that light need treatment as well. The neglect of minor skin ailments on the part of the ignorant, or careless general practitioner, receives just criticism. That there is a demand justifies and entails the supply of advice and treatment from the conscientious physician. The history, early methods of preparation, and some modern suggestions, only too few, for the treatment of freckles, flushing, warts, etc., receive consideration from the author. Electricity in minor skin affections is duly discussed. The main points of Dr. Morrison's paper are emphasized by the endorsement evidenced in the discussion. ISADORE DYER.

State News and Medical Items.

DIED.—DR. STANHOPE JONES, eldest son of Dr. Joseph Jones, born in Augusta, Ga., December 16, 1860, died at the residence of his brother, Charles C. Jones, in Colburn, Southwest Virginia, July 24, 1894. Dr. Jones received his early education in New Orleans and at the State University at Baton Rouge. He graduated in medicine in 1883 at the Medical College of Louisiana, being chosen valedictorian of his class. After his graduation he was appointed inspector of shipping, which position he held with credit for a year. In 1884 he was chosen by Dr. Finney, the coroner, as deputy coroner. The duties of this position he discharged honorably and efficiently during the four years of his term. He was noted for his accurate and skilful post-mortems and official reports of cases. He was uniformly urbane and courteous in the discharge of his duties, and had a host of friends both upon the east and left banks of the river. He was cheerful, kind and gentle in his ministrations to the sick, quick and accurate in diagnosis,

and successful in his treatment of disease. In 1887 he married Miss Minna Bayne, of New Orleans. He survived his wife but a short time, leaving three children.

Dr. J. Leake, of Bayou Sara, was in the city recently.

Dr. R. R. Lyons, of Crowley, was in the city recently on business.

Dr. R. G. Gautt, an old practitioner of Haynesville, La., died recently at that place.

Hemphill, La., is in want of a physician. Dr. H. H. Holton, who has been there a number of years is not physically able to continue in active practice.

Dr. A. J. Perkins, of Lake Charles, La., is in the city with his father, who is here for treatment.

Dr. D. P. January, of Crowley, La., sold his residence to Dr. Morris, and removed to Eunice, La.

London has sixty ambulance stations for the six thousand accidents that occur on her streets each year.

Dr. Felix O. Latiolais, of Broussardville, La., died last month, age 43, from an attack of pneumonia.

Medical journalism will be given the prominence of a special chair at the next international medical congress.

Dr. H. E. McKay, who located at Hammond, La., last year, has opened a new drug store in that growing town.

Dr. and Mrs. D. N. Foster, of Franklin, La., were in the city last month.

The Journal extends its congratulations to Dr. and Mrs. A. A. Allen, of Bayou Goula, upon the birth of a daughter.

Drs. E. L. McGehee and Will. H. Wood, of New Orleans, La., visited their old home at Woodville, Miss., recently.

The Journal extends its sympathy to Dr. and Mrs. J. J. Thomas, of Okaloosa, La., on the death of their little girl on October 8.

Dr. W. D. Wall, Jr., who has been practising with his father at Jackson, La., has moved to the new town, Eunice, on the Southern Pacific railroad.

MARRIED.—On Oct. 29 1894, at Christ Church, New Orleans, Dr. B. A. Ledbetter and Miss Amie Seawell. The *Journal* extends its congratulations and best wishes.

DR. CHAS. PELAEZ, a leading physician of Biloxi, Miss., died last month of Bright's disease. The doctor was a worthy citizen and had the confidence of all who knew him.

DR. A. A. FORSYTHE, of Monroe, La., sends notice of the death of Dr. J. F. Pace, of West Monroe. The doctor was a member of the Ouachita Parish Medical Society.

THE announcement is made of the removal of the headquarters of the *Journal of the American Medical Association* to 82-86 Fifth avenue, Chicago, where the paper will hereafter be printed on its own presses.

THE first regular meeting of the Middle Tennessee Medical Association will be held the 20th and 21st of November, 1894, in the senate chamber of the capitol at Nashville. The association will be called to order by the president, Dr. J. B. Cowan, Tullahoma, at 12 o'clock. You are most cordially invited to be present.

DR. H. EUGENE STAFFORD, who is one of Meridian's talented sons, has reached a high position in his profession as a physician in New York city. He has been appointed adjunct professor of ophthalmology in the Polyclinic; consultant ophthalmologist to the Tarrytown Hospital, and surgeon to the eye department of the West Side Dispensary.

THE following is the Shreveport Charity Hospital report, as compiled by Dr. T. E. Schumpert, surgeon in charge, for the month of October: Number from State at large, 101; city and parish, 105; remaining under treatment from previous months, 32; received during the month, 130; total to be accounted for, 206; discharged recovered, 85; improved, 32; not improved, 6; died, 5; remaining under treatment, 79; white, 97; black, 109; total number of patients treated at hospital from November 1, 1893, to November 1, 1894, 2019.

ACCORDING to recent statistics there are about 2000 women practising medicine on the continent of North America, of whom 130 are homœopathists. The majority are ordinary practitioners, but among the remainder are 70 hospital physi-

cians or surgeons, 95 professors in the schools, 610 specialists for the diseases of women, 70 alienists, 65 orthopedists, 40 oculists and aurists, and finally 30 electro-therapeutists. In Canada there is but one medical school exclusively devoted to the training of medical ladies, but in the United States in 1893 there were ten, one of them being a homœopathic establishment.

Chicago Gynecological Society.—At the sixteenth annual meeting of the Chicago Gynecological Society, held October 19, 1894, the following officers were elected to serve the ensuing year: Dr. Franklin H. Martin, president; Dr. A. J. Foster, first vice president; Dr. J. C. Hoag, second vice president; Dr. H. P. Newman, secretary, and Dr. T. J. Watkins, editor. The retiring president, Dr. Fernand Henrotin, delivered an interesting annual address, after which the society adjourned to the annual banquet. Dr. John B. Hamilton, J. B. Murphy, Health Commissioner Arthur Reynolds, Alex. H. Ferguson and others were guests of the society.

The Mobile hospital committee of the general council help a lengthy session last month for the purpose of hearing from the faculty of the Alabama Medical College in relation to the proposed change in the management of the city hospital, which is now in charge of the faculty. The faculty was ably represented in Mobile's distinguished physicians, the dean of the faculty, Dr. George A. Ketchum and Dr. Rhett Goode. The remarks of these gentlemen made a deep impression on the committee, as they presented a strong array of facts and reasons for its continuance as at present, the chief being that it is the mainstay of the Medical College of Alabama.

The bronze statue of Dr. J. Marion Sims was unveiled in Bryant Park, New York, October 20. After addresses by Dr. Geo. F. Shrady and Dr. Paul F. Mundé, the statue was formally presented to the city and accepted by Mayor Gilroy. The erection of this statue is the successful culmination of a movement which began soon after the death of Dr. Sims, in 1883. Special praise is due our esteemed friend, the *Medical Record*, for its active work for this object. Contributions were received from the medical profession in this and other

countries. There is no more honorable name in American medicine than that of Dr. Sims, and no one could deserve more than he a memorial of this sort. The Woman's Hospital, in the same city, is also his monument.

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about $180, will be made on July 14, 1895, provided that an essay deemed by the committee of award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but can not have been published, and must be received by the secretary of the college on or before May 1, 1895. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within it the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the college; other essays will be returned upon application within three months after the award. The Alvarenga prize for 1894 has been awarded to Dr. G. E. de Schweinitz, of Philadelphia, for his essay entitled Toxic Amblyopias.

The Contagiousness of Consumption.—The Toronto courts have recently had the question of the contagiousness of consumption before them. A health officer demanded the dismissal from school of a child suffering from phthisis, and his action led to legal proceedings. The judge sustained the action of the health officer, deciding that the disease is contagious.

Dr. Roux' Cure for Diphtheria.—A few weeks ago the Paris *Figaro* opened a subscription list in order to enable the Pasteur Institute to supply Dr. Roux' antidiphtheria serum to all medical applicants. The appeal has resulted in a sum equivalent to about $50,000 being raised. It is hoped that institutes in which experienced physicians will administer the cure will soon be established. The Paris Academy of Medicine has reported in favor of Dr. Roux' treatment.

QUARTERLY MEETING AVOYELLES PARISH MEDICAL SOCIETY.

EVERGREEN, La., October 4, 1894.

House called to order by the president at 12:30 P. M.

Present: Drs. Ducoté, J. S. Branch, Buck, Pearce, Arnold, Wille, W. G. Branch, Longarre, Rabalais, Dantzler, Haas, Porter and Regard.

The minutes of the last meeting were read and adopted.

A letter from Dr. Savant was read in which he expressed his best wishes for the society.

A letter from the State Board of Medical Examiners was read, which urged upon the society the necessity of aiding in the enforcement of the medical law recently enacted, and especially of Sec. 5, relating to the practice of midwifery. Sec. 5 was read and interpreted as not to affect the midwives usually met with here.

A letter from Dr. Roy to Dr. Branch, declining an invitation to the banquet, was read, giving as a reason for the declination that he had resigned from the society because he held it contrary to its rules to do contract practice, which he was doing, and under the circumstances he could not accept the society's courtesies.

Dr. Rabalais made a motion, which was carried without a dissenting voice, that after January 1, 1895, no member of the society should do contract practice.

By Dr. Buck—Moved that the chairman appoint a committee to draft a fee bill. Drs. Buck, Branch, Dantzler, Longarre and Rabalais were appointed on this committee.

On motion of Dr. Branch, a recess of half an hour was taken to give the committee time to prepare its report.

At 2 P. M. the meeting was called to order.

The fee bill committee reported through its chairman, Dr. Buck, presenting a list of charges, and asking that the society vote on the report item by item.

With the exception of some few changes, it was adopted as reported, viz.:

OFFICE PRACTICE.

Ordinary prescription or advice, first call	$2 50
Each subsequent prescription	1 50–2 00
Physical examination	2 50

VISITING PRACTICE.

Visit in town	2 50
Visit up town, one mile	2 50–3 00
Each subsequent mile	50
At night, double.	
Additional prescriptions in same family at same visit	1 00
Consultation, not including mileage	10 00–50 00
Subsequent consultations	5 00–25 00

Expert testimony before court	$25 00-50 00
Opinion involving legal issue	10 00-50 00
Certificate of death	5 00
Obstetrics and Gynecology.	
Natural delivery, not including mileage and detention	15 00
Detention over six hours, per hour	1 00
Difficult delivery	25 00-50 00
Abortion, same as labor.	
Placental delivery	10 00
Forceps or turning, extra	10 00-50 00
Capital operation, obstetrics and gynecology	25,00-100 00
Original examination and instrumental treatment	3 50-5 00
Subsequent instrumental treatment, not including medicine	1 50
Surgery.	
Minor operations	5 00-20 00
Major operations	20 00-100 00
Venereal Diseases.	
First prescription, cash	5 00
Subsequent prescription	2 50
Poisoning.	
Prescription, not including mileage	5 00
Administration of anæsthetics	10 00

By Dr. Regard—Moved that the proceedings of the meeting be published in the parish papers. This motion was carried by a majority of one vote.

Dr. Branch, who voted nay, said that the laity entertained the idea that the society met for the sole purpose of legislating against them, and he was against publishing anything which might tend to strengthen this conviction.

Dr. Buck, on the other hand, was of the opinion that it would be wise to acquaint the laity with our charges so they would know what to expect when settling day came.

On motion of Dr. Porter it was agreed to reconsider the motion, whereupon Dr. Regard withdrew it.

By Dr. Dantzler—Moved that the fee bill be printed on cards and one card be sent to every physician in the parish, whether a member of the society or not.

By Dr. Branch—Whereas, the society had recently lost by death a valuable member and ex-president, moved that the chairman appoint a committee to draft resolutions on the death of Dr. C. D. Owens.

The chair appointed Drs. Arnold and Wille on this committee.

Several members had interesting papers to read, but on account of lack of time their reading was postponed to the succeeding meeting.

Dr. Rabalais invited the society to meet at his residence the next time. The invitation was accepted on motion of Dr. Arnold.

The committee appointed on resolutions on Dr. Owens' death reported as follows:

Resolved, It is with profound regret the Avoyelles Parish Medical Society has learned of the death of Dr. C. D. Owens.

Resolved, That by his death the profession has lost an able practitioner and one worthy of the confidence he had earned.

Resolved, While we throw the veil of charity over his faults we remember with pride his brilliant accomplishments and his many worthy traits of character.

Resolved, We deeply sympathize with his son Logan, and offer him our sincere condolence in this grievous affliction.

Resolved, That a copy of these resolutions be spread upon the minutes.

At 4 P. M. the meeting adjourned to meet at Dr. Rabalais' residence, Moreauville, first Thursday of January.

EMILE REGARD, *Secretary.*

A CASE OF PYÆMIA DUE TO APPENDICITIS.

The history of the case I wish to present to you this evening is as follows: A. C., aged twenty-five years, a weaver by occupation, was admitted to the medical wards of the Episcopal Hospital May 9, 1894, at the request of his medical attendant, Dr. Ferguson, supposing the man to be suffering from abscess of the liver.

On admission the following facts were elicited, which I have copied from the resident's meagre notes: *Family history*, negative. *Previous history:* Enjoyed good health, although not especially robust; about three years ago recalls having a short illness ushered in by a chill, the prominent symptoms of which were sharp, cramp-like pains referred to the lower third of the abdomen; was confined to bed for a week. (This was undoubtedly an attack of appendicitis). *Present attack:* States that he was feeling perfectly well up to about two weeks ago, when he was awakened with sharp pains in the iliac fossa, and in the course of the morning they were followed by a pronounced chill, succeeded by sweating; through the day he felt nauseated, and in the evening vomited.

During the interval of two weeks from the time of his first attack until his admission into the hospital, he had always once in the twenty-four hours, and sometimes oftener, a decided chill followed by profuse sweating; pain, referred to the right iliac, umbilical and hypochondriac regions was almost continuous; the bowels were watery and moved daily; the patient was confined to bed and growing weaker.

After his admission into the medical ward all his symptoms were referred to the region of the liver, over which there was distinct tenderness. The daily chill and high temperature (106 deg. F.) naturally led my colleague, Dr. Morris, on the medical side to suspect abscess of the liver, and he transferred the case to the surgical wards for operation.

On the day after his transfer to the surgical wards I found the case very much as above stated, the right hypochrondriac region being tender on pressure, liver area increased. On examining the case in the ward before operation, I exposed but a small portion of the abdomen and noticed a distinct eruption which I supposed was due to the vigorous use of a scrubbing brush. The case was then taken to the operating room and etherized, and on a more careful examination of the abdomen under an anæsthetic, I found the eruption which I had first supposed was due to the bichloride and friction to be pretty generally distributed over the entire trunk, and in appearance was not unlike the eruption of typhus fever, or in other words a distinctly morbilliform eruption. The history at that time in my possession was rather negative, and I decided not to operate until more definite data could be obtained. On the following day I saw the physician under whose care he had been, and with my colleagues, Drs. Deaver, Neilson and Morris, decided to make an exploratory incision over the region of the liver. The patient was etherized, and an incision corresponding to the right semi-lunar line gave a free opportunity to explore the surface of the liver, which appeared normal. An exploration with an aspirating needle failed to reveal any purulent collections. The region of the appendix was explored through the abdominal wound, suspecting that possibly it might be the seat of the trouble; but with the hand carried down over the liver to the right iliac fossa, no evidence of trouble was apparent.

After the operation the chills seemed to be less severe, not being so frequent as before, and the temperature not rising so high. The external wound closed quickly, and no symptoms relative to the operation were manifest. The next chill was four days after the operation, and did not rise nearly to within two degrees of the height of the previous one. The next did not appear until the fifth day, although the patient was growing gradually weaker, and died on the tenth day after the operation. After the second chill he began to expectorate bloody mucus, sometimes a cupful of blood being expectorated during the twenty-four hours.

A post-mortem examination revealed the liver slightly enlarged, and filled with a large number of metastatic abscesses, the principal pus collection and largest abscess being in the

left lobe. The appendix was entirely destroyed, and its position occupied by a small pus cavity holding about three drachms of pus. The cæcum for several inches beyond its attachment to the appendix was gangrenous. There were some septic deposits in the lungs, although no distinct infarcts were to be found. The reason I ascribed for the liver being affected, which is usually a secondary affection coming under the general circulation, is that the materies morbi coming from the appendix immediately entered the portal circulation—superior mesenteric vein—and consequently the first deposit would naturally be found in the liver.

The post-mortem here distinctly revealed a case of pyæmia, the primary cause of infection arising from the appendix. One peculiar feature in the case was the eruption, which was more or less misleading, although eruptions in suppurative fever, or pyæmia, have long been recognized, and are spoken of by Braidwood in his exhaustive treatise on that subject.

My object in briefly reporting this case to-night is that I think it of no little interest (without wishing to go into the subject of pyæmia, which is so familiar to all the fellows of the society), throwing, as it does, more light upon the much mooted subject of appendicitis, and again, adding its weight to the testimony that the above mentioned disease is strictly a surgical affection rather than a medical one; for I feel certain that had the true condition of affairs been recognized at the onset of the attack, the ultimate termination might have been different,—*Denver Med. Times.*

THE PHYSIOLOGICAL ACTIONS OF ALCOHOL.

Dr. David Cerna, in a paper on the physiological action of alcohol, read at the Pan-American Congress, concludes his very able paper as follows:

(1) Alcohol in small amounts excites and in large doses depresses both the peripheral motor and sensory nerves.

(2) Excessive quantities cause a spiral degeneration of the axis-cylinder or nerve-fibres.

(3) Reflex action is at first increased and afterward diminished by an influence exercised by the drug upon the spinal cord and the nerves.

(4) In small amounts the drug stimulates the cerebral functions; it afterward, especially in large quantities, depresses and finally abolishes them.

(5) Alcohol causes lack of co-ordination by depressing both the brain and the spinal cord.

(6) In toxic doses alcohol produces hyperæmia of both brain and spinal cord, especially of the lumbar enlargement of the latter.

(7) Small doses of alcohol produce increased rapidity of the cardiac beat; large amounts, a depression of the same. In either case the effect is brought about mainly through a direct cardiac action.

(8) The drug in small quantities causes a rise of the arterial pressure by a direct action upon the heart; in large amounts it depresses the arterial pressure similarly through a cardiac influence.

(9) In large doses alcohol enhances coagulation of the blood; in toxic quantities it destroys the ozonizing power of this fluid, causing a separation of the hæmoglobin from the corpuscles.

(10) Alcohol in small doses has little or no effect on the respiratory function; in large amounts it produces a depression of both rate and depth of the respiration through a direct action on the centres in the medulla oblongata.

(11) The drug kills by failure of the respiration.

(12) On the elimination of carbon dioxide alcohol exercises a varying action, sometimes increasing, sometimes decreasing, such elimination.

(13) The action of alcohol on the amount of oxygen absorbed also varies, and may be said to be practically unknown.

(14) The drug lessens the excretion of tissue waste, both in health and disease.

(15) In small amounts alcohol increases the bodily temperature; in large doses it diminishes the same. The fall of bodily temperature is due mainly to an excess of heat dissipation caused by the drug.

(16) Alcohol, in sufficiently large amounts, has a decided antipyretic action.

(17) In moderate amounts alcohol aids the digestive processes.

(18) Alcohol diminishes the absorption of fats.

(19) The drug exercises a varying influence on the amount of urine secreted, but it probably increases the activity of the kidneys.

(20) In large doses, or when continuously used for a long time, alcohol produces cirrhotic changes of hepatic especially and paralysis of spinal origin. It also causes insanity, epilepsy, and other maladies.

(21) Alcohol is a conservator of tissue, a generator of vital force, and may therefore be considered as a food.— *Therapeutic Gazette.*

TRIBUTE TO DR. ALBERT B. MILES.

By C. D. Simmons, M. D., Dutch Town, La.

Praise to the man whom we deplore,
His life was so freely given
To lighten the hearts of the rich and poor,
To smooth the way to Heaven.

The strong, the weak, the great and small,
Have felt his magic touch,
And wonder filled the hearts of all
That man could do so much.

The halt, the lame, and all that came,
His wondrous skill to seek,
Attest his claim to well earned fame,
Though so modest, kind and meek.

His work and worth are widely known,
He was built upon a splendid plan,
And wherever the healing art has gone
It tells of the surgeon and the man.

In our own bright Southern land
He has taught us true and plain,
With the impress of a master hand
That our lives are not in vain.

That the healing art may be
Enriched by genius rare,
And that the mind and soul now free,
Have laid its treasures there.

Treasures that only science feels
The world can never know,
Where bowed and bent the student kneels
At the shrine of human woe.

Where time and strength are meted out
With the lavishness of youth,
Where mind and matter turn about
To find the living truth.

There will his precepts dwell
As long as time shall be,
And the grateful heart will tell
Of the surgeon's destiny.

In manhood's glowing hour
His great heart ceased its beating,
Trusting the Supreme, the ruling power,
While his hurried breath was fleeting.

As he sleeps in earth's cold gloom,
Mid friendship's tears and smiles,
Have carved upon his tomb
The deeds of Albert Miles.

MORTUARY REPORT OF NEW ORLEANS.

FOR OCTOBER, 1894.

CAUSE.	*White.....*	*Colored...*	*Male.....*	*Female....*	*Adults ....*	*Children.*	*Total .....*
Fever, Yellow							
" Malarial (unclassified)	5	3	5	3	6	2	8
" Intermittent							
" Remittent	3		2	1	3		3
" Congestive	2	1	2	1	2	1	3
" Typho	3	4	4	3	7		7
" Typhoid or Enteric	2	2	4		2	2	4
" Puerperal		1		1	1		1
Leprosy							
Small Pox							
Measles							
Diphtheria	18	2	11	9	1	19	20
Whooping Cough	1	2	1	2		3	3
Meningitis	7	5	10	2	3	9	12
Pneumonia	7	13	9	11	16	4	20
Bronchitis	8	5	6	7	4	9	13
Consumption	34	39	41	32	73		73
Cancer	15	3	4	14	18		18
Congestion of Brain	5	1	4	2	4	2	6
Bright's Disease (Nephritis)	8	7	5	10	15		15
Diarrhœa (Enteritis)	19	12	18	13	13	18	31
Cholera Infantum	6	5	8	3		11	11
Dysentery	5	3	6	2	8		8
Debility, General	4		1	3	4		4
" Senile	15	11	11	15	26		26
" Infantile	8	4	7	5		12	12
All other causes	163	115	167	111	183	95	278
TOTAL	338	238	326	250	389	187	576

Still-born Children—White, 33; colored, 28; total, 61.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 21.44; colored, 40.94; total, 26.81.

L. F. FINNEY, M. D.,
Chief Sanitary Inspector.

Stanford E. Chaillé

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

SUPPURATIVE HEPATITIS.*

BY A. A. FORSYTHE, M. D., MONROE LA.

Mr. President and Gentlemen of the Society:

In conforming with my duty, and in accordance with your selection, I will present for your consideration the subject of Suppurative Hepatitis.

My experience with the disease has not been entirely confined to the cases I will give you a history of to-night, but embraces observations made while I was prosecuting my medical studies at Tulane and during two years' service as an interne of the Charity Hospital of New Orleans.

Hepatic abscess—the occasional sequel to acute and chronic inflammation of the parenchyma of the liver, *en masse*, one lobe, or in circumscribed patches—is a disease common in the tropical regions, but said to be rarely encountered in the temperate climates; a disease children and females are less liable to than adults and males; a disease fraught with great danger to life; a disease frequently insidious in its development; a disease which has embarrassed the diagnostic acumen of many physicians; a disease that has a greater number of causes ascribed to it than any affection I can recall.

*Read before the Ouachita Parish Medical Society on August 13, 1894.

Having treated eight cases during the past two years I am not ready to accept as true the assertion that abscess of the liver is met with infrequently in temperate climates. In seven of my cases the diagnosis was conclusive; in the remaining case there was some doubt, which we were not permitted to clear up by an autopsy. Furthermore, I am inclined to the opinion that it is not an uncommon occurrence to bury people who die from an undiscovered, deep-seated abscess of the liver.

The opinion held by some recent text-book writers is that the greater number of cases of hepatic abscesses are caused by the invasion of micro-organisms into the alimentary canal, subsequently locating in the liver and constituting the seeds of the disease. Other causes may be enumerated as follows, viz.: Climate; excessive heat; miasmatic effluvia; exposure to sudden vicissitudes of weather; epidemic causes, which I doubt; intemperate drinking; abuse of mercury and other purgatives; dysentery; all ulceration of stomach, intestines, gall bladder and biliary ducts; sudden suppression of accustomed discharges; translation of gout or rheumatism; paroxysms of violent emotions; grief and anxiety; diseases of the stomach and intestines, unaccompanied with ulcerations; malarial fevers and malarial toxæmia; pyæmia; phlebitis, incident to internal ulcerations from tuberculosis, syphilis and typhoid fever; irritation of gall stones; lumbricoid worms, migrating into hepatic ducts; medullary variety of carcinoma; disintegrating syphilitic gummata of the liver; inherited tubercular susceptibility; traumatic and spontaneous causes.

To my mind it seems improbable that abscess of the liver originates from so many varied causes. I am inclined to the opinion that many observers have mistaken coincidence for cause. As for my individual opinion, relative to the etiology of the disease, I am partial to the idea that excessive indulgence in the use of alcoholic stimulants and dysentery, augmented by malarial enervation, are the most fruitful causes in our section of the country.

The symptoms and clinical history of the disease under consideration are usually obscure. Indeed, large abscesses of the liver may occur without any phenomena directing or inviting

special attention to the viscus. In such insidious cases there may be debility, irritability of the nervous system and irregular febrile movements. All such symptoms may be attributed to other causes. In fact, the first intimation we may have of its existence is at the time of rupture, or, if it remains intact, after death.

In another class of cases pain is an attracting symptom, and may be dull and boring when the abscess is deeply seated; acute and lancinating when the disease is superficial. The pain may be entirely confined to the region of the liver, or it may be reflected to the seat of the right scapula or shoulder, and, in rare instances, radiates down the arm. Stress has been laid upon rigidity of the right rectus muscle of the abdomen as a symptom in all cases. We generally have irregular pyrexia, which may be wanting; derangement of digestive organs: derangement of respiration and circulation. As the disease advances, the right hypochondrium may become enlarged, and when the abscess approaches the surface of the body we have tenderness and pain upon pressure or percussion; and when the purulent mass points at the surface you will find a painful spot with brawny skin over it. Fluctuation is a symptom that I have been unable to obtain. The pyrexia, at times, behaves like our quotidian, tertian, quartan and double types of malaria. These pseudo-intermittents should be distinguishable from the true by the inutility of quinine.

The mortality from this disease, when left to nature, is 80 per cent. Of this number 56 per cent. die with the abscess or abscesses intact. The death rate, after simple aspiration, and after the major operations, I have been unable to learn from the literature at my disposal. It is reasonable to suppose that the number of recoveries has increased since the advent of modern antisepsis.

In the majority of cases abscess is limited to one, sometimes two, and rarely more than three foci. Metastatic abscesses, usually and rapidly, succeed to acute dysentery, pyæmia and phlebitis. Multiple abscesses have a predilection for the convex surface of the liver, and, in point of danger, probably stand foremost on account of our inability to reach all of them. Deep-seated solitary abscesses likely come next in the scale of

danger, by reason of their silent development and the destruction of a great area of hepatic tissue before discovery. The pain in the superficial class attracts attention early, and proper treatment follows.

In point of greatest frequency the right lobe, posteriorly, is affected, and may be either superficial or deep. In some instances the whole of a lobe becomes a pultaceous, purulent mass, contained within Glisson's capsule. In some of these huge accumulations the pus works into the abdominal or thoracic walls and dissects its way to the thigh or to the axilla, and, in either event, may be confounded with spinal abscess.

In establishing a diagnosis of suppurative hepatitis, we may be confronted with the necessity of differentiating between it and the following diseases, viz.: Mural abscess, hydatid formations, which may even become purulent; distended gall bladder, chronic fibrinous pneumonia, pleuritic and cardiac effusions, syphilitic gummata, carcinoma of the medullary type.

When we have cause to fear the formation of a hepatic abscess, as a secondary affection to acute hepatitis, phlebotomy has been urged by some, but I mention the fact merely to condemn it as a spoliative treatment. Mercurials are supposed to have a beneficial effect, by preventing an effusion of lymph, or by causing its liquefaction and absorption after it has been thrown out and organized. Ipecac, in large doses, may do good, by relaxing the vascular system and equalizing circulation; by causing nausea, diaphoresis and large bilious stools. In India, since ipecac came in vogue in the treatment of dysentery and hepatitis, abscess of the liver occurs less frequently. A combination of tartar emetic and nitrate of potash has some strong supporters, from an antiphlogistic standpoint, in conjunction with revulsive applications.

I have but little confidence in the preventive treatment of threatened suppuration in hepatitis. "What is to be shall be," is about the light I view it in. It is of paramount importance that you do not mistake the stage of suppuration for the beginning of hepatitis.

Hepatic abscess, as I have said, has a mortality of 80 per cent.; of this number, 56 per cent. die with the abscess or

abscesses intact. All cases that rupture spontaneously may discharge below the diaphragm into the stomach or duodenum, and, in either event, most of the pus will be vomited promptly; into the colon, and pass off with the stools; into the gall bladder or biliary ducts; into the pelvis of the right kidney, and pass out through the urinary tract; into the hepatic vein, or vena cava; into the peritoneal cavity; into or through the abdominal wall directly or remotely. Through the diaphragm, the pus may empty into the right pleural cavity, and then it may make its way out through the bronchial tubes, or through the chest wall; into the right lung and tubes, and be expectorated; into the pericardial sac; through the chest wall directly or remotely.

When the abscess bursts into the pericardium, or into the peritoneum, death follows sooner or later; into the hepatic vein, or vena cava, death speedily ensues, and well it may, for we can not imagine of a more profound purulent infection of the blood than what obtains in such an event. It seems reasonable to my mind that the most favorable way for an abscess to discharge is into the stomach or intestines, for it is probable that, in such an event, the abscess ruptures at its most dependent portion, and the drainage is rapid and complete, and the cavity is not likely to become infected with atmospheric germs, but assimilation may be impaired thereby. In rupturing through the diaphragm it seems to me that drainage becomes a slow, up-hill effort. When the abscess makes its way into the bronchial tubes the force-pump power of the lung is brought into requisition to get rid of the overflow pus. Then we are likely to have the invasion of atmospheric micro-organisms to play the role of obstructionists. I will now proceed to give you the histories of the cases I have had to deal with during the past two years.

CASE I.—John D., aged 33 years, laborer, habits fairly good. I was informed upon my first visit, September 13, 1892, that about one year before he had been the subject of acute dysentery, and had been ailing ever since. Upon several occasions he had attempted to do manual labor, but in a short time had to desist. He had been treated by several physicians here and in New Orleans, deriving but little benefit. Had been

having irregular rigors, fevers and night sweats for three or four months; appetite capricious and digestion bad; had lost in flesh; had suffered from pains under the right scapula; no refreshing sleep for a month, due, principally, to a harassing cough, unaccompanied by much expectoration until about one week ago, when the sputa increased and changed from a light frothy to a tenacious, rust-colored mucus; pain upon deep inspiration, followed, invariably, by a much dreaded fit of coughing; temperature 101 deg. F.; pulse 96; respiration irregular and superficial.

I made a systematic physical examination of this patient. In the apices of the lungs crepitant râles existed in goodly numbers, but predominated in the right. The middle portion of right lung evolved nothing more than a harsh breathing; but over its base I found dullness emerging into flatness, on descent, and pain from percussion. In this locality I found harsh bronchial breathing, sibilant, sonorous, crepitant, subcrepitant and large mucous râles. The free border of the liver extended about two finger-breadths below the costal cartilages of the false ribs. Backward pressure upon the exposed edge of the liver caused an uneasy feeling, but with abdominal muscles relaxed, and by hooking the fingers of both hands under the free border of the liver and pulling the organ upward against the diaphragm, pain was elicited, accompanied with a paroxysm of coughing, followed by clammy perspiration. These last symptoms were reproduced by firm pressure over the false ribs.

The right lobe of the liver was enlarged, and pushed the right side of the diaphragm upward and compressed the base of the lung, as was evidenced by the liver flatness reaching the level of the fifth rib, anteriorly; posteriorly, the line between flatness and dullness was on a level with the seventh rib.

Here was a case in which the clinical history, subjective and objective symptoms, made the diagnosis of abscess of the liver, pointing toward the right lung, a rational conclusion. Ill health dating from an attack of acute dysentery; the results from medicinal treatment negative; rigors and sweats; loss of flesh and digestive power; anorexia; irregular fevers; spontaneous and provoked pains; cough and rust-colored expectoration;

enlargement of the liver from the convex surface compressing base of lung, followed by what I regarded as a provisional plastic pneumonitis.

I delivered my opinion to the patient and warned him to not become alarmed in the event the abscess broke into the lung, as he would probably expectorate the pus freely at first. I was called three days later and was shown in a wash-bowl about one pint of pus and blood intimately blended, which commenced to well up in the patient's mouth during a paroxysm of coughing; purulent expectoration was profuse for a few days, after which it gradually diminished in quantity. The temperature fell to normal in a few days, and a general amelioration of all his symptoms ensued. Put him on a chalybeate tonic and he improved rapidly in general health and greatly in appearance. At the end of eight weeks he asserted that his health and bodily weight exceeded his former standards. He thought he was once more a sound man, and resumed work at his trade in the railroad shops, working for two weeks, when he was seized with high fever and his former symptoms gradually supervened. Cough, with moderate expectoration, mucoid in character, was a distressing symptom, for which he was obliged to use opiates. His general health, in spite of my treatment, or consequent thereto, gradually waned for a month. He then went to New Orleans and put himself under two notorious charlatans and found himself worse after a month's treatment. He returned to Monroe and I was called again in January, 1893. I informed the patient that I had come to the conclusion he was the subject of a second accumulation of pus in the liver, and there was no telling where it might open, nor what the result would be. I proposed to him to use an aspirating syringe to locate the abscess and afterward operate. He did not approve of my proposed line of treatment. Later on, I was informed that upon the advice of two of our brother practitioners, he repaired to New Orleans, where he was operated upon. I afterward read in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL an article stating that he did nicely after the operation, until about the seventeenth or eighteenth day, when he died suddenly from asphyxia, caused by water being forced into the bronchial tubes while washing out the abscess cavity.

No autopsy was held in this case to determine whether this man had been the subject of two distinct abscesses or had suffered a relapse in the first instance. If you remember, gentlemen, upon my first examination I implied that I found what I deemed a deposition of tubercles in the apices of his lungs. The question I would like to have settled was the relapse caused by the development of a second abscess, or was it caused by tubercular bacilli attacking a residual abscess cavity in the first instance, or was it possible, at such a late date, for the advent of atmospheric germs through the lungs to set up a putrefactive action therein, followed by hepatic tissue necrosis. Let it appear to your minds, gentlemen, as it may, to my mind one hypothesis is as plausible as the others.

Case II.—Carter B., mulatto; aged 32 years; fond of drink and indulged in excessive venery; carpenter by occupation. During the month of November, 1892, patient visited my office and stated he had been in bad health for several months; that he had taken a great deal of medicine, but had not been benefited. He complained of feelings of weakness, malaise, dyspnœa, palpitation of the heart, nervous condition, vertigo upon exertion, appetite irregular and imperfect digestion; fevers at times. Objective signs were swaggering gait, prominent abdomen from an enlargement of the spleen to a marked degree, cachectic facies, pale, flabby tongue, considerably furred; paleness of the palpebral conjunctivæ, slight hacking cough, quick pulse, embarrassed respiration with a cool breath, temperature normal. I sized up the case as one of malarial toxæmia and prescribed accordingly. Patient passed from under observation for six months, when, on the 5th of May, 1893, I was requested to visit him at his home. Found him in bed, where he had been, off and on, for about two months. Stated that he had derived no benefit from the medicine I had prescribed six months before. Temperature, 102½; pulse, 108. Found no diminution in the size of the spleen, but noted, by standing at the foot of the bed and taking sight up the trunk, that the liver was enlarged and raised the right costal arch of the false ribs above its fellow. Firm pressure over the false ribs elicited pain, as did backward pressure on the free edge of the liver, and acute pain was produced by compressing the

liver against the diaphragm. He had been having irregular rigors, fevers and sweats for two months.

I informed this man that I thought he had an abscess of the liver that would require an operation. Prescribed several doses of quinine and antifebrin, and heard nothing more for fourteen days, when I was again requested to go and see the man. At this visit I found a rounded intumescence below the costal border. Plunged an aspirating needle into the prominence and drew off a syringeful of pus. Patient agreed to an operation, which was performed three days later, on the 22d of May. We drew off three pints of pus and inserted a large drainage tube into the abscess cavity. During the second twenty-four hours there was quite a free discharge of pure bile, staining the dressings a golden yellow hue. On the fourth day washed out the abscess cavity, and repeated the operation daily for a week, then every second day, until the twenty-first day, we dismissed the case. Patient has made a good recovery.

CASE III.—Edward M., colored; aged 60 years; plantation laborer; habit, getting tight every Saturday. On the 7th of May, 1893, patient presented himself, complaining of bad health of several months' duration; during that time he had experienced an increasing pain in the lower part of the right side of the chest, and, of late, the pains had increased in severity and affected his right shoulder. Stated he had la grippe and pneumonia during the previous winter, and had been unable to do much work since. Claimed he had a poor appetite, and was troubled with eructations of food and gas after meals, and that his bowels alternated between constipation and diarrhœa. There was some humidity about a slight cough he had.

My first impression was that I had before me a case of pneumonia that was terminating by lysis, or had resulted in chronic pneumonia or phthisis, or I would find a pleuritic effusion. These preconceived ideas were soon dissipated upon physical examination. I found no evidence of consolidation at the base of right lung, and but few râles. Noted, however, that the dimensions ofthe liver were augmented and impinging upon the base of the lung. Upon interrogating the patient more closely I decided that his pains emanated below the percussion resonance of the lung, in the liver, and that the pains

in the right shoulder were sympathetic reflex, as there was no local condition to account for them. Noted some slight pain upon pressure over the liver, but could not see that upward pressure, against the diaphragm, caused any more pain than backward pressure. There was no elevation of temperature.

I informed the man that I thought he had either a cancer of the liver or there was an abscess forming in that organ. He refused to allow me to use an aspirating needle. I prescribed for his dyspeptic symptoms. He promised to return for re-examination inside of three weeks. Two months to a day, 7th July, 1893, elapsed before he returned. He looked like a wreck, emaciated, and unable to walk without assistance. Said he preferred to die rather than put up with the pains in his right side he had experienced for two or three weeks. He had been having chills, fevers, and clammy sweats. The hepatic region was sensitive to the slightest pressure, and, below the costal arch of the right side, there was a bulging of the liver from pus, as was proven by means of the aspirating syringe. Patient readily consented to an operation, and three hours later we evacuated, through a trephine opening in the eighth rib, a little over one-half gallon of laudable pus, which you see, gentlemen, in a state of preservation in this bottle. By the end of the fifth week we dismissed the patient, and he has made a good recovery. During the period of convalescence he became the subject of an anthrax the size of a man's fist, situated in the right lumbar region. Same was treated by crucial incision and packed with pledgets of absorbent cotton and saturated with pure carbolic acid.

Case IV.—R. C. St. P., aged about 40 years. On August 10, 1893 visited the patient, but had prescribed for a diarrhœa a few days previous, which continued to grow worse. Found him in bed with slight fever; griping pains in the abdomen around the umbilicus, with sharp exacerbations at times; nausea and vomiting of mucus and bile; stools from one to two hours apart, and of a gelatinous appearance. I ventured the diagnosis of acute enteritis and prescribed anodyne and astringent remedies with revulsive applications to the tympanitic abdomen. Diarrhœa checked in two or three days, and, coincident therewith, my attention was specially attracted to

the liver, which I found inflamed and the seat of a hyperæsthetic condition. During the next few days hepatic pains developed, and finally became excruciating, requiring the free use of opiates. At the time the acute hepatitis was recognized the patient exhibited marked signs of debility, and it was five days later when we drew off from the anterior border of the liver a small quantity of sero-purulent fluid. At this time there had been delirium for forty-eight hours; rigors, fevers and sweats. Wanted to operate the next morning, but a brother of the patient's was due next evening and we waited to see what he would have to say about the proposed treatment. Upon his arrival he approved of operating, and expressed regrets that we had not operated the day before, as his brother's condition, to his mind, was precarious, and he feared the outcome. Patient at this time presented somewhat of a listless delirium, except when aroused thoroughly he talked rational, but would soon drop off into his former state and commenced picking at the bed-clothes.

As early as possible, on the 19th of August, we placed the patient upon the operating table, under great misgivings. We drew off about a teacupful of pus from the liver. Patient did not show any improvement after the operation, and died thirty-six hours afterward with all the evidences of sapræmia.

This man did not have a good constitution and presented, at best, a "measly," cachetic appearance. I had known him for about one year, and he was continually, during that time, afflicted with boils, sores on his hands from the slightest traumatic causes, and a general scaly condition of his skin. His mode of living was in a tent, where he kept an eating stand, and I think he lived principally upon "catfish" and "hot tomalies."

We were unable to get an autopsy to determine whether the patient had been the subject of a single, multiple, or a great number of metastatic abscesses, or a combination. The case was certainly one of acute enteritis, with a secondary acute hepatitis, terminating in suppuration.

CASE V.—Tissue B., colored; aged about 18 years. Saw her on the 6th, 7th and 11th August, 1893. This girl was so extremely dull and ignorant I could not get a history, any

more than that she had a contiuous fever and a "misery" in her head for several days, but had not been in good health since they finished "chopping out cotton." Her dates were reckoned according to the moon calender and past Sundays. In the absence of any appreciable organic disease I concluded the case was one of malarial remittent fever, and prescribed accordingly, giving her rations enough to last about two days. Before leaving the house the idea occurred to me that I had given her some local treatment for a venereal sore of the vulva, with a non-suppurating bubo, about two years before. Upon questioning the girl I found that my impression was correct. She had no recollection of any secondary symptoms of syphilis.

Thirteen days afterward I returned and was told that the fever hadn't "'bated," and that she was, and had been since my last visit, suffering with a "misery" in her right side and shoulder. Noted evidences of debility; conjunctivæ deeply jaundiced; and a slight fullness in the right hypochondrium. Upon closer examination found the outlines of the liver increased and that viscus quite sensitive to percussion and pressure. I returned next day and found pus in the liver of a yellow color. Two days later we operated and secured upward of one-half pint of pus from the anterior border of the liver. Thinking that there was more pus in the liver, we ran the needle in several directions to no effect; but, in two or three instances, we struck some very firm substance in the centre of the liver that we could not well understand. The solidity of these points was sufficient, after forcing the needle into their substance, to permit, through the grasp, forcible movements of the liver in any direction, through the medium of the needle.

The patient died on the table before the operation was completed. Autopsy revealed a second abscess near the surface of the liver, between the axillary lines, containing about one-half pint of pus. The firm portions of the liver we had transfixed with the needle were found of an irregular shape and constituted the deeper wall of either abscess cavity. I have not come to any conclusion as to the cause of these solid nodules. The question is: "Were they syphilitic gummata which had partially broken down into pus—if such a thing does occur—or were they the medullary type of carcinoma;

or were they organized fibrinous deposits?" Her age, as a rule, would be considered against the idea of cancer.

CASE VI.—John C., aged about 30 years. Last March 22, patient came to Monroe from a neighboring town, and sought my diagnosis of his case. He said several physicians had examined him, and there was a diversity of opinion among them as to his case. I realized at the time that, if his disease was one that required time for development, I certainly had an advantage in that respect over the physicians who had previously examined him.

He stated that he had led a fast life and had drunk a great deal of liquor. Said that while he was off at the World's Fair he was seized with pneumonia, and had not gotten straight since. Had been suffering a great deal with pains in his right side and under shoulder blade; had been having rigors, fevers and night sweats; had become somewhat addicted to the use of morphine to ease his pains.

His facies and the character of his breathing, caused me to think that I would find large cavities in his lungs.

He had 2½ degrees of fever; pulse 108, respiration 30; cough and expectoration; considerably emaciated; crepitant and subcrepitant râles throughout both lungs, but predominated in the apical parts; hepatic enlargement; brawny appearance of the skin in the epigastric region; liver sensitive to percussion and pressure, and particularly so at one point below the costal border of right side. After completing a thorough physical examination I was asked if I wanted to wait until next morning before giving my opinion. I said: "No; I have reached a conclusion." I was asked what it was, whereupon I told him I thought he had an abscess of the liver and a tubercular condition in his lungs. He seemed to be affected from what I had told him, and, after a few moments' reflection, he wanted to know what the treatment would be in his case. "Operation," was my reply. Later he wanted to know what doctor I would recommend that he should go to in New Orleans for treatment. I told him who would be my preference in such a case.

I intimated that we had performed such operations in Monroe, but he was bent on going to New Orleans, which he did next evening.

After I had left the house, I understand, he told his relatives, with whom he was stopping, that if he had a broken hair-spring that *had to be repaired* he was certain he would not go to *a blacksmith* with the job. Of course I have given him credit for his good judgment in the premises.

The case was operated upon about four months ago, and, I have been told, the abscess cavity is still discharging.

CASE VII.—Mrs. C., aged about 30 years. I was requested by a physician to visit the case. She gave a history of irregular fevers for about two or three months, with rigors and sweats after the first month. During this time she had a cough, which gradually increased, and had suffered with pains in the right hypochondrium. While in a fit of coughing she said she felt something give way and she expectorated a large quantity of bloody pus. After the first few days the expectoration grew less and less, and in about four months she recovered her health. It was two months after the bursting of the abscess when I saw her for the first time. Under the use of a chalybeate tonic for two months she was restored to health.

The purulent expectoration in this case either came from an abscess of the liver or an abscess of the lung. Finding no cavity in the lung, and there being no foundation in cause for an abscess of the lung, I naturally made a diagnosis of suppurative hepatitis.

CASE VIII.—John S., aged 50 years. I saw this case in West Monroe in a moribund condition, in consultation with Drs. Pace and Sandel. I have no notes, but the history of the case was substantially as follows, and, as Dr. Pace is here to-night, I think he will bear me out in same: Three months before patient had an attack of bilious remittent fever of two weeks' duration. He got up in a few days, but it was not long before a pain, dull and throbbing in character, developed in the hepatic region of the right side, which gradually grew worse and kept up to the time of death. These pains, at times, were paroxysmal, and when walking about on the streets he frequently made pressure with his hand over the liver, which he thought afforded him some ease. After awhile irregular fevers, rigors and sweats were prominent symptoms. Several days prior to his death he insisted that there was some-

thing very serious the matter in his side, and he thought that he was going to die. Dr. Pace suspected that he had an abscess of the liver, but was refused the privilege of using an aspirating needle. The night of his sudden death he had eaten supper at the table with his family. Some two or three hours afterward Dr. Pace was called and administered one-half grain of morphine hypodermatically to ease severe pains which the patient thought were cramps in the bowels. About three hours later Dr. Pace was called again. Patient remarked to the doctor as he walked in that "the jig was up." He was suffering excruciating pains in the liver, back and chest. It was but a few minutes, however, until he said he was feeling easier, but immediately passed into a profound comatose condition, dying in about five hours. When I saw the patient his eyes were fixed; no corneal reflex; pupils completely inactive; lips, ears and finger nails livid; respiration irregular and labored; auscultation showed slight vesicular breathing, replaced by a stridulous bronchial type; radial pulse fast, weak, irregular, compressible and, at times, almost imperceptible.

My hypothesis was that this man had a deep-seated abscess of the liver which had ruptured and discharged gradually into the hepatic vein or ascending vena cava through a pin-hole opening and the pus was carried to the right side of the heart, and pumped into the ramifications of the pulmonary arteries, causing, eventually, more or less obstruction to the circulation in the lungs, and giving rise to an overwhelming blood poisoning. In Waring's oft-quoted statistics of 300 fatal cases of abscess of the liver, rupture into the hepatic vein and vena cava occurred four times.

Our mode of procedure in the four cases we operated upon was virtually the same in all. Drs. Surghnor, Faulk and Hilton assisted in the operations, which were upon cases Nos. 2, 3, 4 and 5.

Some ten to fifteen hours prior to operating, except in case No. 3, we applied over the field of operation a large green soap poultice. While the chloroform was being administered—which had been preceded in each case by a stiff whiskey toddy, and a hypodermic of morphine and atropia—we removed the

poultice and washed the field thoroughly with green soap, followed by a solution of bichloride of mercury (1 to 1000) and then with alcohol. The incisions in cases Nos. 2, 4 and 5 were about two and one-half inches in length, and situated below the costal cartilages of false ribs on the right side. In case No. 3 the incision was made over and parallel to the eighth rib, across the anterior axillary line. In this case we trephined the rib over the anterior axillary line. In the four cases we found no adhesions, as was apparent by the to and fro gliding motion of the liver against the abdominal wall upon each act of respiration, in strong contrast to a liver fixed to the abdominal wall by adhesions. We provided against leakage of pus into the peritoneal cavity by packing small pieces of sponge between the liver and abdominal wall. Thus, with Potain's aspirator and vacuum bottle we drew off the pus. The next step, before removing the canula, was to incise the liver to the cavity, parallel to the canula, for the reception of a large drainage tube, then passed through this incision a pair of hæmostatic forceps, closed, withdrew the canula, opened the forceps to expand the incision sufficiently to admit of the passage of the tube to the bottom of the cavity.

We then removed the sponge packing and replaced it with 10 per cent. iodoform gauze, cut in half-inch strips, leaving the end of each strip externally. The space between the tube and gauze barrier was firmly packed with the iodoform gauze and continued until the wound was packed to a level with the external surface of the abdominal wall. Either end of the abdominal incision was drawn together with one suture, and then covered with a pad of borated lintine, a layer of absorbent bichloride cotton (1 to 2000), then secured with roller bandages.

Case No. 4 died in thirty-six hours after the operation, and case No. 5 died on the table. Daily, after the third day, in cases Nos. 2 and 3, we washed out the abscess cavity with iodine water (1 to 80), renewed the gauze packing and other dressings. Case No. 2 was dismissed at the end of the third week. He has continued in good health since, and has gained upward of sixty pounds over his former weight. This increase in weight, after recovery from abscess of the liver, has occurred

in every instance that has fallen under my observation where the subject was under middle age. Even in case No 1, in the short space of time before he relapsed, he had become heavier than formerly in health. Why such subjects take on increased flesh is something I can not explain.

Case No. 3 was dismissed during the fifth week, and his convalescence was deterred by the development of a large carbuncle. He has regained his health, and his weight does not exceed his former standard, but he is a man past sixty years of age. There was no necrosis following the trephining of the rib despite his age.

In conclusion, I will state that some recent surgeons do not believe in emptying a large abscess of the liver at the time of the operation, for fear of a rupture of the thin wall that may cover the pus. I think the idea embraces an imaginary danger. Why should we hesitate to evacuate an abscess cavity at the first sitting, when we know that a whole lobe of a liver may be reduced to a pultaceous purulent mass, merely encased by Glisson's capsule? The hepatic ligaments, I should think, would prevent such a disaster. I believe in completely evacuating the pus from the first, and letting reparative granulations set in at the earliest moment.

The admission of atmospheric air seems to be another "bugbear" in the eyes of some authorities. They fear the idea of germs entering the abscess cavity and setting up putrefactive action, and sometimes causing gangrene of the liver.

In the cases we operated upon we used iodine water to wash out the cavity daily after the third day, when we had reason to believe that adhesions had taken place. In our cases that recovered they did so in a much shorter period than all other cases I have observed.

I am an advocate of a complete operation at one sitting, regardless of adhesions. Iodoform gauze, properly packed around the drainage tube and between the liver and abdominal wall, supplies all that could be desired to prevent the leakage of pus into the peritoneal cavity until adhesions take place.

As a suggestion to you, gentlemen, I would say that when you operate and make your incisions below the ensiform or costal cartilages, make your puncture and incision in the liver

near the lower end of the abdominal incision, for, if the liver should be much enlarged and the accumulation of pus be great, the hepatic ligaments are put upon the stretch, and as soon as the pus is drawn off the liver recedes in an upward direction; whereas, if you enter the liver at a higher point, you may have trouble, after the organ recedes, in getting the drainage tube in and in adjusting the gauze properly to prevent a disastrous leakage.

Case IX.—Since reading the above article the following case presented itself at my office August 18, 1894: Landy T., colored; aged 49 years; devoid of constitutional taints and bad habits. His general health had been below par for eight or nine months, and during this time he had several paroxysms of chills and fevers; of late he had been the subject of night sweats, hacking cough, and had become too weak to do field work. Two physicians had failed to improve his health. In walking he was manifestly weak; respiration and pulse hurried; temperature normal; broad, pale, furred tongue with teeth marks. Found the dimensions of the liver increased, and tenderness elicited by forcing the organ against the diaphragm, and at one point, laterally, between the eighth and ninth ribs, where we obtained a sample of pus the color of tea with milk in it. Six days later we trepanned the eighth rib, over the anterior axillary line, and obtained three pints of pus, which we found about two inches from the surface of the liver. The technique of the operation was about the same as that in the preceding cases. When making a crucial incision in the liver for the insertion of a large drainage tube, the knife imparted the knowledge that we were cutting through a dense fibrous exudate. This fibrous wall complicated the after-treatment by firmly grasping the tube and occluding drainage, as was apparent before removing the dressings on the second day. We found that we could push a flexible hard rubber sound through the tube into the abscess cavity, but upon withdrawing the sound the tube became occluded again. By the fifth day strong febrile reaction manifested itself, and there was urgent need of free drainage and antiseptic irrigation. Thinking that adhesions had become sufficiently firm to warrant the use of a pair of uterine dilating forceps we withdrew

the tube, which required considerable force to free it from the grasp of the indurated liver tissue, and expanded the opening in the liver, being careful to maintain an outward traction on the forceps while dilating. This procedure enabled us to discover that the abscess cavity had become filled with a seropurulent fluid, and as this fluid drained off by the force of gravity, and toward the last by displacement with iodine water, we noted the escape of numerous shreds of organized lymph. We repeated the dilatation and irrigation daily for seven days. After this time drainage and irrigation were carried on through the tube. We discontinued flushing the remains of the abscess cavity after the twenty-first day. On the twenty-fourth day patient came three miles, by himself, in a buggy, to my office. He repeated his visit on the thirty-second day. At this time we drew the drainage tube out and cut off about two inches of same. He returned on the forty-second day, and, as there was no discharge through the tube, we removed it entirely, and dismissed the patient as cured. Instructed him to apply daily some burnt alum to an exuberant granulation tissue that was sprouting from the cicatrizing incision in the skin.

THE CHEMICAL ANALYSIS OF THE GASTRIC JUICE FOR DIAGNOSTIC PURPOSES.*

BY J. A. STORCK, M. D., M. PH., NEW ORLEANS.

Since 1871, when Leube, at Rostock, asserted the possibility of using the stomach tube for diagnostic purposes, an excellent means of examination of the gastric juice was opened up.

With our ever-increasing knowledge of medical and physiological chemistry, and the accuracy of our apparatus for volumetric analysis, much has been accomplished in the past ten years in this branch of medicine.

Our improvement in this direction has made possible the application of chemical analysis to the diagnosis of gastric diseases as accurate as the application of chemical urinalysis to kidney diseases.

The number of investigators in this new field has gradually increased.

*Read before the Orleans Parish Medical Society, November 10, 1894.

Leube, Ewald, Boas, Mathieu, Uffelmann, Frerech, Einhorn and others have accomplished for the diagnosis of gastric disorders what Beuce, Jones, Vogel, Ultzmann, Roberts, Tyson, Hoffmann and others have done for the diagnosis of kidney disorders.

The analysis of the gastric juice having for its object the diagnosis of stomach diseases is best conducted as follows:

1. A test meal consisting of toast or stale white bread, 40.0 water, 300 cc., is given say at 7:30 A. M., after fasting all night, and one hour after 8:30 A. M. The gastric contents are evacuated by means of Ewald's tube, the quantity of liquid withdrawn, its consistence odor and color are noted.

2. Filter through pure white filter paper; preserve the residue on the filter for microscopic examination.

3. Determine with litmus paper whether acid or not.

4. Take 10 cc. of the filtered gastric juice to test its absolute acidity, add 4 drops of alcoholic solution phenolphthalein and stir; now add drop by drop deci-normal sodium hydrat. solution contained in a burette graduated in 1-10 cc., until a rose coloration occurs which does not disappear on stirring the liquid; the number of cc. is read off.

Under normal conditions, one hour after a test meal 10 cc. of gastric juice require from 4 to 6.5 cc. of the soda solution for neutralization; values above or below this may be regarded as pathological.

For the sake of simplicity these values are very generally expressed in percentages of the deci-normal soda solution; for example, by .6 per cent. acidity is meant that 10 cc. of the gastric juice require 6 cc. of a deci-normal soda solution for neutralization.

Since each cc. of the deci-normal soda solution contains .0704 grm. of caustic soda, and will exactly neutralize .00364 grm. of absolute H Cl. The number of cc. so used multiplied by .00364 expresses the percentage of H Cl contained in 10 cc. If this be applied to the above we find 0.21 per cent. of absolute H Cl.

The range of free H Cl. in the gastric juice in normal digestion is estimated at 0.2 to 0.15 per cent.

5. The presence in the gastric juice of free H Cl is as-

certained by color reactions, Gunzberg's or Boa's reagents being used. Five to ten drops of gastric juice is taken, and a few drops of one of the reagents added to the gastric juice contained in a small porcelain capsule; evaporate by gently heating over flame of spirit lamp. In the presence of free H Cl a distinct cherry red color appears in films or streaks at the point of contact of the reagent with the acid solution. The above reaction is not developed by organic acids, and does not fail in the presence of albuminates or salts.

The employment of too great heat may result in the development of a brownish or yellowish color from the combustion of organic substances, but could not be confounded with the red color produced by free H Cl. This test is sensitive in a dilution of 1 to 20,000 of free H Cl.

6. The method of Leo for quantitative analysis of free H Cl is clinically practical; most other methods demand the facilities of a laboratory.

The method of Leo is as follows:

1. Remove the organic acids from the gastric filtrate by distillation and ether, and add sufficient water to the residue to restore the original volume.

2. Take 10 cc. of this, add 5 cc. of a concentrated solution of $Ca\ Cl_2$ and titrate with a deci-normal soda solution until a faint red color appears, using phenolphthalein as indicator.

3. Take a second convenient quantity, add several grammes of powdered calcium carbonate, and filter. Take 10 cc. of this filtrate, heat until the free carbonic acid is expelled, add 5 cc. of concentrated $Ca\ Cl_2$ solution, and titrate. The difference in the result of the two titrations will represent the free H Cl value in 10 cc. of the gastric juice.

7. Extract the fatty acids by agitation with stronger ether in small Florence flask; dissolve the residue in distilled water.

8. Butyric acid is recognized by its odor, and by throwing a few small pieces of calcium chloride in its aqueous solution; if butyric acid is present oily drops appear on the surface of the liquid.

A more accurate test is to add a little alcohol and a few drops of $H_2\ SO_4$ to its aqueous solution; on heating the characteristic odor of butyric ether is evolved.

9. For the detection of lactic acid use Uffelmann's carbolized reagent. To about 2 cc. of the reagent contained in a test tube add a small quantity of the gastric juice; if lactic acid acid be present the amethyst color of the reagent will turn lemon-yellow on shaking.

10. Acetic acid can be recognized by its odor and by the intense red color its aqueous solution, neutralized with soda solution, assumes when treated with a few drops of ferric chloride solution.

11. The digestive activity of the pepsin is ascertained by the following method: 5.0 of egg albumen is introduced into a small flask (50 cc.), with 15 cc. of the gastric juice.

Egg albumen is prepared as follows: A fresh egg being put in boiling water, the temperature will go down a few degrees. As soon as the water boils again, the time is noted and the egg kept in the boiling water for fifteen minutes from the time noted, and afterward cooled down by a stream of cold water; then they are deprived of the shell and the white is separated from the yolk, cleaned, dried with blotting paper and rubbed through a brass sieve of thirty meshes to the linear inch, and finally mixed on a slab by means of a spatula.

After introducing the egg albumen and gastric juice into the flask, shake vigorously to prevent particles of albumen from sticking to each other and forming large lumps. The flask is then placed in a water bath 35-40 deg. C. (100-104 F.). When the contents of the flask have reached that temperature, the time is noted and the digestion carried on in the water bath at the above temperature for six hours, or less time if a slight opalescent, almost clear solution with traces only of undissolved membrane is obtained sooner. The flask should be shaken every five minutes.

If a solution is not obtained within six hours, test sample again for less digestive strength.

On the other hand, if a clear solution is obtained in less than six honrs, test for a higher strength. Use the gastric juice from the stomach of a normal individual for control test.

12. For rennet the previously neutralized gastric juice is allowed to act on milk, which rapidly coagulates at 40 deg. C. (104 F.).

13. The products of digestion of the test-meal, consisting of syntonine, propeptone, peptone and glucose, are often looked for to determine whether the stomach is properly performing its work.

14. To detect syntonine, neutralize the liquid; if precipitate be produced it is syntonine, and is redissolved by an excess of acid or alkali.

15. As to propeptone, 2 or 3 cc. of a saturated solution sodium chloride is added to equal volume of gastric juice and one or two drops of acetic acid added; propeptone is precipitated if present. Or add a small quantity of potassium ferrocyanide, and acidulate with a few drops of acetic acid, when the propeptone will precipitate.

16. For peptone, filter the liquid freed from propeptone and syntonine. To 2 or 3 cc. of the liquid add 1 cc. of liquid potassæ and a few drops of a 1 per cent. solution of copper sulph. If pepton be present a purple red color biwret reaction is developed.

17. A portion of the fluid withdrawn from the stomach is heated with Fehling's solution; if glucose be present a precipitate of red suboxide of copper is seen.

18. The absorptive power is best estimated by Penzoldt's test. Two grains iodide potassium are administered by the mouth, preferably after a meal in gelatin capsule (first carefully wiped to guard against any of the salt clinging to its outer surface), and the moment of the appearance of iodine in the saliva noted. Under normal conditious iodine is detected after ten to fifteen minutes; if it appears only at the end of half to one hour the absorptive power of the stomach may be regarded as diminished. The test is applied as follows: Filter paper saturated with starch paste, dried, and the saliva ejected on it every five minutes. On the addition of strong $H N O_3$ a blueish color is developed in the presence of iodine.

These tests are of considerable value in diagnosing the following diseases: Cancer of the stomach, gastric ulcer, gastroxynsis, hyperacidity, hypersecretion, gastric catarrh and dilatation of the stomach.

Apparatus and Reagents Used in Making the Above Tests.

One burette, Mohr's pinch-cock attachment, graduated in $\frac{1}{10}$ cc.; 6 small porcelain capsules, 1 spirit lamp, 1 burette stand and holder, 6 or 8 test tubes and rack, 2 small porcelain crucibles, graduates, white filter paper, water bath, oven, dropping pipettes, Florence flask, conc. Ca Cl_2 solution calcium carbonate, sol. soda chloride, calcium chlor., decinormal solution soda hydrate, litmus paper, solution ferric chloride aq. 1-15; absolute alcohol, dil. alcohol, ether, solution copper sulph, 1 per cent.; liq. potassa nitric acid, potassii iodidi, potassii ferrocyanide, sulph. acid.

Gunsberg's Reagent.

Phloroglucin	2.0
Vanillin	1.0
Absolute alcohol	30.0

Boas' Reagent.

Resorcin resublimat	5.0
Sacchar. alb	3.0
Alcohol *dil*	100.0

Uffelmann's Reagent.

Sol. ferric chloride, 1-15	3 drops.
Sol. ac. carbolic, 4 per cent	10 cc.
Water	20 cc.

Alcoholic sol. phenolphthalein 1 gm. in 100 cc. dil. alcohol.

Biographical Sketch.

BIOGRAPHICAL SKETCH OF DR. STANFORD E. CHAILLÉ.

Stanford Emerson Chaillé, of New Orleans, La., was born July 9, 1830, in Natchez, Miss. As early as 1396 and for many years thereafter the Chaillé family gave to Poitiers, France, many mayors and other officials. Catholic descendants of the family still live near La Rochelle, the seaport nearest Poitiers. As early as 1650 one branch became Huguenots or Protestants, and, according to family tradition, when the "Irrevocable Edict of Nantes" was repealed and Catholic persecution reached its culmination, Pierre Chaillé a Huguenot, having witnessed the massacre of his family, suc-

ceeded, when a youth, in escaping to an English vessel at La Rochelle, and took refuge for years in England, where he was naturalized September 9, 1698. He married Miss Margaret Brown, said to have been a Huguenot and therefore probably named Marguerite le Brun. About 1700 he is believed to have settled in Boston, Mass. His son, Moses, who lived some years in Boston, emigrated to the eastern shore of Maryland in 1710, became wealthy, and died there in 1763, having married Miss Mary Allen, a sister of Judge Allen and also of the wife of Rev. Jno. Rosse, the first pastor of the Episcopal church, built in 1734, at Snowhill, Md. Col. Peter Chaillé, the only son of Moses and Mary Chaillé, was a distinguished patriot in the revolutionary war, a member of the Maryland convention of 1775, a subscriber to funds for carrying on the war, a delegate to sign and ratify the United States Constitution, a member for more than twenty years of the Maryland Legislature, etc. He married Miss Comfort Houston, whose father was a Scotch gentleman and her mother a Miss Quinton, and they left four sons and four daughters who bore descendants.

William Chaillé, a younger son of Col. Peter Chaillé, who was born in 1767 and died in 1800, married Anne Handy, who was born in 1775 and died in 1814, and who was the daughter of Col. Eben Handy, a patriot of the war for independence; he was a great-grandson of the Rev. Samuel Handy, who, landing in America in 1675, became the American progenitor of very numerous Handys now living in the United States. The only children of William and Anne (Handy) Chaillé were Peter Chaillé, who died young and unmarried, and William Hamilton Chaillé, who was born in Salisbury, Md., March 1, 1799, emigrated to Natchez, Miss., in 1819, and there died August 13, 1836, prosperous, loved and honored. October 23, 1828, he married, at Vienna, Md., Miss Mary Eunice Priscilla Stanford, born in Maryland, November 19, 1804, and died in Natchez, April 22, 1844. She was the daughter of Dr. Clement Stanford and his wife, Annie Dashiell, and a niece of Hon. Richard Stanford, a member of the United States Congress from North Carolina, 1797-1816. The Stanfords were of the English Cavaliers and the first Richard Stanford landed in Virginia in 1635.

Dr. Chaillé's direct descent is from the earliest settlers of the United States and noted patriots in 1776. Among these ancestral families are those of Stanford, Handy, Dashiell, Houston, Quinton, Adams and Polk. Three of Dr. Chaillé's four great-grandfathers and many more of his relatives were soldiers of 1776.

Dr. Stanford Emerson Chaillé is the only child of William Hamilton and Mary (Stanford) Chaillé. He married, February 23, 1857, Miss Laura E. Mountfort, daughter of Lt. Col. John Mountfort, U. S. A., son of Jos. Mountfort, one of the famous Boston "tea party" of 1773. The Mountforts are a Boston family descended from Edmund Mountfort, who settled in Boston in 1656. Dr. Chaillé's only child is Mary Laura Chaillé, born November 16, 1857, wife of Dr. David Jamison of New Orleans. They have two children, Stanford Chaillé Jamison, born in 1887, and David Jamison Chaillé, born in 1888.

Dr. Chaillé was educated under private tutors until his mother's death in 1844, she having appointed Hubbard Emerson of Mass., her husband's dearest friend and her son's godfather as her son's guardian. To him, who proved to be a faithful and beloved second father, the son was sent. He entered Phillips' Academy, South Andover, Mass., in 1844; and was there graduated in 1847. He was a student at Harvard College, 1847-51, received the degree of A. B. in 1851, and A. M. in 1854. He began the study of medicine in 1851 at the Medical Department of the University of Louisiana (now Tulane University), and was graduated in 1853. In 1860-61 Dr. Chaillé was a student in Paris in the laboratory of Claude Bernard, then the world's most eminent physiologist. He renewed his studies in Paris in 1866-67.

Dr. Chaillé was a private of the New Orleans Light Horse 1861-62; acting surgeon general of Louisiana, February 17 to May 1, 1862; surgeon and medical inspector of the Army of Tennessee, staff of Gen. Braxton Bragg, May 12, 1862, to July 24, 1863; surgeon in charge of Fair Ground No. 2 Hospital, Atlanta, Ga., 1863; surgeon in charge of Ocmulgee Hospital, Macon, Ga., January, 1864, to May, 1865, when he was captured and paroled. He returned to New Orleans in September, 1865.

Dr. Chaillé was resident student in the New Orleans Charity Hospital, 1852-53; resident physician United States Marine Hospital, 1853-54; resident physician to the Circus Street Infirmary, 1854-60; co-editor and proprietor of THE NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, 1857-68; demonstrator of anatomy in the Medical Department of the University of Louisiana, 1858-67; lecturer on obstetrics in the same, 1865-66; professor of physiology and pathological anatomy, same, since 1867; was chosen to deliver one of the ten addresses on medical jurisprudence before the International Medical Congress, Philadelphia, 1876; appointed by the United States Congress one of the twelve experts to investigate the great yellow fever epidemic of 1878, and was chosen secretary of the board, 1878-79; appointed by the National Board of Health one of the four members of the Havana Yellow Fever Commission, and was chosen and served as president thereof, 1879; appointed by the National Board of Health its "executive agent" at New Orleans, with the title of "Supervising Inspector of the National Board of Health," March, 1881, to October, 1882; commissioned by President Arthur one of the seven civilian members of the National Board of Health in January, 1885, and so continued until 1893, when the board was abolished by act of Congress; delivered popular lectures on physiology and hygiene to school teachers and the public, 1884-88; was chosen dean of the Medical Department, Tulane University of Louisiana, March 31, 1885, and has so continued to the present time; appointed by Tulane University professor of physiology and hygiene in the Collegiate Department, 1885-88; was chosen chairman of the section of hygiene of the International Medical Congress, Washington, 1887, but could not accept the high honor; attended Jefferson Davis, his most honored friend, in adversity as in prosperity, in his last illness, November and December, 1889; was appointed professor of physiology, hygiene and pathological anatomy, Medical Department, Tulane University of Louisiana, 1890; was chosen the Louisiana member of the committee on organization of the Pan-American Medical Congress, 1891-93.

Dr. Chaillé's contributions to medical literature were begun in 1853, and have been numerous since that time. The

most important are to be found, when not otherwise stated, in THE NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, and are as follows: Eight articles on the Vital Statistics of New Orleans, 1868, 1870-72-74, 1880-88; and in connection with *Voters*, 1874-76, published by the United States Congress; "Origin and Progress of Medical Jurisprudence," Transactions of the International Medical Congress, 1876-77; "Human Anatomy and Evolution," *New York Medical Record*, 1879; "Medical Colleges, Profession and Public," 1874; "State Medicine and Medical Organization," Transactions of the Louisiana State Medical Society, 1879; "State Medicine and State Medical Societies," Transactions of the American Medical Association, 1879; "Sanitation and Evolution," Transactions of the American Public Health Association, Vol. VI, 1881; "Abuse of Alcoholics," *ibid.*, Vol. XII, 1887; "Appendix to Conclusions, Board of Yellow Fever Experts," United States Congress, 1879; Preliminary Report of the Havana Yellow Fever Commission, Annual Report of the National Board of Health, Vol. I, 1879; Final Report of the Commission, *ibid.*, Vol. II, 1880, and in Vols. III and IV other reports on yellow fever; "Prevention of Yellow Fever," 1882; "Small-pox and Vaccination," 1883, published by the New Orleans Auxiliary Sanitary Association; "Importance of the Study of Hygiene in Schools," 1882; "School Books on Physiology and Hygiene," 1883; "Inundations and their Influence on Health," 1882-83; "Infants: Their Chronological Progress," 1887; numerous official reports and annual catalogues in behalf of the Medical Department, Tulane University of Louisiana, 1885-92.

Chiefly to Dr. Chaillé, as chairman of the Committee on State Medicine in the Louisiana State Medical Society, is due the clause in favor of State medicine in the Louisiana Constitution of 1879, and also several laws enacted by the State. He has been familiar with yellow fever epidemics since 1850, and studied the disease in New Orleans for many years when it prevailed annually.

Dr. Chaillé is an honorary member of the College of Physicians, Philadelphia; of the Medical and Chirurgical Faculty of Maryland; of the Academy of Medical Sciences, Havana,

Cuba, and of the Louisiana Pharmaceutical Association. He is a member of the American Public Health Association, American Medical Association, Louisiana State Medical Society, Orleans Parish Medical Society, Louisiana Educational Association, New Orleans Auxiliary Sanitary Association, Sons of the American Revolution, etc.

Of many compliments paid, none have been more valued by him than these: At the time Dr. Chaillé was a student at Harvard, there were three famous students' societies, the Hasty Pudding Club, social and dramatic; the Alpha Delta Phi, literary, and the Porcellian Club, social. Freshmen could not be elected to these clubs, and Sophomores were chosen by the Juniors and Seniors; and no compliment was so highly prized as election to these societies. Dr. Chaillé was the first member of his class elected in the first two clubs named, and the second elected (but declined) to the Porcellian Club.

Prof. S. D. Gross, M. D., was president of the International Medical Congress held in Philadelphia, 1876, and announced that he would rigidly limit every one of the ten addresses to sixty minutes. Dr. Chaillé's address on Medical Jurisprudence exceeded the allotted time, at the expiration of which he halted, and, turning to Professor Gross, said: "Mr. President, my hour has expired and I await your orders." The president exclaimed: "Go on, sir; go on. We don't stop a race horse when we get him on the track."

Proceedings of Societies.

MARYLAND CLINICAL SOCIETY.

Stated meeting held October 19.

Dr. Randolph Winslow presented two cases of gastrostomy for cicatricial stenosis of the pharynx and œsophagus. The first case had been shown before the society in the spring, and it was only exhibited again in order that the members might see the condition of the patient after the lapse of six months. The boy had not only been alive but had grown fatter and stronger. He was fed regularly every four hours through the fistula, his diet consisting of milk, eggs, whiskey and

cod liver oil. He was also allowed to swallow as much milk as he was able to, but that was not a large quantity. The fistula had been in every way a success; it had saved him from impending starvation, it did not leak and the surrounding tissues were entirely healthy.

The second case was of a similar nature to the first, a cicatricial contraction of the gullet from the ingestion of concentrated lye. The patient, a colored boy, 1 year and 9 months of age, was brought to the University Hospital on July 11, 1894. He had been healthy until six weeks before admission, when he swallowed some concentrated lye, the exact amount not having been ascertained. Until eight days before coming to the hospital he was able to drink a little milk, but since that time had not swallowed anything. Nutrient enemata were ordered for him and on July 13 Dr. Winslow performed gastrostomy by Frank's method.

As he had had no nourishment for ten days his stomach was opened at once and milk introduced. This was a mistake, as some of the milk got on the wound and infection followed, with the formation of a superficial abscess. His temperature, which had run up to 104 as the result of this abscess, fell at once on the removal of a few stitches and the evacuation of a little pus. The patient had done well, but the fistula did not retain the contents of the stomach as perfectly as in the first case, probably on account of his incessant fretting and crying, which caused prolapse of the mucous membrane of the stomach through the wound. These two boys have been saved from starvation by the performance of gastrostomy; but what is to become of them when they return to their homes? Their parents can not or will not pay proper attention to them, and they will likely be allowed to perish from neglect. Up to this time it has not been possible to dilate their strictures from above, and Dr. Winslow is contemplating reopening their stomachs and attempting dilatation from below.

Dr. Rohe—I had a case about three years ago. A child had an attack of scarlet fever, after which there was a gradual closing of the œsophagus until, finally, nothing would pass into the stomach. At the Hopkins Hospital an attempt was made to dilate the œsophagus, without success, and finally gastrostomy was advised. The child's mother objected and left the hospital. Two weeks later he was brought again to the Maryland Hospital. No fluid would pass, nor could any instrument be introduced. I tried electrolysis and feeding, and for over a year he was thus kept alive, but the contraction again closed, and finally he died. I found a very small opening at the lower end of the œsophagus, which might have been

dilated from below. Electrolysis undoubtedly did good in this case, for his physical condition, when first seen, was very poor, but during the year he had gained twenty-five pounds.

Since the meeting of the society, at which these cases were exhibited, Dr. Winslow has succeeded in passing a small bougie through the stricture in the second case, and making it protrude through the fistula, to which he tied a silk ligature and drew it upward into the mouth. He used this as a saw, after the manner of Abbe, and succeeded in dividing the stricture sufficiently for a No. 21 œsophageal bougie to pass.

Dr. Julius Friedenwald read a paper on the use of the Resorcin test for the detection of free hydrochloric acid in the gastric juice.

Dr. I. R. Trimble read a paper entitled "Two Cases of Hæmaturia Cured by Operation" (nephrectomy).

Stated meeting held Friday, November 2.

Dr. S. C. Chew read a paper on "The Prevailing Epidemic of Typhoid Fever."

"I desire to call attention to some points connected with the prevailing epidemic of the disease, to seek to elicit opinions upon these points from my professional brothers present, and to see how fully they are consonant with or in opposition to my own. The points to be referred to are: (1) The frequency and prevalence of the disease of late and at present, as compared with other recent years; (2) the gravity of the cases as generally observed, and on an average; (3) the probable or possible causes of the prevailing epidemic, so far as they can be traced.

First, as to the frequency. Judging from the number of cases I have met with in my own practice or in consultation with others during the past six months, I should be disposed to say that it is decidedly more prevalent than I have observed in this same space of time in any recent year. Again, the careful study of the health reports for the past three or four years brings one to the same conclusion.

Second, the gravity. As in previous years, I have found very different degrees of severity in my cases this time. Of thirty-three cases encountered in the past six months, and in which the diagnosis of typhoid fever was perfectly clear, only one terminated fatally, death being due to repeated hæmorrhage (intestinal). Two of the cases were so dangerously and critically ill that for several days the chances of death seemed greatly to preponderate over those for recovery. These two cases occurred in different parts of the city—a month intervening between their attacks. Of the remaining thirty cases, none at least during the time that I saw some of them—and

none at any time in my own cases—were critically ill, and I am strongly disposed to attribute the comparative mildness of a number of them to the early and assiduous use of the cold bath.

Third, the study of the causation of the present prevalence of typhoid fever, and the question whether there is any one cause that has been specially operative in producing it, presents great difficulties, as is always the case when the disease occurs in an extensive community. I do not of course refer to the question of its microbic origin, for that is no longer *sub judice;* but I mean that the inquiry as to the manner in which the poison gains access to the system of patients is beset with great difficulties. The best opinions seem to favor the view that the chief medium of infection consists of liquid ingests, chiefly water and sometimes milk—though with reference to the latter it may be sometimes doubted whether it is the milk itself or the water with which it has been diluted or in some way mixed. It is perhaps possible that the microbe of the disease may sometimes enter the system by inspired air, though that is thought very doubtful by some good authorities. And at any rate the chief channel of invasion is the alimentary canal. The difficulty of determining the source of infection is illustrated by some facts that I will present: In an institution for the care of orphan girls in this city an outbreak of typhoid fever occurred in September of this year, case following case in such rapid succession that in a short time twelve children out of a quota of thirty-two were attacked with the disease. Simultaneously with these cases in a different part of the city and in another institution where boys and girls were received, the disease broke out and twelve of the inmates were attacked with it. Was there any factor common to these two groups of cases which may explain both of them? It is hard to believe that the general water supply of the city should be the special cause, for if it acted with such intensity and concentration in these two places, similar aggregations of cases would most probably be met with elsewhere. Could the milk supply of the two institutions account for both sets of cases? In both the milk supply was received from what was apparently the same source, which we may call Dairy "A." I have been assured by my friend Dr. Green, who attended the cases in the first named institution, that no new cases occurred among the inmates after the process of boiling the milk and water was begun. This certainly gave ground for just suspicion, which was partly intensified when it was ascertained that the same dairy supplied the other institution. But this well grounded suspicion was very much weakened when it was

ascertained that the boys, being housed in one building of that institution and the girls in another—the same milk being supplied to both—the girls were attacked by the disease while the boys escaped. This looked very much as if some other cause were operative; hence the case against the milk, while not yet deserving a verdict of "Not Guilty," was at most entitled to the Scotch verdict of "Not Proven."

Dr. Osler—I have noticed in my hospital a much greater prevailence of disease this year than last. In last year eighty cases, this year sixty one cases since the 15th of May, a considerable increase over corresponding dates of last year. I do not think our cases have been exceptionally severe. Of twenty cases I have under observation now, only one is critically ill. Baltimore is in the position of a city that must be of necessity a typhoid city; that is always so of a city that has no sewerage system. A very proportional number of cases seen in the city come from outside districts. One of the most important points of danger I think is the milk supply, over which we seem to have no control. I do not think the death rate of typhoid fever will ever be at the minimum until the sewerage is changed and the milk supply brought under the proper control. Just as soon as this is done, supposing we have a good water supply, the death rate of Baltimore will be lowered.

Dr. McShane—Our water supply is not as bad as supposed; I heartily endorse what Dr. Osler has said, however. In the annex and outlying districts of the city the water is taken from wells, and in 90 per cent. of these wells the water is unfit for use.

The introduction of pipes to carry off the overflow from pits is simply a subterfuge. Nearly every pit in Baltimore is pervious and the soil is saturated with filth, and this may be one of the means of contaminating the water.

Dr. Rohe—Anybody who tries to find the source of all cases of typhoid fever in one thing, will make a mistake. The larger proportion of our cases in the city are probably brought home from summer resorts and outlying districts where well water is used. In another set of cases the water supply is that of the city; but even if you go to the source of supply and examine it you will not find the germ, the cause being somewhere between the beginning of the supply and where it enters the house. If you have a direct continuation from the pipe outdoors into the house, all is right; but if you draw water from an out-door hydrant, which is close to the pit, it is different, the soil infiltration polluting the water in the hydrant box, which is apt to be pervious.

Dr. O'Donovan—To my mind it is far more important to

look after the water supply of large cities. In Germany the disease has been driven away, and should be here. Knowing these things, what should be said of us for drawing our supply from an open sewer, for that is what Lake Roland is. The water which flows into it comes very largely from the region of Towson, whose streams are simply filthy. Should we allow to occur on the Gunpowder what we have seen occur in Lake Roland when we know that such contamination can be kept down. The sewerage along these streams is washed with every rain into the river. The cause appears to be a practically avoidable one, and the power to remove it should be not only given, but used intelligently.

BITING THE NAILS.

Dr. Berillon, as the result of an extensive inquiry, confirms his previously expressed opinion that onychophagia and similar habits are generally associated with degeneracy. The frequency of onychophagia varies greatly in different institutions. In some two or three out of every ten children are addicted to biting their nails. A careful examination invariably reveals signs of degeneracy. The children are usually less healthy in apperearance than others, presenting deformities of the skull and anomalies of the teeth and ears. In such subjects the teachers notice a marked antipathy to physical exercises and games requiring effort. They write poorly and show marked inferiority in respect to manual dexerity. They are slow to learn; they are incapable of continuous application; in fact they always exhibit an inferiority in some direction or other. The disciplinary measures usually resorted to to correct bad habits are powerless in this; in the majority of cases only hypnotic suggestion seems to be capable of effecting a cure. The habit of biting the nails sometimes persists until late in life. —*Med. Fortnightly.*

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Editorial Articles.

TESTING THE DIPHTHERIA-ANTITOXIN.

About the middle of last month Dr. E. M. Dupaquier, of this city, received from New York a consignment of anti-diphtheric serum produced in the Pasteur laboratory of that city under the careful supervision of Dr. Gibier. Not desiring to restrict the benefits of the serum to his own immediate clientèle, Dr. Dupaquier offered it to a medical commission, to be used at its discretion and to obtain careful reports of cases treated with it. While the reports received from other cities all spoke highly of the serum as a preventive and as a curative, still the opportunity to test the new agent in our midst was not to be neglected.

A timely bequest from Mr. V. Lehmann to the Eye, Ear, Nose and Throat served as a nucleus of a fund which has grown to a considerable size. This institution took the initiative in the formation of the commission, which organized on November 17, 1894. The commission is composed as follows: From the Eye, Ear, Nose and Throat Hospital, Drs. A. W. DeRoaldes, A. McShane, C. J. Landfried, Wm. Scheppegrell, F. E. Girard, J. B. Hart, J. A. Storck; from the consulting

staff of the same, Drs. C. J. Bickham, E. Souchon, John B. Elliott, R. Matas, F. W. Parham, T. S. Kennedy, Isadore Dyer; from the Orleans Parish Medical Society, Drs. E. M. Dupaquier and Charles Chassaignac; from Board of Health, Drs. S. R. Olliphant, F. Formento and P. E. Archinard (represented by Dr. O. L. Pothier); from Medical Department of Tulane University, Dr. S. E. Chaillé; from New Orleans Polyclinic, Dr. J. H. Bemiss; from Charity Hospital, Drs. J. D. Bloom and H. D. Bruns; from Touro Infirmary, Dr. F. Loeber; from Alumni Association, Dr. Jos. Holt.

The commission went into permanent organization, with Dr. DeRoaldes as president, Dr. Olliphant as vice president, and Dr. Chassaignac as secretary. No time was lost, for steps were immediately taken to outline a plan of action. The fifteen vials of precious fluid were confided to the care of Dr. O. L. Pothier, who was intrusted with the important labor of preserving the serum and injecting it in cases designated by the commission. The supply of serum was exhausted before the end of November. Eleven cases in all were treated with the first consignment of the Gibier serum, which is certainly a very reliable product. The commission is preparing a detailed report of the cases; enough, however, has been published from day to day to enable us to draw safe conclusions concerning the action of the serum. The interest of the people, who have subscribed generously to the funds for the purchase and production of the serum, has been very keen, and the daily press has kept a record of the cases under treatment.

Of the eleven cases treated with the first shipment of the Gibier serum, one died. Death in this case, however, was in no way to be attributed to the serum; the mother of the infant, while swabbing the throat of the little patient, detached a piece of false membrane, which was at once drawn into the trachea, causing suffocation before a surgeon could be summoned to perform tracheotomy. The patient had been under observation long enough to show that the serum was doing good work when the untoward accident occurred. In all the other cases treated, the action of the serum was unmistakable. The development and extension of false membranes were checked in a short time, and the condition of the patient improved in every respect.

No attempts at prevention were made. The supply of serum was so small that the commission wisely decided to use it for the purpose of settling one question in regard to its action —that is, its curative value. The result has been very gratifying. It is true that the injection of the serum did not prevent other remedies from being employed. On the contrary, the usual treatment, general and local, was kept up. Some skeptical persons will ascribe the good results to intelligent treatment; but we feel sure that the detailed report of the commission will show the serum acted most decidedly for good in aggravated cases that would certainly have succumbed but for the serum.

In one of the eleven cases observed, a child of sixteen months, nothing but the serum was used. After the injection a spray of salt water was used every two hours. In two days after the injection, the child was practically well.

When Koch's tuberculin was shown to be a disappointment as a therapeutic agent, the medical and lay world was filled with a distrust that has not yet been entirely dispelled. Indeed, when the diphtheria-antitoxin became widely discussed, there were not a few sneers about another prospective failure. It gives us joy to state that the doubts of skeptics have been resolved and the hopes of progressive men realized. The antitoxin has come to stay. It is an agent of great and undoubted therapeutic powers, and the physician who, in desperate cases, neglects to give his patient, when possible, the benefit of antitoxin, does not do full justice to those who implicitly trust a human life to his keeping.

Abstracts, Extracts and Annotations.

MEDICINE.

THE FIRST RECORDED DEATH IN HYPNOSIS.

The death of Ella Salamon, in Tuzer, Upper Hungary, at her home, on September 17, 1894, while in an hypnotic state, has attracted much attention abroad, owing to the fact that it is the first recorded instance of death of this kind. The *Journal of the American Medical Association* publishes

the following abridged statement from the pen of Dr. William von Vragassy, who was visiting at the home of Count László Forgách, an uncle of the unfortunate victim, and who was present during the the hypnotic experiment, and witnessed her death and the subsequent autopsy:

"Miss Salamon was hypnotized in the presence of her parents and several relatives and friends; the operator, Mr. Neukomm, with the permission of the family and a full understanding with Miss Salamon, wished to induce in her an hypnotic state to gain information concerning the illness of the operator's brother, about whose malady the attending physicians differed. As Miss Salamon passed into hypnosis she seemed to be fatigued. The operator explained that he would attempt a very interesting experiment. He stated that for some time his brother, in Werschetz, had been raising blood, and the physicians could not agree that it came from the lungs or the stomach. Calling upon Miss Salomon to exercise clairvoyance while hypnotized, she gave a wonderful description of the patient's lungs, with the topography, pathology, diagnosis and prognosis. The operator said to her: 'We are now in Werschetz; do you see my brother?' 'I do not see him,' she replied. He then explained to her the location of the house in which his brother lived, and said, 'My brother is in the third room.' 'Yes, yes!' said the subject, in tones of conviction, 'We are there.' 'How is my brother?' he questioned. She replied, 'He is very ill.' In answer to more questions, the subject then went on to explain the details of the patient's malady. She spoke of the lungs of the distant patient as though they were before her on a plate. She used technical language with the greatest exactness, though she had never had medical training. After this the subject's face was very pale and she seemed exhausted. The operator asked her a final question: 'What do you think of my brother's disease?' With difficulty she answered, 'Be prepared for the worst.' At that instant she fell from her chair with a hoarse cry; her tongue protruded from her mouth, and she became collapsed. Her head was lowered, clothing loosend, artificial respiration performed after Sylvester's method, and ether injections given; later she was wrapped in blankets, but she died almost in a few seconds, in spite of all.

"The autopsy was conducted by an assistant in the Pathologic Institute, in Buda-Pesth, in the presence of Dr. Jozás and myself. The brain exhibited a high degree of anæmia and consecutive malnutrition, with indications of œdema; otherwise there was no abnormality. I conside- the causes of death acute anæmia of the brain, incident to the hypnotic state, with syncope and heart failure.

"Professor R. von Krafft-Ebing writes: 'According to reports, the case is so unheard of that there must have been concurrence of quite extraordinary circumstances. In medical experience it is the first case of death in hypnosis. Inasmuch as there are thousands of hypnotic experiments performed daily by the laity without injury to health, one must regard this exception as inevitable.

"'There is doubt that Ella Salamon died in hypnosis, but that she died by hypnosis is questionable. In the absence of a history of her life and a detailed description of her mental and physical condition during the fatal hypnosis, the manner of death can not be determined with certainty. .

"'It appears that Miss Salamon was about twenty-three years old, very nervous, and that she had often been hypnotized. On this occasion she seemed weary. The hypnotizer, in accordance with an unscientific belief of the laity, induced in her an alleged capability of clairvoyance, which, for a person so intelligent as Miss Salamon, was a new and very trying experiment, calculated to cause her great emotional excitement. Miss Salamon then exerted herself, according to report, to be agreeable and useful in the suggested capacity. While in the hallucinatory state she believed that she saw a diseased lung, and she gave a long description of the pathologic condition, in an excited and agitated manner. The final question of the opeaator had an intense emotional effect on her and caused her collapse.

"'The brief report of the autopsy leaves no doubt that she died of cerebral anæmia. It can be certainly stated that she did not die of suffocation (there was no spasm of the tongue); nor from cerebral hæmorrhage; and not from imparted or auto-suggestion—causes which might prove fatal under certain circumstances. All the symptoms given point to the brain as the organ concerned in inducing death, but it is uncertain whether through serous apoplexy or so-called nervous apoplexy.

"'The question of the cause of death in this case probably permits this answer: The unskilful use of hypnotism by a layman and the unusually violent cerebral excitement stand as the causes of death; but it must also be considered that the victim was probably a morbidly constituted person, with a personality which reacted abnormally to stimulation, and whose death might have been hastened when awake by a violent psychic force.

"'This case teaches that the laity should not practise hypnotism; that one must not play with hypnosis. In Austria there is an enactment of October 26, 1845, which permits only authorized physicians the use of magnetism (hypnotism), and makes its use by others punishable.'"—*Boston Med. Journal.*

THE CAUSE OF MIGRAINE.

There is probably no functional disorder which has given physicians more annoyance and less satisfaction in its treatment by the application of therapeutic agents than migraine. Antipyrin, antifebrin, phenacitin, acetanilid, and other recently discovered members of the aromatic series of coal-tar products have afforded very little palliation in this class of cases; for every physician who has had much experience in the treatment of migraine knows, to his sorrow, that the apparently beneficial effects of these drugs are very transient indeed. Most of them are capable of affording relief only for two or three times, and all ultimately fail to palliate suffering except by the use of doses so large as to be absolutely dangerous through their depressing effects upon the heart.

The immediate cause of pain in migraine is a question which has been the subject of much discussion. Du Bois-Raymond, who was himself a serious sufferer from migraine, regarded it as due to spasms of the muscular coats of the vessels, the result of the disturbance of the sympathetic. He located the disease in the cervical sympathetic; and evidence of the correctness of his theory is to be found in the cord-like feeling of the temporal arteries during an attack of this disease. But Guttman has recently reported cases in which the vessels of the affected parts are relaxed, passive congestion being present.

It is thus apparent that the pain may result from both causes. In the first class of cases it is doubtless due to pressure of the contracting muscles of the vessel walls upon the nerves ramifying among their fibres; while in the second class of cases it results from the pressure of the distended vessels upon nerves lying outside of them. The important point for consideration is, what is the ultimate cause of migraine? The transient and irregular appearance of the disease affords evidence that it is not due to any organic change either in the sympathetic or any other portion of the nervous system, but must be the result of some temporary cause which is irregular in its operation.

The researches of Glenard during the last twelve years have thrown much light upon this most interesting subject. Glenard, Trastour, Dujardin-Beaumetz and other eminent French investigators have repeatedly pointed out the fact that prolapse of the stomach, intestines, liver, kidneys and other abdominal viscera is a most active and frequent cause of vasomotor and sympathetic disturbances of the most varied character. Trastour has called attention to the fact that migraine is

a prominent feature of cases of enteroptosis. Within the last four or five years the writer has made careful note of the physical condition of the abdominal viscera in cases of migraine, and has been able to verify the observations of Glenard and Trastour in almost every case.

Dilatation of the stomach, prolapse of the stomach, in most cases also prolapse of the bowels, and not infrequently prolapse of the right kidney have been found; and the existence of an extremely hyperæsthetic condition of the lumbar ganglia of the abdominal sympathetic, associated with the static disturbances refered to, have seemed to be amply sufficient to account for the attacks of migraine. In a considerable proportion of cases, when the patient has spoken of recent suffering from migraine upon one side of the head, we have been able, without questioning the patient, to determine the side upon which the attack occurred, by a simple examination of the abdominal sympathetic. If the left lumbar ganglion was found to be most sensitive, the patient almost invariably testified to having had a recent attack of migraine upon the left side of the head. When both ganglia have been found very sensitive, and equally so, patients subject to migraine described the disease as either beginning upon one side and rapidly extending to the other, or occurring simultaneously upon both sides of the head. We feel confident that this disease is not confined to the cervical sympathetic, as suggested by Du Bois-Raymond, but that the primary seat of the malady is the abdominal sympathetic; hence remedies, to be of permanent utility, must be addressed to the abnormal hyperæsthesia of the abdominal sympathetic which will be found to exist in every case of this sort.

The question next arises, what is the cause of this extraordinary hyperæsthesia of the abdominal sympathetic? One cause has already been referred to—viz., prolapse of the abdominal viscera, resulting in a mechanical strain upon the abdominal sympathetic through stretching of the nerve branches distributed to the viscera, thus dragging upon and irritating the nerve centres in which they originate. This cause might be considered amply sufficient; but that something more is necessary is evidenced by the fact that although the enteroptosis and the strain occasioned by gravity is continuous, the patient suffers only occasionally from severe attacks of migraine, sometimes only at intervals of a month or two, at other times at intervals of one or two weeks or a few days, although we have occasionally encountered cases where it was of daily occurrence.

The hyperæsthesia of the abdominal sympathetic is, then, only a predisposing cause of migraine; an exciting cause must be superadded. This, in the opinion of the writer, is most frequently toxæmia, resulting from the retention of the stomach contents, and decomposition resulting in the production of ptomaines or other toxines which, when absorbed into the blood, irritate to an excessive degree the already over-excited sympathetic, and thereby set up a morbid reflex action, which results in an attack of migraine, or nervous headache.

The patient most frequently attributes the attack to overwork. The clergyman complains of having nervous headache on Monday morning after his Sunday sermon. Ladies frequently complain of an attack of headache following an unusually severe round of social duties. Other similar causes are assigned. A careful study of these cases, however, shows that, associated with the overwork, there will always be found symptoms of indigestion; and if not apparent to the patient, the condition of the stomach readily becomes apparent by the administration of a test breakfast, and a careful analysis of the stomach fluid by the quantitative method. We have never failed to find in these cases either a high degree of acid fermentation or an excessive quantity of neutral chloro-organic compounds. In both conditions the stomach contents contain a vast quantity of toxic substances which, when absorbed into the blood, induce a veritable toxæmia. Intellectual activity is an exciting cause of the disease only through the fact that, by a morbid reflex action downward, it increases the hyperæsthetic condition of the abdominal sympathetic, and at the same time retards the digestion; and so favors both the production of toxines, which are the direct cause of the disease, and the susceptibility of the sympathetic to the action of the poisonous substances.

Viewed from this standpoint, migraine is no longer a complex or mysterious malady, but simply a state of systemic poisoning, the origin of which is decomposition of food products in a dilated or prolapsed stomach which, through motor insufficiency, is unable to unload itself of its contents with sufficient promptness to prevent septic and putrefying processes. Hence, the remedy is to be sought, not in the discovery of some drug which will temporarily paralyze the nervous sensibility, reduce blood pressure or raise it, as may be required in the individual case, but by the removal of the real cause of the disease. The writer believes that every case of migraine is capable of being radically cured. He has had the good fortune to restore several scores of patients suffering from this malady, by the following simple means:

1. Antiseptic dietary arranged very nearly in accordance with the well-known formula which Dujardin-Beaumetz has adopted.

2. The patient's stomach is washed out regularly and with such frequency as the severity of the case may require; usually the administration of lavage two or three times a week is amply sufficient, but in cases in which the attacks occur daily the lavage must be practised every day, and in some cases, for a short period, the stomach must be emptied and thoroughly washed twice a day. We find the best time for cleansing the stomach to be at night, five or six hours after the patient's last meal. This gives the stomach rest during the night, and relieves the kidneys of the labor of removing a vast quantity of toxic substances which, being absorbed in the blood, would seek an outlet through the kidneys, if they were allowed to remain in the stomach.

In addition to the above, tonic measures are employed by which the patient's general health is improved; galvanism, the sinusoidal current, fomentations and the moist abdominal bandage at night are employed as means for relieving the hyperæsthesia of the abdominal sympathetic. When considerable enteroptosis exists, a proper abdominal supporter is worn until the patient has, by gymnastics, massage and manual Swedish movements, acquired sufficient strength in the abdominal muscles to be independent of artificial support. The results of this method of treatment have been most gratifying, as the following case will illustrate:

A lady thirty-five years of age, who had suffered for ten or fifteen years from frequent attacks of migraine, came under the writer's care about a year and a half ago in a condition of extreme weakness and exhaustion, the result of daily attacks of migraine of the most violent character, these having gradually increased in frequency, until, from occurring monthly, they came to be almost constant. The patient was, in fact, at no time entirely free from pain. The test breakfast gave the following result:

Total acidity	(M M of HCl)	.216
Total chlorine	" "	.312
Free HCl	" "	.048
Combined chlorine	" "	.168
Coefficient (normal .86)	" "	1.000
Acidity due to normal elements (free HCl. and combined chlorine		.192

From the above figures it was evident that the patient was suffering from acid fermentation. This, in fact, was the only pathological condition present. Physical examination showed dilatation of the stomach, which was doubtless the cause of the acid fermentation, from the food being too long retained in the stomach.

Lavage was ordered daily; an antiseptic diet was prescribed, together with lavage and other measures in accordance with the plan we have outlined; and the result was that the patient's attacks ceased almost immediately. Only one or two slight ones occurred after the beginning of the treatment, and these were quickly checked by the administration of lavage. The patient made an excellent recovery, although it has been necessary for her to continue the use of the stomach tube at intervals, as the result of digressions in diet, as she has marked dilatation of the stomach and extreme enteroptosis.

The second examination of the stomach fluid, made seventeen days after the first, gave the following results:

Total acidity	.260
Total chlorine	.372
Free HCl	.012
Combined chlorine	.292
Coefficient	.840
Acidity due to the normal elements	.263

This analysis shows a very close approach to the normal condition. The normal coefficient being .86, it is evident that the acid fermentation has been suppressed, and the chemical test showed lactic acid to be absent.

The free HCl. is diminished, but this is more than compensated for in the increased amount of combined chlorine. The figures show a slight degree of hyperpepsia, but this is due to the increase in combined chlorine rather than to an excessive amount of free HCl.; and as the product is normal in character, as shown by the practically normal coefficient, the condition could scarcely be considered as pathological, but rather as an exaggerated normal state—what might be termed a physiological hyperpepsia, the result of which was a rapid gain of blood and tissue change, which improved the patient greatly within a very short time.

Some physicians may be glad of the suggestion that most attacks of migraine may be cut short almost immediately by the administration of a thorough stomach washing. If the lavage is applied as soon as the first symptoms make their appearance, the attack may be aborted with almost absolute certainty. If, however, it has had a start of several hours, the most that can be expected is a mitigation of the symptoms and a very considerable abbreviation of the duration of the headache. We have frequently noted the curious fact that patients suffering from migraine are greatly relieved by lavage, even when the stomach seems to be entirely empty, or to contain nothing but a quantity of mucus with a sour or rancid odor.

In some unusually rebellious cases we have found the use of the following simple antiseptic remedy of value: Three

parts of charcoal (preferably wheat charcoal), one of sulphur, and one-half part of salicylate of bismuth, taken in drachm doses. The recently introduced sub-gallate of bismuth, in five to ten grain doses, taken either just before or just after eating, has also proven a very efficient remedy.—*Modern Medicine.*

PTOMAINES.

In studying the subject of ptomaines it is well to understand their origin.

A ptomaine is a chemical alkaloidal compound, basic in character, which is formed by the action of certain bacteria or micro-organisms upon organic matter during the process of fermentation. These germs are vegetable microscopic organisms, and have been duly classified; they belong to the class "algea."

Therefore being vegetable in character and the changes which they undergo during fermentation being chemical, the product—the ptomaine, or the proteid, or whatever it may be—must be permanent and uniform in character under like conditions.

These micro-organisms are divided into three general classes—the round, the long and the spiral or spirelum.

These may be again divided into the toxogenic and non-toxogenic varieties, and by far the largest proportion of known micro-organisms are non-toxogenic, hence their resulting ptomaines are non-toxic, while the ptomaines of toxogenic germs are toxic. The character of the ptomaine is influenced or determined not only by the character of the micro-organism itself, but also by the character of the media in which the fermentation takes place. A toxic germ in one media may produce a non-toxic product, or only slightly so; while in another media the ptomaine will be of the most virulent toxic character. Therefore it naturally follows that these micro-organisms must have a suitable media in which to grow and multiply and develop their ptomaines or they will remain harmless in the locality where they exist. Most germs multiply very rapidly in suitable media, or they may lie dormant a long time under unfavorable conditions.

Take, for example, the bacilli of tuberculosis in dried sputa, and it will remain viable a long time; it may be pulverized and ground up and float in the air until it comes in contact with a suitable media, when it will grow and multiply and develop its ptomaines and do its deadly work.

The growth and multiplication of germs is by one of three ways: first by fissior or direct division; second by spores or outgrowths; third by karyokinesis. The latter is the most common form of multiplication, and they multiply very rapidly under favorable conditions, some forms much more so than others.

There are three things necessary to the production of ptomaines, viz.: warmth, moisture and suitable media, and if either one of them is absent no ptomaines will be developed and the germs remain harmless, for no matter in what numbers they may exist, they are harmless unless their toxic ptomaines are developed.

Ptomaines are transition products of decomposition, and their stage of transition modifies their character very materially as well as their pathological action, and in studying this subject we must not confound them with leucomaines, which are also basic chemical compounds, but formed in living tissues, as the products of fermentative changes, or of retrograde metamorphosis. They are the alkaloidal products of physiological change, and may or may not be toxic in character.

Now let us go one step further in the study of these ptomaines and see how they produce their toxic or pathological effect. Being alkaloidal in character they are more or less soluble in the fluids of the body, and when once in solution they are readily taken into the circulation and carried to the nerve centres where they produce their primary effect, or by direct action upon the tissues in which they come in contact they produce their toxic effect. A good example to study because it is frequently observed, and because its symptoms are so characteristic and uniform, is the action of the alkaloids of the bacilli of tetanus; a traumatism is received, the germs of tetanus are introduced, the warmth, moisture and suitable media—devitalized tissue—is present, and in due time—from seven to nine days—tetanic symptoms begin. The wound is no larger, possibly it has healed externally, but beneath this external wound the ptomaines are forming; and first by rigor followed by fever and then spasms you know that the alkaloid has been carried to the nerve centres and is producing its toxic effect, just as sure as the alkaloid of nux vomica produces its similar effect when taken into the system, either hypodermatically or via the stomach; and they are both vegetable alkaloids and their action is very similar; but to show that the poison has been absorbed and taken into the system, you may cleanse the wound thoroughly, you may even excise all the surrounding tissue, or even amputate s limb, but you do not arrest the spasms, because it (the poison) has gone beyond the point of infection. What do

you do? You control the effects of the toxic ptomaine until it shall be eliminated from the system, if possible, by the various emunctories. In other words you aid nature in eliminating the poison and support your patient, giving him the highest possible power of resistance.

So you take the bacilli of tuberculosis. You do not successfully attempt to destroy the bacilli, but you place your patient in the best possible condition to resist the growth and development of the germs and their ptomaines.

There are other very important elements to be considered in this connection: the leucocytes, in their capacity of phagocytes, and the nucleins of the blood, etc., all of which play an important role in studying the pathological effect of micro-organisms and their ptomaines.

I consider the so-called period of incubation of many of our zymotic diseases as only the period that is necessary to the development of the ptomaines after an infection.—*Kansas Medical Journal.*

BEDBUGS AS CONVEYORS OF TUBERCULOUS INFECTION.

French sanitarians are just now considerably agitated over the question of bedbugs. Dr. Felix Brémond argued before the Commission of Hygiene that the bedbug is a nuisance and a cause of disease, and so thoroughly convinced the commission of the correctness of his ideas that the extermination of the bedbug in infested lodging houses was ordered forthwith. But the lodging house keepers had become so much attached to the society of this cheerful pet that they entered a vigorous protest to the demands of the commission, and contested the decision in the courts, and with the result that the Municipal Council and the State Council reversed the decision of the Commission of Hygiene, and thus the bugs were delivered from the imminent peril which threatened them, and the tenants of cheap lodging houses in Paris still furnish food for these hungry phlebotomists.

Drs. Brémond and DeWevere have made a careful study of the relation of bedbugs to health, and have shown that this loathsome insect is a menace to health, not only by reason of the loss of sleep and of blood directly attributable to its ravages, but also through its becoming the means of transmitting the microbes of tuberculosis. One case is cited in which such a communication of disease took place: A young man died of tuberculosis. Shortly afterward, his brother, who occupied his bed, became infected with general tuberculosis. The physician in attendance noticed that he bore marks of many

attacks by bedbugs, and, being led to suspect this source of infection, examined the bugs, and found that a large portion of them carried tubercular bacilli in their alimentary canals. Rabbits bitten by the same bugs contracted the disease and quickly died of it. An infusion made from the bugs by crushing them was also found to contain the microbes, and when injected into small animals, quickly gave rise to the disease.

This is a question which ought to receive the attention of the sanitary authorities in our great cities. It has long been known that flies may communicate cholera, charbon and other infections, as erysipelas and possibly yellow fever. It has also long been known that earthworms are a means of dispensing charbon infections. Mosquitoes convey certain animal parasites, as falaria; possibly also the parasites of malaria. It is possible that many insects may be engaged in this mischievous activity. This is a matter to which sanitarians may well give consideration.—*Medical News.*

HINTS ON TREATMENT OF DIABETES.

Dr. Solomon Solis Cohen, writing on the different forms of diabetes mellitus, gives this suggestive advice with respect to treatment: Examine the urine frequently, and administer alkalies freely if this excretion be too acid, or if the sugar have diminished suddenly. As constipation is a precursor of diabetes coma, it must be prevented by giving phosphate of sodium in doses according to the effect produced. This may be combined with 1 64 of a grain of arseniate of sodium, a useful expedient. Strontium bromide in doses of twenty grains may be given in cases of diabetes in the gouty and obese. It is a stomach tonic, promotes digestion, relieves flatulence, increases general nutrition, and keeps the blood moderately alkaline. Strontium lactate can be alternated with the strontium bromide. From time to time arseniate of strychnine, 1-128 of a grain six times daily, is given as a general nervous tonic and stimulant. Dr. Solomon Solis Cohen believes in codeine; and, following Sir Benjamin W, Richardson, he gives it in solution with hydrogen dioxide. Thus:

℞ Codeinae phosphatus ..... gr. ij.
Spiritus rectificati ..... drachms iv.
Acidi phosphorici diluti ..... drachms ij.
Glycerini ..... drachms vj.
Solutionis hydrogen-dioxidi (10 vol.) ad ounce of Misce.

Two teaspoonfuls to be taken in three ounces of water. With this is enjoined an alkaline course, arsenic being sometimes added. Hydrogen dioxide, ozonic ether and oxygen

have been advocated on the presumption that they bring about increased oxidation of the sugar or secondary products circulation in the blood. Dietetic treatment of course precedes medication. Don't try to cut off bread and potatoes together. Gluten bread is not reliable and not palatable. Try to make up by fats for the exclusion of the starches. Keep your patients warm and protected; cold is their greatest enemy Examine the urine for organic acids, and keep the blood alkaline. In the matter of diet be strict enough to diminish polyuria and glycosuria, and if possible secure their disappearance, provided you can at the same time keep the patient comfortable, but under any circumstances make the patient com fortable.—*Therapeutic Gazette, p. 299, No. 5, 1893.*

THE CAUSE OF OLD AGE.

Physiologists have long been familiar with the fact that a characteristic change in the tissues takes place in advanced age, which, provided an individual dies a natural rather than a violent death, is the real cause of the termination of life. This change in the tissues is the result of a gradual shrinking of the arteries which marks the beginning of old age, and which occasions, as it progresses, a gradual starvation and shrinking of the tissues. The organs of a man of advanced years are all smaller than in the same individual when in his prime. The cause of this degenerative change in the arteries is a question which has been made the subject of much study and speculation. A few years ago an Italian bacteriologist proclaimed that he had discovered the "germ of old age." The idea was scouted by all scientific men, but there may be something in it, after all. At any rate there seems to be good ground for believing that germs, if not a specific germ, are at least one of the most important influences which bring on old age.

It has long been known that the ptomaines or toxic substances produced by microbes, are capable of setting up various degenerative processes. Degenerative changes in the joints, the liver, the kidneys and other organs, have been directly traced to this cause. Dr. Dana, an excellent authority in nervous diseases, has recently called attention to the fact that sclerosis and other degenerative changes in the brain and spinal cord are doubtless due to the influence of ptomaines absorbed from the alimentary canal. The writer has for some time held the opinion that the degenerative changes incident to advancing age are due to the same cause; namely, the toxines absorbed from the alimentary canal. These toxines are constantly pres-

ent in greater or less quantity according to the extent to which fermentative and putrefactive processes prevail in the stomach and intestines. These processes depend, first, upon the integrity of the digestive process in the individual, and, secondly, upon the character of the substances introduced into the alimentary canal as food.

Laying aside the first consideration, supposing the individual to be in a healthy state as regards the condition of his digestive organs, we may draw important inferences in relation to the second consideration—the kind of substances received into the alimentary canal as food—from a study of lower animals. Herbivorous animals, such as the sheep, ox, deer and others, are noted for the sweetness of their flesh, a quality which is appreciated not only by human beings but by animals of the carnivorous class, which are never known, unless severely pressed by hunger, to devour animals of their own class or other carnivorous animals, but to carefully select animals of the herbivorous class for their food. The strong and offensive odor of the flesh of the dog and other carnivorous animals places them in wide contrast with herbivorous animals in this respect. The source of this strong odor is to be found in the characteristic difference in the contents of the alimentary canals of the two classes. The fecal matter of the dog and other carnivorous animals is in the highest degree putrescent and repulsive, while that of the herbivorous or vegetarian animal is very much less offensive. The same is true with reference to the urine of the two classes. The strong odors connected with the body of the dog and other carnivorous animals evidently find their origin in the decomposition of flesh taking place in the alimentary canal. The decomposition of vegetable substances is rarely accompanied by the formation of extremely offensive or toxic substances, whereas the decomposition of flesh gives rise to poisonous substances of most extraordinarily loathsome and deadly properties.

These considerations suggest at once the thought that while all human beings must necessarily be constantly subject to the influence of toxic substances generated in their own alimentary canal, and consequently must grow old and succumb sooner or later to the degenerative processes of old age, these processes may be greatly accelerated by subsisting upon a diet which favors the production of toxic substances in the alimentary canal.

If this is correct, we should expect to find the greatest longevity among those animals and those men who subsist upon the simplest and purest diet, other conditions being equal. It would be impossible to find a sharper contrast than that which

exists in this respect between carnivorous and vegetarian animals. Contrast, for example, the dog which grows old, becomes rheumatic and infirm in eight or ten years, with the donkey, which lives a useful life to forty or fifty years, and the elephant, which is still active and useful at a hundred years. The same is true among men. The greatest number of persons now alive above one hundred years of age, are to be found among Russian peasants who rarely taste meat. These people have been practical vegetarians for so many centuries—perhaps from the earliest ages—that anatomists have noted a distinct difference in the length of their alimentary canals as compared with those of the flesh-eating Germans, whose ancestors were cannibals.

The Biblical and all other accounts of the early history of man, indicate that in the earliest ages the dietary of human beings was vegetarian in character, and that the longevity of man was very much greater than at the present time.

The close relation between the degenerative changes connected with the rheumatic or arthritic diathesis and those of old age has often been remarked. The rheumatic diathesis is quite incompatible with great longevity. Rheumatism in its protean form is one of the most constant and distressing orders of old age. The relation between English roast and the gout and rheumatism which prevail so extensively among Englishmen was clearly pointed out by that distinguished physician and essayist, J. Milner Fothergill.

The above considerations, if not considered absolutely exclusive, are certainly worthy of thought.—*Modern Medicine.*

COLDS—THEIR CAUSES, PREVENTION AND TREATMENT.

While we are all familiar from personal experience with the phenomena of an ordinary cold, yet to explain the relation between the cause and the effect becomes extremely difficult. For example, we know that if the feet are exposed to cold and dampness we are almost sure to suffer from an attack of coryza or cold in the head. Why should the exposure of the feet give rise to an inflammation in so distant a portion of the body?

Many theories have been advanced in explanation. One theory is to the effect that an impression upon one surface of the body is conveyed to the brain centres and reflected by the sympathetic nervous system to another and distant portion of the body. The impression being reflected and symptoms manifested in that portion where there is the least resistance. If the mucous membrane of the nasal

cavities has been weakened by previous attacks, or is in a constant state of mild inflammation, the symptoms will be manifested here. If the throat or bronchial tubes constitutes the area of least resistance it is here that the inflammation will be manifested. While this theory is somewhat plausible, yet it is not entirely satisfactory.

Another theory is to the effect that if the blood is driven from one portion of the body as a result of exposure, it causes congestion and increased blood pressure in other portions, especially the internal organs. This theory is not satisfactory. If true, it would be the internal organs that would suffer, and not the superficial ones.

Another theory, advanced by Bosworth, is to the effect that taking cold is due to the removal of heat to an unusual extent from the external or internal surface of the body. This gives rise to a functional disturbance, which in turn excites some morbid process in some distant portion of the body. It is undoubtedly true that taking cold, or the phenomena that results from exposure, is due to some disturbance in the relation existing between heat production and heat radiation. We know there are certain nutritive changes going on constantly in the body. We know that these nutritive changes produce the body heat. We know that the normal temperature of the body produced by these nutritive changes is 98.6 degrees. We also know that there is a constant radiation of heat from the body. If there is a disturbance between the normal relation of heat production and heat radiation, certain morbid processes are sure to result. If more heat is extracted from the body than can be produced by those nutritive changes, alarming and fatal symptoms at once occur.

Bosworth has well illustrated this result in the case of a swimmer. As long as one. by active exercise in the water, can maintain the normal body temperature all goes well, but when sufficient activity can not be maintained to keep up the normal body heat, then there is the great exhaustion, intense venous congestion, feeble circulation and the fatal cramps.

In case only a portion of the body is exposed to cold or dampness there is simply a disturbance of the nutritive changes occurring in that part and the effect of this disturbance is manifested in some distant part, in that portion where there is the least resistance. This heat production and distribution has been compared (Bosworth) to that occurring in an ordinary *chandelier*. If all the jets are lighted, they will burn with a steady, uniform brightness. If one or two jets are turned off, the others will burn with increased pressure and brightness. If one of these jets is somewhat defective

as a result of previous injury, and unable to stand the increased pressure, then this will flare up with greater brightness than the others. So in the human system, the nutritive changes that are constantly going on, by which animal heat is produced, is the result of a certain nervous force sent out from the brain, the great reservoir of all nerve force. It heat production is arrested or disturbed in a certain part of the body, the same amount of pressure or nerve force being sent out from the reservoir, it necessarily follows that there will be increased pressure, increased nutritive activity in other portions, and if there is a weakened, defective surface, the increased nutritive activity will be manifested here. Increased nutritive activity constitutes inflammation, and thus we explain why it is that exposure of the feet to cold and dampness will produce an inflammation in the nasal cavities.

Why is it that people who go into crowded stores enveloped in furs and seal skins so frequently take cold? They can not understand it, for they are certainly clothed warmly. The trouble is this: As a result of the warm and oftentimes overheated atmosphere, together with the heavy wraps, more body heat is produced than is radiated. Nature endeavors to overcome this difficulty and perspiration occurs in order to diminish heat production. When they go out into the cold atmosphere, this perspiration is checked and there is now suddenly more heat radiated than before. There is again this loss of balance between the heat production and heat radiation, and a cold results. From these observations, it will be seen how easy it is to "catch a cold." The most common causes are exposure of the feet to cold and dampness, sitting in drafts and suddenly cooling off when the body is over-heated, passing from a close, over-heated atmosphere to one of cooler temperature, without proper protection, and last but not least, improper and insufficient clothing. Why is it that so many children, especially among the poorer classes in our great cities, are so frequently the subjects of chronic catarrh, bronchitis and laryngitis? Simply because they are not properly clothed. If we examine the clothing of any poor child, we will be surprised to find it so poorly protected, and we will not wonder that their little bodies can not produce sufficient heat to keep them comfortable. The wonder is not that so many die, but that so many live. In the majority of cases we will find their limbs clothed in thin stockings, with no underclothing. Their arms are usually protected by the single thickness of the sleeve of the dress. Their bodies are fairly well and warmly clothed, but the extremities very poorly. While the adult will hardly be comfortable without

at least three or four thicknesses of clothing covering the arms and limbs, yet the little child is frequently expected to be comfortable and well protected by a single thickness.

When cold has once been contracted and allowed to run its course, certain tissue changes result in the parts affected, that render them far more susceptible to the subsequent attacks. After a few seizures these tissues become thickened or infiltrated as a result of the inflammatory process, so that only the slightest exposure is necessary to produce an acute attack.

As a result of the thickening of the parts, it often becomes difficult or impossible to breathe properly and easily through the nasal cavities, and the patient resorts, epecially at night, when unconscious, to oral respiration. As a result of breathing continuously for hours at a time through the mouth we have, in the course of time, a chronic pharyngitis, and following this a chronic laryngitis.

Acute colds are not always confined to the nasal cavities. The usual symptoms of acute coryza are frequently followed by a cough indicating an acute bronchitis more or less severe and frequently lasting a number of days. These attacks frequently repeated undoubtedly pave the way and render the lungs susceptible to more serious diseases.

How shall we prevent a cold? By so protecting and clothing every part of the body as to maintain the normal relation between heat production and heat radiation. Obviously, we will not wear chest protectors and heavy clothing and go out in damp, cold weather with thin shoes. We will not muffle the neck and wear a fur or sealskin cloak, and go out with kid gloves upon the hands. One who is subject to sore throat or bronchitis will make a great mistake by wrapping up the neck and chest in flannels and at the same time neglecting the feet.

It has been very properly said that the throat and chest will be far better protected by an overshoe on the foot than by a flannel about the neck. Sufficient clothing should be worn to keep the person comfortable and to keep the normal nutritive activity in every part of the body. We should avoid overclothing one part of the body and leaving another part insufficiently protected.

Treatment.

If asked if a cold can be cured, we would answer yes, almost certainly. If asked if a cold is cured, we would answer just as promptly, no, or very rarely. Unfortunately colds are allowed to run their course or are treated so in-

efficiently that no effect is produced. Indeed, the rule is that that one will not give up "for it is only a cold" until the symptoms have become really alarming, and then it is too late to cure it—we can then only palliate the symptoms. As has already been stated, a cold that has been allowed to run its course does permanent injury to the parts affected; resolution or return of the tissues to their normal condition is slow, even after the acute symptoms have subsided. Generally, before resolution has occurred, the person suffers another exposure and there is a renewal of the inflammatory process.

I again mention this tendency to recurrence on the slightest exposure to emphasize the importance of early and careful treatment. Bearing in mind the causes of these attacks, the indications for treatment become plain. We should endeavor to restore by appropriate measures the loss of balance between the heat production and heat radiation. Let us remember that as a result of exposure there has been deficient nutritive activity in that portion exposed. The measures to be instituted are those that will restore this nutritive activity to the normal degree. When, as a result of some exposure, it is evident that a cold has been taken, no time should be lost. The patient should at once be given a hot foot bath, hot drinks, as hot tea or hot lemonade, a good dose of Dover's powder, or ten grains of quinine, and placed in bed, well covered.

The copious perspiration that occurs indicates that our endeavors are successful. The normal heat production has been restored and nature is attempting to prevent an over-accumulation of heat by this sweating process. The patient should be uncovered gradually and thoroughly rubbed. Confinement to a warm room for a day or two, especially in cold, damp weather, is all that is needed to complete the cure. If cases are taken early, they can be almost invariably aborted by this line of treatment.

In many cases we can promptly abort a cold by the local application of atropia and cocaine, without the confinement of the patient to the house or bed, especially when the case is seen early. A 1 per cent. solution of atropia should be carefully, and not too freely, applied by means of a camel's hair brush or cotton applicator to the swollen and inflamed mucous membrane of the nasal cavities and especially to the distended turbinated bodies, followed by the application in the same manner of a 4 to 6 per cent. solution of cocaine, used rather more freely, and followed in a few minutes by the insufflation of a powder of cocaine, morphia and bismuth, or of cocaine, camphor and bismuth. Convenient formulæ are as follows:

Cocaine, mur ..... gr. xxx.
Morphine, sulph ..... gr. v.
Bismuth, subnit ..... oz. i.
M. Sig., use by insufflation.

Cocaine, mur ..... gr. xxx.
Camphor ..... drchm. i.
Bismuth, subnit ..... oz. i.
M. Sig.:
Boric acid ..... drchm. v.
Salol ..... scruple, v.
Menthol ..... gr. iv.
Cocaine ..... gr. x.

The atropia and cocaine causes a speedy contraction of the swollen tissues and checks the profuse discharge, and the patient is at once rendered comfortable. In the course of an hour the difficult nasal respiration and attending symptoms return, and consequently the patient should be provided with the powder and directed to use it when these symptoms are manifested. A few applications will, in the great majority of cases, entirely overcome the attack. A patient should never be given a prescription for cocaine without indicating to the druggist that it is not to be renewed. It is even a better plan to furnish the cocaine to the patients, not allowing them to know what they are taking, when there will be no danger of contracting the cocaine habit.

In some cases the cold is manifested, not only in the head, but in the chest as well, as will be indicated by a trying, frequent cough and a sense of constriction in the lungs. In these cases, in addition to the measure suggested, a hot water compress should be applied to the chest and well covered. Too frequently a cold is allowed to continue for two or three days before a physician is called in, and then the "golden opportunity" of "breaking the cold" is past.

While a simple cold is not in itself a serious or dangerous matter, yet it should never be neglected, on account of the consequences that may follow. It should be remembered that the proper time for successfully treating it is in the early stages.—*Colorado Climatologist.*

THE TREATMENT OF HABITUAL CONSTIPATION.

The *Hospital* for September 1 contains an article on this subject in which the author remarks that the general causes of constipation are such as produce either weakness of the peristaltic movements of the bowels or an unnatural hardness of the intestinal contents. Among the conditions leading to deficient peristaltic action a predominant place must be given

to negligent habits acquired by the patient. Neglect of the calls of nature, hurried, irregular and often imperfect acts of defecation, lead to the overloading of the colon and stretching and consequent weakening of its muscular coat. Want of exercise has also an important bearing on the subject. Dietetic errors are chiefly responsible for the production of undue hardness of the fæces, and the habitual ingestion of larger quantities of food than are requisite for the needs of the body tends to induce impaired intestinal action. A very frequent cause is a deficiency in the consumption of water, which is an important constituent. Tea, owing to the tannin contained in it, has very little value in liquefying the intestinal contents; alcoholic drinks are also deficient in this respect. A diet of which meat forms a large part; or in which farinaceous foods predominate, favors constipation, and bread made of refined flour loses not only much of its nutritive value, but also much of its stimulative power. The habitual use of rich or indigestible food is also a cause of constipation.

The result to be aimed at in the treatment, says the author, is to secure for the patient natural and regular evacuations, and to render him independent of aperients as far as possible. Brisk exercise, preferably on horseback, should be insisted upon, and the abuse of active purgatives must be stopped. A larger proportion of vegetables and a still greater one of wholesome fruit, with less meat, will in many cases be indicated. Fresh fruit should be eaten at breakfast to a greater extent than is usual, and stewed fruits, such as prunes or apples, are excellent laxatives. Fat or oily substances in the form of butter, olive oil, bacon, etc., are often desirable. The occasional use of brown bread and oatmeal is effectual. The importance of a sufficient supply of fluids should be impressed on the patient, and it is often important that a tumblerful of water should be taken in the morning before breakfast, and in severer cases another at night. It may be hot or cold, according to circumstances, but should not be merely warm, as this may excite vomiting; it is also better to sip it at intervals while dressing. The author recommends aids of a mechanical nature, such as small enemata of glycerine, olive oil, or simple cold water. Another method is the employment of abdominal massage either by the hand or by a weight. This method also reduces obesity, itself a factor in the production of constipation from the loss of power it causes in the action of the abdominal muscles. It should be kept in view that the object for which drugs are used are not to produce purgation, but to act as tonics to the intestine in order to restore its natural function, and that their employment is to be discontinued

when this has been attained. Among remedies of this class aloes holds a high place. Its action is slow, and chiefly on the colon and lower bowel. It may, with advantage, be combined with nux vomica or belladonna. Cascara is also a useful intestinal tonic when given in small doses, full doses being too large to produce the most useful action of the drug. It may be combined with the liquid extract of licorice, which assists its action.

Saline aperients or mineral waters are less adapted for the treatment of habitual constipitation, but the milder forms may be diluted, instead of plain water, in the morning, the amount being reduced and plain water substituted as improvement takes place. It is necessary, says the author, to warn patients against rhubarb, as its secondary astringent action renders it wholly unfitted for habitual use; mercurial preparations, also, should not be used for this purpose. Care and skill are necessary in the treatment of habitual constipation, and it should be impressed on the patient that it is not a trivial complaint to be treated by an occasional pill, often a quack one, which leaves his last state worse than his first, and renders rational treatment a much more difficult task.—*N. Y. Medical Journal.*

DR. GIBBONS' RESUSCITATION TEST.

Dr. P. J. Gibbons, of Syracuse, will not be able to make his resuscitation test in the case of the murderer Wilson at present, as an appeal has been made for a new trial and the electrocution has been necessarily postponed. In connection with this interesting matter the question has arisen whether the Governor has the legal right to sanction such a test; but in a dispatch from Albany, dated November 16, it is stated that the Attorney General of the State has informally expressed the opinion that if the relatives of the criminal consent there is nothing in the laws to prevent the experiments being made. Among those who have given expression to their doubts as to whether the interrupted current as applied in the electrocution of criminals really destroys life are the well-known electrical experts Drs. Wm. J. Morton and Augustin H. Goelet, the latter of whom published an article in the *Electrical World* of September 8, entitled "How to Deal with Apparent Death from Electrical Shock." Dr. Morton has given the following opinion: "Since the beginning I have agreed that there is no positive proof that any criminal claimed to have been killed by electricity has actually been so killed. The burden of proof has always rested on those who claim that he was killed. * * *

It is a case of Scotch verdict—not proven. There is but one way to prove that a man has been killed by electricity, and that is to lay the body aside in a convenient room and wait for the signs of chemical decomposition. But to take a subject warm from the electrical chair and within an hour or so to cut him up is, in my opinion, simply a prostitution of science. It is a pollution of the true sources of knowledge. * * * As I recollect the official report concerning the microscopical changes found upon examination in the bodies of the criminals executed by electricity, it shows that in no one case has there been found any evidence of structural change in the tissues, except as to mere superficial burns produced by contact of the electrode with the skin."—*Boston Medical and Surgical Journal.*

NEW TREATMENT OF TAPEWORM.

Dr. Dronke, in the treatment of tapeworm, associates the three most powerful tenifugues, thus hoping to obtain a more active therapeutic influence. His formula is:

Honey	℥v.
Ethereal ext. pomegranate	aa gr. vijss.
Eth. ext. male fern	
Kousso flowers	℥v.

M. Sig.: Divide this into three parts and take them in the morning with intervals of ten to fifteen minutes, the day before the patient living, of course, on a reduced diet.

One or two hours after taking the preparation administer an ounce of castor oil. Have the patient pass his stools into a vessel filled to the brim with warm water to avoid breaking the worm.—*Lancet Clinic.*

THE PHYSIOLOGY OF THE SPLEEN.

Volpius (*Beitrage zur klin. Chirurgie*) has arrived at the following general conclusions concerning the physiology of the spleen:

1. Histological study of the normal splenic tissue shows the possibility, but not the certainty, of the entrance of colorless cells in the circulation from the spleen. It is evident that the red cells undergo disintegration in the spleen, but there is no ground for assuming that they are formed in the spleen.

2. Comparison of the blood of the splenic artery and vein shows no positive difference.

3. In acute general anæmia the spleen shows signs of increased activity.

4. Removal of the spleen causes a transient decrease in the number of red, and increase in the number of white blood cells.

5. The thyroid gland has no vicarious relation to the spleen.

6. The lymph nodules and the bone marrow acquire an increased blood-forming activity after extirpation of the spleen.

7. The regeneration of blood is retarded after hæmorrhage in persons without spleen.

These conclusions, though contradicting certain accepted teaching, offer little that is new, but are of value in that they are based upon accurate scientific data, and corroborate much that has already been done. Unfortunately, our knowledge of the physiology of the spleen is still left in a state of confusion. —*Boston Med. and Surg. Journal.*

CREAM OF TARTAR IN THE TREATMENT OF GONNORRHŒA.

Dr. Oteri *(Journal de Medecine de Paris)* has employed the cream of tartar in 280 cases of gonorrhœa, bubos, chancres and operations on the prepuce. On account of its mild action it is of service in urethral injections, even to five a day. It subdues the inflammation and arrests the discharge. It is possessed of eminent antiseptic and absorbent properties. In profuse suppuration in wounds or cavities with sinous or necrosing walls it will yield good results if applied locally. In bubos, chancres and syphilitic ulcerations, as well as in balanitis, he has found it a good local application. It is cheap, devoid of odor, painless and easily handled.—*Lancet Clinic.*

AUTO-INTOXICATION.

Auto-intoxication of gastro-intestinal origin other than that produced by alcohol and other causes of hepatic cirrhosis is a very important subject, and one which has been particularly brought forward by Bouchard. Many varied diseases and conditions have their origin in this cause.

Nervous symptoms, cutaneous diseases, kidney affections, disorders of general nutrition, rickets, tetanus coma (which has been named dyspeptic coma).

The poisons of the digestive tube are of alimentary origin and are formed in the intestinal canal. Fermentation is frequent and gives rise to the production of lactic, acetic, butyric, valerianic, propionic, olic, palmetic, margaric, oxalic acids,

aldehydes, acetones, etc., the latter being present in dyspeptic coma. Syntonine, peptotoxin, etc., have been found in the stomach. Intestinal products are still more numerous. The products of deranged biliary secretion are very toxic. Indol, skatol, cresol phenols, potash salts, etc., may be placed in the same list.

Most of these result from the action of the micro-organisms, which reduce the antiseptic properties of the bile, since they are able (staphylococcus aureus and bacillus coli) to live in pure bile; other organisms are found in the stomach. Of these the B. coli is the most dangerous. Stagnation of the ingesta of a greater or less degree is principally responsible for the production of the fermentations.

Bonvent and Devio introduced by the veins a solution of the alcoholic extract of the digestive liquids. Three substances have been isolated from the complex solution.

1. A brownish substance, not very pisonous.

2. A yellowish substance, a convulsive poison of great intensity.

3. A colorless coma-producing agent.—*Kansas Medical Journal.*

ICHTHYOL AGAINST CATARRHAL SORE THROAT.

Herz' statements that he obtained good results from the use of ichthyol gargles in ordinary catarrhal sore throat induced Dr. Sonnenberg to try the same means in his patients. The result was equally excellent—all the symptoms disappearing, it is reported, within about twenty-four hours. The patients gargled every ten to fifteen minutes with a 2 to 3 per cent. aqueous solution of ichthyol.—*Am. Med. Surgical Bulletin.*

THE RELATION OF ECZEMA TO THE MUCOUS MEMBRANES.

Von Sehlen calls attention (*Monatshefte fur praktische Dermatologie*) to the relation which exists between eczema of the skin and certain diseases of the adjoining mucous membranes. Inflammation of the nasal mucous membrane, chronic catarrh of the external ear, conjunctivitis, balanitis, inflammation of the anal mucous membrane with the formation of fissures, are some of the affections which may arise from the extension of an eczema. In the treatment of these the author has found ichthyol of great service. The paper concludes as follows:

1. Chronic eczema of the skin may attack the adjoining mucous membranes, and produce upon them apparently independent affections.

2. Eczema of the lips, catarrh of the external ear, eczema of the lids, and a certain form of conjunctivitis are to be regarded as special localizations of the eczematous process, and are to be treated accordingly.

3. Certain inflammatory conditions of the anal mucous membrane, and of the genitalia in both sexes, seem to stand in close, if not causal, relationship to eczema of the skin.—*University Medical Magazine.*

CHLOROFORM TREATMENT OF PHTHISIS.

In the *Jour. de Méd. de Paris*, Mr. Potter urges that by the inhalation of chloroform the bacillus of tuberculosis is destroyed *in situ*. It is not necessary to produce anæsthesia, but short of this, inhalations should be employed at brief intervals daily for a considerable period.—*Med. Age.*

SURGERY.

TWO CASES OF GONORRHŒAL RHEUMATISM WITH SPECIFIC BACTERIAL ORGANISMS IN THE BLOOD.

By H. F. Hewes.

In March, 1894, I made bacteriological examinations of the blood of four patients with gonorrhœal rheumatism. In all the cases the affection was polyarticular, accompanied by some fever; and an urethral discharge containing gonococci was present. Repeated cultures were taken from the blood, with careful aseptic precautions. The culture media used was a preparation compounded by Dr. J. H. Wright, assistant in pathology at the Harvard Medical School, upon which he had succeeded in growing the gonococcus. In three cases the result was negative; no colonies were obtained from the blood upon repeated cultures. In one case bacterial organisms of a specific nature were found to be present in the blood in repeated examinations. This case, with the permission of Dr. F. C. Shattuck, I report.

Case I.—M. D. entered Ward 31 of the Massachusetts General Hospital March 14. He gave the following history:

One month ago he caught a severe cold. Four days later

his left knee and ankle became painful, swollen and red; some œdema of leg. Next day his right thumb and ankle were affected. The trouble in the joints increased; he felt prostrated and feverish, and sweated considerably.

September 23, entered Ward 29, surgical, at the Massachusetts General Hospital. At this time the left knee and ankle were swollen, red and tender; the left shin œdematous; the right thumb and right ankle slightly swollen.

March 4. While in ward developed a keratitis of both eyes.

March 14. Transferred to medical wards.

He had never had rheumatism before. Gonorrhœa eight years before. Had had connection with a woman five weeks before onset of present attack, but had noticed no discharge from urethra or painful micturition.

His examination upon entrance to Ward 31 revealed the following: Appears very sick, dull and prostrated. Phalangeal joint of right thumb slightly swollen and tender, not red. Left knee tender and much swollen; fluctuation present; girth 15½ inches (right knee 14½ inches); patella floating. Left ankle swollen and tender, not red. Discharge of puriform material present at urethral meatus, which contained gonococcus upon bacteriological examination. Heart negative. Chest negative. Temperature 102. Pulse 95.

March 16. The patient has continued dull and feverish, the temperature at night running between 101 degrees and 103 degrees. Salicylate of soda, given in full doses for three days, seemed to have no effect upon the joints or fever.

March 17. Right knee became painful and swollen. On this day a culture was taken from the blood upon the special media. A control culture was taken upon glycerine agar at the same time. At the end of forty-eight hours several minute whitish colonies appeared upon the specific media. These colonies, upon microscopical examination, proved to be composed of a biscuit-shaped diploccus resembling the gonococcus of Neisser in morphology and reaction to staining reagents. Colonies transferred to blood serum, agar and gelatine media failed to reproduce. Colonies transferred to the specific media upon the first day reproduced; those transferred later did not.

No colonies were obtained upon the glycerine-agar culture from the blood.

The patient continued to show signs of general infection. The temperature remained continuously above 100 deg., rising to 102 to 103 deg. The right ankle-joint, the phalangeal joint of left great toe, the right wrist, the metatarso-phalangeal joint of right little finger became involved in turn.

April 1. The process began to subside; no new joints became involved. The affected joints continued stiff and somewhat swollen, but gave no more signs of an acute process. No urethral discharge present. Temperature still between 99 to 101 deg.

May 1. Temperature normal for first time. Joints stiff, and much evidence of chronic thickening present.

Discharged May 7.

Cultures from blood were taken March 20 and March 24 and April 1. In the first two cultures, colonies were grown similar in all respects to those described in the account of the first culture. No growths were obtained from the culture of April 1.

In August, 1894, I made examination of the blood of five patients with gonorrhœal rheumatism. The cultures are made upon the acid gelatine media of Trurro. An urethral discharge containing gonococci was present at the time the cultures were taken in all cases. In three cases no colonies were grown from the inoculations. In two, specific bacterial organisms were grown from the blood in repeated cultures; and in the more typical case of the two the character of the organism was tested by inoculation into a bitch. This case, with Dr. E. G. Cutler's permission, I report.

Case II. G. A. entered Ward 7 of the Massachusetts General Hospital August 20.

Five days ago he was kicked by a mule in the left hip, the kick knocking him over. Got up feeling all right. Next day left hip and groin very stiff and painful. Next day left hip better, but right hip and groin painful and stiff, with shooting pains up into loin and down thigh. He has passed bloody urine on several occasions since accident, but not upon every micturition. No pain on micturition or defecation. Three days ago both eyes became injected and painful, with sticky discharge. No chills or chilly sensations; no headache; no vomiting. Bowels all right. No pain in chest or belly. He has had gonorrhœa about a month, and still has discharge from urethra.

Examination showed patient to be well nourished, but with a dull and heavy aspect. Both eyes injected and sore; puriform secretion in the inner canthus of both eyes; cornea clear; pupils equal and react. Tongue clean and moist. Heart and lungs negative. Abdomen soft. Slight tenderness in left groin. Bladder not distended. No buboes. Spleen felt below costal border. No paresis. Knee-jerks present. Moves hip-joints with pain, especially right hip. Tenderness and slight swelling over right Scarpa's triangle. Tender over right

iliac crest and right half of sacrum. No tenderness over sciatics. Second joint of second toe, left foot, swollen, red and tender; also metatarsal phalangeal joint of great toe, with œdema of dorsum of foot. Urethral discharge which contains gonococci. No perineal tenderness. Urine smoky; specific gravity 1.019; albumen 1-5 per cent.; considerable sediment, much normal and abnormal blood, pus cells, caudate cells, a few hyaline and granular casts, no bladder epithelium. Temperature at entrance 102.8 degrees.

The temperature continued high, rising to 104 degrees on the second day. The spleen became larger. Patient had a good deal of pain in sacrum and right hip.

On the fourth day right knee tender and painful. Next day boggy and swollen, and a culture was taken from the blood.

On the third day after, several small colonies appeared upon the media. The colonies had a slightly yellowish tinge; did not tend to spread. Transferred to agar, blood-serum and gelatine media, they failed to reproduce. Transferred to acid gelatine, they reproduced. The organisms composing the colonies were biscuit-shaped diplococci, resembling the gonococcus of Neisser in morphology and reaction to staining reagents.

The signs of general infection in the patient continued. The temperature remained between 101 deg. and 103 deg. The spleen could be felt enlarged. The right wrist-joint became tender and swollen; then the right shoulder, the left hip, the left knee. The knee-joints was much swollen, the patella floating. In other joint, swelling not extensive.

September 5. The left eye became inflamed, and a keratitis set up. The left wrist painful and swollen.

September 17. The above mentioned joints all still somewhat swollen and tender and very stiff. Right eye became injected, and keratitis set in.

October 1. No acute joints present. Knees and wrists still swollen and stiff. Urethral discharge still present. Temperature between 99 deg. and 101 deg.

Cultures were taken from the blood on August 25 (as described), on August 30, September 4, 8 and 20. Upon all occasions except the last, colonies were obtained similar to those described in the account of the first culture taken August 24. The colonies of August 30 were reproduced to the fourth generation, and this growth inoculated to the vaginal mucous membrane of the bitch. Thirty-six hours later a thin, puriform discharge was visible at the vaginal orifice and upon the mucous membrane. A bacteriological examination of this dis

charge revealed the presence in it of the biscuit-shaped diplococcus, both within and without the pus-cells. Distinct colonies of the diplococcus were also obtained by culture from the discharge. A second inoculation was made from the fourth generation of the culture of September 4 upon the urethral mucous membrane of a bitch, with a similar result. The inoculation in both trials was made by smearing the membrane. Cultures were taken on several occasions from the discharge from the eyes during the keratitis, and no diplococci were grown, nor were they found on slides made from the pus.

The marked feature of these two cases in which organisms have been found is the prominence of the signs of general infection and constitutional disturbance. The condition in both cases was distinctly typhoidal; in fact, the second case was at first considered to be typhoid. The spleen was distinctly enlarged in the second case. The range of temperature was much higher than is usual in gonorrhœal rheumatism. In fifty-three cases of this affection at the Massachusetts General Hospital, of which I have examined the records, the temperature reached 103 deg. in but four, and the average of the maximum temperatures of all cases was 101 deg.; while in these reported cases the temperature reached 103 deg. and 104 deg. respectively, and remained between 101 deg. and 103 deg. for a week at a time.—*Boston Medical and Surgical Journal.*

REMARKS ON THE RELATION OF RESIDUAL URINE TO VESICAL IRRITATION, ESPECIALLY IN PROSTATIQUES.

By G. Frank Lydston, M. D., Chicago.

It is generally accepted that the most of the symptomatic disturbances incidental to certain chronic bladder diseases, especially in cases of prostatic enlargement, are dependent upon the accumulation of residual urine. The deduction from this prevalent belief is obvious. It is supposed that the imperative and infallible indication is the removal of residual urine; consequently, with this end in view, the average practitioner busies himself in a frantic attempt at systematic emptying of the bladder as a matter of routine in cases of prostatic disease, with the result, very often, that the patient's misery really begins when he falls into the hands of the surgeon. I have no intention to ignore the factor of residual urine in cases of obstruction to the urinary outflow, but I believe that certain qualifications as to its importance are necessary. I have long been impressed with the idea that residual urine *per se* is not as important a

factor in genito-urinary irritation as is ordinarily believed. Indeed, I do not think that the symptoms of vesical irritation bear any relation to residual urine, at least in the early history of these cases, other than that of a coincidence. I am satisfied that in a large proportion of adult males there is always a greater or less residuum of urine remaining in the bladder after micturition. In young subjects, with a high degree of tonus of the vesical muscle, complete emptying of the bladder during the act of micturition is undoubtedly the rule. As the subject grows older what may be termed a physiological atony develops, the expulsive power of the vesicle muscle is lessened, the bladder sinks lower in the pelvis, and, while it can not be said that a distinct pouch is formed, the level of the floor of the bladder is considerably lower than that of the vesical outlet, and this, in association with the lessened degree of contractility, and the fact that the *trigonum vesicæ* has no particular action in expelling the urine, permits of a certain amount of accumulation in the *bas-fond*.

It is a matter of common observation that if an individual empty the bladder thoroughly and defecate immediately thereafter, he may readily expel simultaneously with the act of defecation quite a quantity of urine from the bladder, so large a quantity that it could not possibly be attributed to trickling of urine from the ureters into the bladder during the interval following micturition and preceding the act of defecation. The older the subject the greater the accumulation of residual urine. With the sinking down of the pelvic organs incidental to senile physiological atony of the muscles forming the pelvic floor, this tendency to accumulation of residual urine is increased. If general atheroma exists, it is still further enhanced. If prostatic enlargement or other obstructions at the mouth of the bladder develop, we have the typical accumulation of residual urine characteristic of such cases. It will then be seen that there may be at varying periods of life extreme differences in the degree of accumulation of residual urine. These differences exist independently of pathological changes, and as a purely physiological condition. It is quite generally held that the vesical irritation does not appear in *prostatiques* until a certain amount of residual urine has accumulated in the *bas-fond*, this residual urine being supposed to act mechanically, and give a sensation as though the bladder had not thoroughly emptied itself. The sensation of the constant or frequent desire to urinate is attributed therefore to this accumulation of residual urine. The absurdity of this conclusion is obvious upon physiological grounds.

The bladder of the old man or even of the adult at middle

life is relatively much more insensitive than that of the young subject, and if a small accumulation of perfectly healthy residual urine should produce a constant desire to urinate, or a frequent desire to do so in the adult, or in the old man with enlarged prostate, why should not a physiological accumulation of urine in the bladder to a degree of moderate distention produce the same condition in young subjects with relatively hyperæsthetic bladder? If the deduction were true regarding the production of urinary irritation by the simple accumulation of residual urine, a constant desire to urinate would be perfectly physiological in every individual, for within a very short time after normal micturition there would be a sufficient accumulation of urine in the bladder to moderately distend its walls and produce the desire to micturate. Extremely difficult micturition then would be a physiological rule in subjects of all ages and conditions. Again, the sensation of the desire to urinate is produced by the passage of urine by the false sphincter—*i. e.*, the internal sphincter—into the posterior urethra. It is not until distention of the posterior urethra occurs under physiological conditions that the normal desire to urinate is experienced. In *prostatiques* it is necessary not only that residual urine should be present, but that this residual urine should rise to the level at which it is possible for it to pass into the posterior urethra in order that a desire to micturate should occur.

Another point worthy of consideration is that the bladder walls must be distended to approximate their full physiological capacity before the urine passes in the direction of least resistance, which is necessarily by the internal sphincter vesicæ and into the posterior urethra. It is only by sueh passage that the desire to urinate can result from simple pressure of the urine. The residual urine in *prostatiques* is below the level of the internal sphincter in a part of the bladder which is relatively insensitive. But it may be argued that the symptoms which are ordinarily referred to residual urine are relieved by the passage of the catheter in *prostatiques* and the withdrawal of the residual urine. I admit that clinically this appears to be the fact. I deny that it really is so. In the first place I do not believe that any method of catheterization will thoroughly remove the residual urine and drain the *bas-fond*, and in order to prove that the relief is dependent upon the mere drainage it must be shown that the catheterization completely removes the fluid. Perhaps I am too sweeping in this statement. It is possible that in some cases, with extreme care in utilizing the siphon action of a soft rubber catheter, the

bas-fond may be drained, but my experience shows that, as a rule, the bladder is not only not thoroughly drained, but irritation with a test solution, say of the permanganate of potassium, will prove that there is not only an accumulation of residual urine in the *bas-fond* but in some cases an abundant accumulation of pathological products. The urine may be siphoned from above the level of the internal vesical sphincter and appear tolerably clear, while leaving considerable accumulation of pathological urine in the *bas-fond*. I have found, even after quite thorough irrigation of the bladder as a preliminary to suprapubic section, that the opening of the bladder was followed in the first instance by tolerably clear, antiseptic fluid which had been thrown into the bladder as a preliminary to cystotomy, but that if the finger was passed down into the *bas-fond* through the vesical opening, and moved about as necessary for exploratory purposes, the withdrawal of the finger was followed by a gush of urine which was distinctly pathological and perhaps admixed with a large amount of muco-pus and phosphates. With the ordinary catheter, and especially with the metallic catheter with a prostatic curve, it is, in my opinion, absolutely impossible to withdraw the residual urine. The eye of the catheter can in no way be placed in such a position that the urine will be thoroughly withdrawn. If the external orifice of the catheter be elevated and the beak depressed, the residual urine will not flow. If the position of the catheter be reversed and the beak of the instrument hooked down into the *bas-fond*, the bladder is so devoid of contractility in this location that nothing but aspiration will succeed in removing any particular amount of it. I will again assert my opinion that the *bas-fond* can not be thoroughly drained by any system of catheterization. It may be thoroughly flushed in quite a proportion of instances by following the withdrawal of the urine by aseptic or antiseptic irrigation. Under such circumstances the residual urine is replaced by a residuum of the antiseptic or aseptic fluid used, so that from a mechanical standpoint the patient is just as bad off as ever. It is my belief that in some instances residual urine is present in considerable amount long before any particular symptoms of vesical irritation develop. In most instances symptoms of vesical irritation develop long before there is any particular accumulation of residual urine. I have come to believe, therefore, that the residual urine *per se* has little, if anything, to do with the production of symptoms of vesical irritation, but that it is largely coincidental. The symptoms of vesical irritation are explicable upon far more rational grounds. It seems to me that the development of a hyperæsthesia of the

posterior urethra is the essence of the difficulty when vesical symptoms develop.

To all intents and purposes prostatic hypertrophy is a condition of a chronic inflammatory character. There is more or less new growth encroaching upon the caliber of the posterior urethra, more or less rigidity of this part, and considerable pressure upon the delicate nerve filaments which constitute the seat of the *besoin de uriner*. The relief secured by the passage of the catheter I believe to be chiefly due to two factors: *First*, the blunting of the sensibility of the senerve filaments by pressure and stretching of the parts to which they are applied; *second*, the physiological rest accorded the bladder, and particularly its neck, by the mechanical withdrawing of the urine. If this proposition be correct, we have already explanation of the fact that in some cases of prostatic disease it is impossible to systematically draw off the urine with the catheter because of extreme hyperæsthesia. So marked is this hyperæsthesia that in some cases the slightest passage of the catheter is attended by considerable vesicle tenesmus and an aggravation of the symptoms of vesical irritation. Overstretching, however, under such circumstances, by means of the sound or the finger through the perineal *boutonniere* is often attended by most brilliant results—temporary, it is true, in a large proportion of cases, but enduring for a considerable length of time in many.

Having thus expatiated upon the relation of residual urine *per se* to the symptoms of vesical irritation, it remains to be considered whether residual urine ever assumes a position of importance in the pathology and symptomatology of the disease. I have already stated my belief that the residual urine is simply an incident upon which, if taken alone, the symptoms of vesical irritation in no wise depend. After a time the patient falls into the hands of a physician who regards residual urine as the source of all the trouble. Infection is engrafted upon the innocuous mechanical condition present. The residual urine becomes septic, a septic cystitis is set up, which extends to the true vesicle—*i. e.*, the posterior urethra—and the patient is now tormented worse than ever, his accumulation of residual urine now being rather an important factor, for the reason that, no matter how thoroughly the bladder may be emptied, and no matter how much we may try to blunt the sensibility of the posterior urethra, constant germ infection is going on, and nothing but drainage and antiseptic irrigation will avail anything in securing relief for the patient. It is not my purpose to enter into the discussion of the various methods of bringing about temporary or permanent drainage

of the infected *bas-fond*. I will simply state my belief, however, that even a suprapubic cystotomy is not perfectly satisfactory in this respect. Approximately perfect drainage is obtained, it is true, but a large amount of the benefits from suprapubic cystotomy is due, not so much to the drainage, as far as the relief of mechanical accumulation is concerned, but to the fact that the posterior urethra and necessarily the bladder are put at rest, the urine being allowed to escape so rapidly that decomposition is inhibited, even in the presence of actual germ infection. Ideally perfect drainage of the *bas-fond* can only be accomplished by through and through drainage from above the pubes, through the trigone and out of the rectum or posterior perineal region. There are certain objections to this method which it is not necessary to dilate upon. I am not recommending this particular method of drainage, nor, indeed, do I propose to discuss the question even in a general way; I simply wish to state my opinion that only by some such procedure can the *bas-fond* be thoroughly drained, reserving what I have to say on the technique of vesical drainage for a separate paper.—*Western Medical Reporter*.

THE FATE OF THIERSCH SKIN GRAFTS.

Goldmann (*Beitrage zur klinischen Chirurgie*) says that when a wound has been successfully grafted after the manner of Thiersch, healing occurs without the formation of granulations and with scarcely any cicatricial contraction. After a few months the new skin is reddish and somewhat glistening; it is on the same level as the surrounding skin; it is more or less movable on its bed and frequently possesses both tactile and thermal sensibility. When the changes in the grafts are examined in detail, it is found that in the first instance there is some desquamation of the horny layer, while at the same time there is active proliferation in the middle layers of the epidermis; ultimately the epithelium as a whole thin and the papillæ are of small size. An entirely new vascular network is formed beneath the epidermis which nourishes the latter and persists for years, which accounts for the redder tinge of the new epidermis and differentiates it from the surrounding skin. The graftedskin reaches the level of the surrounding skin surface more rapidly when the grafts are placed on a vascular bed; in the forehead this level has been attained in four to six weeks. It fails to attain this level when the grafts are placed on a granulating surface, as in the latter case there will be cicatricial tissue beneath the new skin. After an interval of months the mo-

bility of the grafted skin is so developed that it can be lifted up in folds from the tissues beneath. Return of sensibility recurs sooner at the margins than at the centre of the grafted area, and where large gaps have been filled up it may not return at all.

In discussing the anatomical basis of these clinical facts, the writer points out that the normal mobility of the skin on the subjacent tissues depends on the network of elastic fibres which connect the former with the latter. By adopting a special stain for the elastic fibres, he was able to prove that these were abundantly formed in the true skin beneath the grafts, and that they were prolonged right up to and into the papillæ, so as to end immediately beneath the epidermis. The presence of the new elastic fibres, derived from the mother skin, gives the grafted skin greater resisting power, so that it is able to withstand traction and pressure. Inasmuch as granulating and cicatricial processes hinder or prevent this growth of elastic fibres into the graft, we are able to understand why the results obtained are so much better when the grafts are placed on a recent wound than on one which is granulating. It is also to be noted that the development of the elastic network explains the absence of cicatricial shrinking of the transplanted skin. The new vessels which are formed from the mother tissue have a great influence in raising the grafted area to the level of the surrounding skin. In this they are assisted by the formation of elastic fibres and of young connective tissue. In a successful case there is no scar tissue to be seen. The return of sensibility to touch, pain and temperature is explained by the formation of new medullated nerve fibres, which are probably also derived from the mother tissue, and which the author has traced into the grafted skin. This method of grafting succeeds at all ages to an equal degree.—*Med. and Surg. Rep.*

URINARY AND OTHER SEDIMENTS FROM THE CENTRIFUGE.

The method of obtaining urinary deposits by means of centrifugal force instead of by gravity, seems to possess, besides the advantage of saving time, a distinct superiority in the more complete concentration of certain important elements. Thus Elsner and Hawley from a careful study of its clinical value (*N. Y. Medical Journal*) conclude:

That the time gained by centrifugalizing urine is of great advantage in many cases when an unaltered urine is desired (fermentation not having taken place), such early precipitates showing the epithelial casts and other structures before changes

in shape, size and contour occur, without bacterial contamination.

The centrifuge does not yield a precipitate in all urines, though in the majority of those urines in which no decided deposit takes place there is a haze or cloudiness near the bottom of the *èprouvette* which with care can be gained and ofttimes gives a valuable microscopic picture. In some urines absolutely no precipitation or haze can be found.

Centrifugaliziug demonstrates, as no other method can, the insoluble and suspended elements present in an abnormal urine.

The presence of blood in the urine can often be demonstrated by the aid of the centrifuge when the other method fails to show it.

In cases of transitory, cyclic or permanent albuminuria, without marked subjective or objective symptoms accompanying, the centrifuge will ofttimes aid in establishing the underlying pathologic condition; hence, for the insurance examiner, the instrument becomes invaluable.

No other method of urinary examination will be as likely to demonstrate primary genito-urinary tuberculosis. The repeated examination of suspected urine is necessary, as failures are frequent and tubercle bacilli are present in small numbers only.

The centrifuge precipitates albumen with picric acid in from five to ten minutes, the test being equal in value to Esbach's, having the decided advantage over the latter (which requires fully twenty-four hours) that only a short time is needed, and that the mucin and other insoluble elements can be measured or weighed.

The prompt bacteriological examination of serous exudates and other pathologic fluids can be made by the aid of the centrifuge more thoroughly and with greater satisfaction than by any of the older methods, while occasionally tubercle bacilli can be found in sputum with the centrifuge which can not be found without it.

In 21 per cent. of the cases examined the centrifuge yielded results which led to more accurate diagnosis than could otherwise have been made. Their work with the centrifuge has emphasized the fact that in the examination of urinary sediments it is important to observe, not only the kind and number of casts, but also to consider very cautiously the number and characteristics of all accompanying elements.—*Philadelphia Polyclinic.*

A NEW METHOD OF PRODUCING LOCAL ANÆSTHESIA.

At the meeting of the Hufeland Society, on October 25, Professor Oscar Liebreich presiding, Dr. Schleich read a paper on, and demonstrated, what he terms a new form of anæsthesia, called "infiltrations anæsthesie." Dr. Schleich has for some time made use of this new form of local anæsthesia, not for trifling operations only, but for complicated ones, such as laparotomy, etc. He uses a very weak solution of cocaine—1 per mille. The cocaine is not dissolved in distilled water, Liebreich having shown in his inquiry on "anæsthetica dolorosa" that distilled water injected subcutaneously has a toxic effect; the solvent used is the physiological salt solution of about half the usual concentration—that is, about 0.2 to 0.3 per cent. of common salt. Schleich's method is as follows: A small spot of the skin near the field of operation is rendered insensible by chloride of ethyl, and here a few drops of the cocaine solutions are injected. At the spot of infiltration a bulla immediately arises, which is absolutely without sensation. Pushing the point of the syringe through this area of insensibility, Schleich again injects a few drops; another bulla arises close to the first, and proceeding from bulla to bulla round the field of operation the whole is infiltrated and rendered quite anæsthetic. This is done extremely quickly, as Schleich showed in the case of a man with a large syphilitic abscess on his arm, who was operated on before the meeting. The man absolutely felt no pain; and the duration of the operation, including the anæsthesia, was only eight to ten minutes. Dr. Schleich said that he had employed his method of anæsthesia for about three thousand operations with unvarying success, and without any bad after-effects. It does not seem to us that the method presents any great elements of novelty.—*Med. Record.*

TETANUS SUCCESSFULLY TREATED BY ANTITOXIN.

The recovery of two cases of tetanus treated by antitoxin is reported in the September 15 number of the *British Medical Journal.* The first, Dr. Dean's case, a lad 16 years of age, crushed his finger, had it dressed, but afterward dug potatoes on several occasions, getting earth into the wound. On the twenty-fourth day after the injury the first symptoms were noticed, "risus sardonicus," etc., and by three days afterward aggravated manifestations of the disease, spasms, cries, pains, opisthotonus, etc., were fully developed. Antitoxin

(grammes 2.25) of tetanus was then given hypodermically and repeated in smaller doses every six hours. It was noticed, however, that the finger was amputated, and that chloral hyd., bromide potas. and morphine were also administered. Dr. Dean frankly relates "whether the administration of the antitoxin had any share in the favorable termination, it is impossible to say." We are glad, however, to welcome anything that may combat this terrible disease. It is to be hoped that Prof. Tizzoni's antitoxin treatment shall at least reduce the high rate of mortality, which is about 90 per cent.

The second case, a boy aged 13 years, cut his knee in the road, getting dust imbedded in the wound. The first stiffness began on the twentieth day after the injury, and in four days afterward the disease was well pronounced. Tizzoni's tetanus antitoxin was administered for about 18 days, using in all 4½ grammes hypodermically, when the lad was restored to his normal condition.—*Railway Surgeon.*

Book Reviews and Notices.

A Clinical Manual of Diseases of the Eye, Including a Sketch of Its Anatomy. By D. B. St. John Roosa, M. D., LL. D., Professor of Diseases of the Eye and Ear in the New York Post Graduate Medical School and Hospital; Surgeon to the Manhattan Eye and Ear Hospital; formerly Professor of Diseases of the Eye in the University of the City of New York and in the University of Vermont; Consulting Surgeon to the Brooklyn Eye and Ear Hospital; President of the New York Academy of Medicine; Honorary Member of the Medico-Chirurgical Society of Edinburgh; Honorary Fellow of the Academy of Medicine of Havana, Cuba, etc. Illustrated by one hundred and seventy-eight engravings and two chromo-lithographic plates. Published by William Wood & Co., of New York; 1894.

We are all familiar with Dr. St. John Roosa and his excellent treatise on diseases of the ear. His precision and terseness in handling and elucidating complex questions is remarkable—to the reader and student he makes clear in the easiest manner possible truths which have long been enveloped in doubtful comprehension. I am glad to see that he has again contributed to medical literature his excellent work on ophthalmology; and this, as with all which has emanated from his

fruitful brain and ever versatile pen, is characterized by a thorough mastery of the subject.

A clear description of and how to use the various complicated instruments so familiar to the experienced oculist, but entirely new to the student, is very properly included in this work, making it a very valuable book to many old ones in the profession and indispensable to beginners. The chapter on the use of the ophthalmometer is very full and sufficiently explanatory of the uses and methods of using this valuable aid to ophthalmic practice.

The author does not agree with many other writers who lay great stress upon the power of the external muscles, and hence devotes but few words to the various instruments made for testing them and their irregularities. He considers the ordinary prism tests amply sufficient.

The chapter on Astigmatism is very exhaustive of the subject; and the tables showing the corneal astigmatism in one hundred persons with normal vision ($\frac{20}{20}$), and without asthenopia, is both instructive and interesting. In these tables he gives the difference in the results obtained by the ophthalmoscope and the ophthalmometer, which, in some cases, was as great as 3D. Dr. St. John Roosa is a very warm advocate of the *intelligent* use of the Javal instrument.

In part IV he invites the reader's attention to his views as differing from those of other writers. This is not the place to criticise the opinions expressed. The glossary at the back is indeed a very valuable aid to all ophthalmologists who would think and write intelligently.

Over all, the work is a very valuable one, and for it I prophesy subsequent editions. WILL H. WOODS.

A Treatise on the Principles and Practices of Medicine; designed for the use of students and practitioners of medicine. By Austin Flint, M. D., LL. D., late Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellvue Hospital Medical College, New York. Seventh edition; thoroughly revised by Frederick P. Henry, A. M., M. D., Professor of the Principles and Practice of Medicine in the Woman's Medical College of Pennsylvania; Physician to the Philadelphia Hospital; corresponding member of the Royal Academy of Rome. Published by Lea Brothers, of Philadelphia, 1894.

That this the seventh edition of Flint's Practice should be published evidences the popularity of the work, which for years has been the guiding star of students and practitioners

all over America, and very extensively read and quoted in Europe.

The revisor, Dr. Frederick P. Henry, of Pennsyvania, has deemed it best to leave out parts of the original work and make up by additions, which make the volume quite as large as the original work.

The section on General Pathology is the most notable omission. This, Dr. Henry thinks, will popularize the book abroad, where a strict demarcation is drawn between General and Special Pathology and the Practice of Medicine.

He has added about 100 pages on those subjects in which such rapid advances have been made of late years.

He includes a chapter on leprosy, which, however important as it is, has been omitted from many of our best text books on practice, because of an inability to classify it correctly. The revisor classes it among the eruptive fevers, preferring to retain a chapter on the subject, even though the classification be open to criticism.

Instead of the article on dyspepsia he substitutes nervous vomiting, peristaltic unrest, nervous eructation, merycismus, incontinence of the pylorus, atony, hyperacidity and hypersecretion, and nervous vomiting.

The large geographical area over which Prof. Flint practised and obtained his experience should make the book in its present revised edition by so able a revisor and writer even more popular than the previous editions have been. That this new edition, notwithstanding the many changes made in the text of the original work, is so well indexed is another recommendation. Every student of medicine and busy practitioner who admires a thorough exposition of scientific truth should include this book in his library. WILL H. WOODS.

State News and Medical Items.

THE Tri-Parish Medical Society, now known as the "North Louisiana Medical Society," will hold its next meeting in Minden, La., second Tuesday in December.

DR. E. S. LEWIS, of New Orleans, was elected secretary of the Southern Surgical and Gynecological Association, which held its meeting last month in Charleston, S. C. The next meeting will be held in Washington, D. C., November, 1895.

Dr. N. B. Morris, of Crowley, La., has been appointed surgeon of the Southern Pacific Railroad.

Dr. Dan H. Howell, secretary of the Medical Association of Georgia, sends a bound volume of the transactions of the last State meeting.

Dr. Brooks A. Colomb, of St. James parish, was married to Miss Margaret Scott, of Gilmore, last month. The Journal extends congratulations.

Dr. H. W. Blanc, of Silver City, New Mexico, is in the city for the winter.

The Medical School at Galveston.—At this date there are twenty-six students enrolled in the school of pharmacy, and one hundred and seventy-eight in the medical department. The school of pharmacy is in its second year, and the medical department in its third. First-class work by a first-class faculty, under a curriculum as high as any in the whole country, backed by the great State of Texas, is beginning to have influence.

The *Texas Sanitarian*, which has been under the editorship of Dr. T. J. Bennett, announces that Dr. J. W. McLaughlin, of Austin, becomes the senior editor. The doctor is a good writer and the *Texas Sanitarian* is fortunate in securing him.

Drs. H. A. King, F. E. Artaud, C. H. Melançon and Clarence Pierson, of New Iberia, lost their offices and all they contained by the burning of the Cage Building.

Dr. James R. Cooke, a successful Boston physician, is perhaps the only man in the country who, though blind from infancy, took up the study of medicine and excelled in its practice.

Dr. Lewis H. Viallon was married last month to Miss Aline Folse, at Napoleonville, La. The doctor is a graduate of Tulane, class of 1890.

Drs. T. J. Ragan and E. C. McKowen, of Jackson, La., were in the city last month. They report the State Insane Asylum is in good condition. The Journal will contain at an early date an illustrated article on this institution, followed by others of the different medical institutions in the State.

MARRIED.—At the residence of Judge L. E. Carter, of Shreveport, Miss Carrie Belle Carter to Dr. E. G. Allen. THE JOURNAL extends best wishes.

DR. DESEAY, of Ruston, La., who takes an active interest in educational matters, has been giving lectures for the benefit of the Louisiana Chautauqua, at different towns in the State.

DR. E. SOUCHON, of New Orleans, read a paper before the Southern Surgical and Gynecological Association, at Charleston, S. C., on the life of his friend, Dr. Marion Sims.

DR. W. E. PARKER, assistant house surgeon of Charity Hospital, attended the meeting at Charleston, S. C., last month.

THE Chattanooga Medical College has ninety-five students matriculated this year.

DR. TOWNES, of Chattanooga, reported to the medical society recently a case dying of pneumonia in which the temperature post mortem rose to 107 deg.

DR. F. L. SIM, who achieved world-wide renown during the yellow fever epidemics in Memphis, Tenn., died suddenly in Memphis, aged 60 years. He was born at Golconda, Ill., of Scotch-Irish ancestry and was the son of a physician, of renown before the war. He received his education at Hanover College in Indiana and in the Louisville Medical College. He then attended lectures and visited the hospitals in Philadelphia for a year. In 1861 he located in Memphis. Dr. Sim first achieved reputation by his tireless work during the small-pox and cholera epidemics during and after the war. National fame came to him in 1878-79, during the terrible yellow fever epidemics, when, in the service of the Howard Association, he labored almost unceasingly regardless of his physical comfort and personal safety. It was not uncommon for him to make sixty visits a day to the sick. In 1882 Dr. Sim took control of the failing Memphis *Medical Monthly* and soon put it on a paying basis. He was also for years professor in the Memphis Hospital Medical College. He was once president of the Association of American Medical Editors, and was a member of the American and British Medical Associations, and of many other organizations.

MORTUARY REPORT OF NEW ORLEANS.

FOR NOVEMBER, 1894.

CAUSE.	*White.....*	*Colored...*	*Male.....*	*Female....*	*Adults ....*	*Children.*	*Total .....*
Fever, Yellow							
" Malarial (unclassified)	7	10	9	8	11	6	17
" Intermittent							
" Remittent	5	1	4	2	4	2	6
" Congestive	1	1	2		2		2
" Typho	2	4	5	1	5	1	6
" Typhoid or Enteric	4	1	3	2	4	1	5
" Puerperal							
Influenza	1	1	1	1	1	1	2
Small Pox							
Measles	1			1		1	1
Diphtheria	20	3	16	7	1	22	23
Whooping Cough	3	1	1	3		4	4
Meningitis	7		5	2	2	5	7
Pneumonia	23	26	27	22	29	20	49
Bronchitis	7	14	12	9	6	15	21
Consumption	38	25	29	34	61	2	63
Cancer	12	1	4	9	13		13
Congestion of Brain	5	1	3	3	4	2	6
Bright's Disease (Nephritis)	23	8	20	11	31		31
Diarrhœa (Enteritis)	18	13	21	10	15	16	31
Cholera Infantum	8	2	8	2		10	10
Dysentery	7	6	10	3	13		13
Debility, General	3		1	2	3		3
" Senile	12	12	10	14	24		24
" Infantile	3	9	7	5	2	10	12
All other causes	181	89	164	106	177	93	270
TOTAL	391	228	362	257	408	211	619

Still-born Children—White, 28; colored, 24; total, 52.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 25.43; colored, 39.36; total, 29.34.

L. F. FINNEY, M. D.,
Chief Sanitary Inspector.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XXII. JANUARY, 1895. No. 7.

Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

WINTER HEALTH RESORTS FOR CONSUMPTIVES.

BY DR. W. M. YANDELL, HEALTH PHYSICIAN, EL PASO, TEXAS.

I shall endeavor to prove from the records of the Surgeon General's Office and those of the Signal Service, conceded to be both accurate and impartial, that Texas, west of the 104th parallel of longitude, and New Mexico and Arizona, south of the 35th parallel of latitude, have the best winter climate in the United States for consumptives. I assume the correctness of the following propositions laid down by Dr. Charles Denison, of Denver.

PROPOSITIONS.

1. Dryness preferable to moisture.
2. Coolness or cold preferable to warmth or heat.
3. Rarefaction preferable to sea-level pressure.
4. Sunshine preferable to cloudiness.
5. Variability of temperature preferable to equability.

DRYNESS PREFERABLE TO MOISTURE.

In the "Statistical Report on the Sickness and Mortality in the United States Army, compiled from the records of the Surgeon General's Office, embracing a period of sixteen years, from January, 1839 to January, 1855, by Richard R. Coolidge, M. D., Asst. Surgeon, U. S. A.," the author says: "The most

important atmospherical condition for a consumptive is dryness —this fact has been forcibly impressed upon the compiler during the minute examinations necessary to the preparation of this report."

Assistant Surgeon G. K. Wood, one of the medical officers whose report is included in Coolidge's report, remarks in reference to diseases of the respiratory system: "The climate of those broad and elevated table lands, which skirt the base of the Rocky Mountains on the east, is especially beneficial to persons suffering from pulmonary diseases or with a scrofulous diathesis. This has been known to the French inhabitants of the upper Mississippi and Missouri for many years, and it has been their custom since the settlement of that portion of the country to send younger members of their families who showed any tendency to disease of the lungs to pass their youth among the trappers of the plains and mountains. The beneficial results of this course, no doubt, depend in a great measure upon the mode of life led by these persons—their regular habits, constant exercise in the open air and the absence of the enervating influences incident to life in cities; but that more is due to the climate itself is shown by the fact that among the troops stationed in this region (whose habits are much the same everywhere) this class of diseases is of very rare occurrence. The reports from the line of posts stretching from the upper Platte, through New Mexico to the Rio Grande, give a smaller proportion of cases of pulmonary disease than those from any other portion of the United States. *The air in this region is almost devoid of moisture; there are no sudden changes of temperature;** the depressing heats of the Eastern summers are never felt, and although in the north the winters are extremely cold, a stimulant and tonic effect is the only result of exposure in the open air. It is of great importance that the climate of this region should be generally known, that the present injudicious course of sending consumptives to the hot, low and moist coast and islands of the Gulf of Mexico should be abandoned.

"In diseases of debility the remedies are tonics and stimulants. What is more debilitating than affections of the lungs,

*Italics mine.

and what less tonic than heat and moisture combined, as is found in the climate of the Gulf coast? It is simply not cold and has no other advantage over the Northern States. The towns of New Mexico should be selected as a refuge for those showing a tendency to diseases of the lungs or scrofula; anywhere east of the Rocky Mountains and west of the region where the northers prevail."

Assistant Surgeon J. F. Hammond, in same report, from Socorro, New Mexico, directly within the belt included in this paper, says: "Phthisis pulmonalis I have never seen in the country except in two instances; once in an officer in the United States Army, and once in an American emigrant. It was developed in each before he left the United States, and each very gradually improved. One resided at Socorro and the other at El Paso del Norte."

Note that El Paso del Norte is now Juarez, Mexico, separated from El Paso, Texas, by the Rio Grande river, and that old Fort Bliss, which is now inside the corporate limits of El Paso, is included in New Mexico statistics in Dr. Coolidge's report, having always been attached to the department of New Mexico until of late years, and that Arizona was then part of New Mexico.

Gen. A. W. Greely, late chief signal officer, in an article entitled "Where Shall We Spend Our Winter," in *Scribner's Magazine*, November, 1888, says: "The map of absolute humidity for January shows, with the data herewith, that *dry, warm air* is found in Southwestern Texas and the southern portions of New Mexico and Arizona." The temperature table will show that Gen. Greely meant comparatively, not absolutely warm air.

In the following table of mean relative humidity (and all others), El Paso is taken to represent the signal stations now or heretofore in this section, ranging in relative humidity for the seven months from 43 at Fort Grant to 57 at Fort Apache. New Orleans is taken to represent Louisville, New York, Boston, Chicago, San Diego, Jacksonville and Detroit, ranging from 67 at Louisville to 73 at Detroit. San Antonio is given for the purpose of comparison, to show the difference

between the climate of that part of Texas and the great southern plateau of the Rocky Mountains.

Station.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Mean for 7 mo.
El Paso	55	55	55	52	48	40	33	48
San Antonio	69	68	70	72	68	67	75	70
New Orleans	71	72	73	72	69	70	70	71

In the Signal Service Report of 1888 a table is given showing the fifteen stations in the United States with the greatest relative humidity, and the fifteen with the "least relative humidity." El Paso, Fort Grant, Yuma, Fort Davis, Prescott, Camp Thomas and Fort Apache, the only stations in this region, make seven of the fifteen.

COOLNESS OR COLD PREFERABLE TO WARMTH OR HEAT.

In addition to what I have quoted from Surgeon Wood, touching this part of the subject, I shall only quote Dr. Coolidge, who says that "the worst possible climate for a consumptive is one with a long continued high temperature and a high dew point. An uniformly low temperature is much to be preferred to an uniformly high temperature."

Months.	Mean.								
	El Paso.			San Antonio.			New Orleans.		
	7 A. M.	3 P. M.	11 P. M.	7 A. M.	3 P. M.	11 P. M.	7 A. M.	3 P. M.	11 P. M.
October	53	75	62	62	79	68	67	76	69
November	41	61	49	52	67	57	57	66	60
December	38	56	46	47	61	53	52	60	55
January	36	53	44	44	58	50	50	58	53
February	41	60	50	49	63	55	53	63	57
March	45	67	56	56	71	62	58	68	62
April	51	75	63	63	78	68	65	75	68

The altitude of El Paso is 3764 feet, San Antonio 781 and New Orleans 52 above sea level.

The following table was compiled in 1890 from Signal Service reports from 1881 to 1888 inclusive, for the seven months October to April inclusive:

EL PASO.

Total minimum below 32 deg	426
Average minimum below 32 deg	53
Total maximum below 32 deg	5
Average maximum below 32 deg	0.6

SAN ANTONIO.

Total minimum below 32 deg	104
Average minimum below 32 deg	13
Total maximum below 32 deg	10
Average maximum below 32 deg	1.3

NEW ORLEANS.

Total minimum below 32 deg	41
Average minimum below 32 deg	5
Total maximum below 32 deg	3
Average maximum below 32 deg	.04

Note that El Paso having an average of fifty-three days in the year in which the temperature falls below 32 deg., the freezing point, had only five days in eight years in which the temperature failed to go above 32 deg. in the shade, while San Antonio with an average of only thirteen days minimum below 32 deg., or a fraction less than one-fourth as many as El Paso, yet had ten days in eight years in which the temperature did not rise above the freezing point, or just twice as many as El Paso. New Orleans, with an average of only five days minimum below 32 deg., yet had three days maximum below 32 deg. in eight years. El Paso, representing dry climates, great diurnal range of temperature, sunshine and altitude, differs more from San Antonio than San Antonio does from New Orleans, representing low, damp and equable climates.

RAREFACTION PREFERABLE TO SEA-LEVEL PRESSURE.

I transfer from Dr. Coolidge's report the following "consolidated table exhibiting the amount and ratio of sickness and mortality in the United States Army in the several regions from phthisis pulmonalis."

REGION.	Mean Strength.	Number Treated.	Deaths.	Ratio of Cases per 1000 of Mean Strength
Coast of New England	3,963	19	5	4·8
Harbor of New York	9,387	56	35	5·9
West Point	6,901	6	8	0.8
North Interior East	3,553	17	10	4·7
The Great Lakes	10,346	47	33	4·5
North Interior West	7,230	30	15	4·1
Middle Atlantic	6,299	16	14	2·5
Middle Interior East	2,456	6	3	2·4
Newport Barracks, Ky	1,454	5	4	3·4
Jefferson Barracks and St. Louis Arsenal	5,580	23	21	4·1
Middle Interior West	5,319	28	13	5·2
South Atlantic	2,800	26	5	9·2
South Interior East	5,919	43	28	7·2
South Interior West	10,013	20	25	2·
Atlantic Coast of Florida	835	2	1	2·3
Gulf Coast of Florida	2,299	16	3	6.9
Texas, Southern Frontier	4,450	18	11	4·
Texas, Western	6,324	25	12	3·9
New Mexico	5,873	8	3	1·3
California, Southern	1,707	9	5	5·2
California, Northern	1,599	9	4	5·6
Oregon and Washington Territory	1,831	6	2	3·2

Dr. Coolidge says: "The statistics for West Point should therefore be excluded from any analysis of the results exhibited, for the reason that the cadets are young, only admitted after rigid examination in regard to health and physical development, and remain but four years." Continuing, he says: "It will be perceived by an examination of this table that, with the exception of West Point, the lowest ratio of cases of consumption occurs in New Mexico, being 1.3 per 1000, and the highest in the south Atlantic region, where it is 9.2 per 1000. It will also be noticed that the regions designated as the South Interior East and the Gulf Coast of Florida give the next highest proportions, being respectively 7.2 and 6.9 per 1000 of mean strength. The ratios for these regions and also those for California are higher than for any of the regions in the northern division."

Ex-Surgeon General W. A. Hammond, in his treatise on Hygiene, quotes extensively from Coolidge's report, and remarks: "As the foregoing table shows, however, New Mexico is by far the most favorable residence in the United States

for those predisposed to or afflicted with phthisis. * * * In a service of three years in New Mexico, during which period I served at eight different stations, ranging from the extreme northern to the extreme southern part of that territory, I saw but three cases of phthisis, and these were in persons recently arrived from the United States. Inflammation of the lungs is also very infrequent, as are likewise pleurisy and bronchitis."

Fort Bliss is one of the eight stations at which Dr. Hammond served.

SUNSHINE PREFERABLE TO CLOUDINESS.

This is a self-evident proposition. For the seven months, October to April, inclusive, Yuma has an average of 1.6 cloudy days per month; Prescott, 2.3; El Paso, 2.4; Fort Thomas, 3.; Forts Apache and Grant, 3.7 each, and Fort Davis, 3.8; while New Orleans has 9.1 and San Antonio 10.4.

Assistant Surgeon J. F. Hammond, in his report from Socorro, heretofore quoted, says: "During the season of twenty-one months through which meteorological observations were made, there is but one day registered in which the sun was not visible." The nimbus "which covers the sky in seasons of continued rain, as in easterly storms, and is the proper rain cloud," is practically unknown throughout all this region, and days in which the sun is not visible are rare.

VARIABILITY PREFERABLE TO EQUABILITY.

This variability is only a great diurnal range of temperature and is entirely compatible with Assistant Surgeon Wood's statement from practical experience, that in this region "there are no sudden changes of temperature," and with Ex-Surgeon General W. A. Hammond's statement in his "Hygiene," that "it has a dry and equable atmosphere." On the contrary, the equability of the Gulf coast of Texas, with a diurnal range of only five to seven degrees, is joined with occasional sudden changes, when the blizzard sweeps down from the north, that freeze the very marrow in one's bones. This entire region is outside of the blizzard and norther belt, being protected by the Rocky Mountains, except a small part on the Fort Davis and eastern New Mexico side, where they occasionally creep in.

Gen. Greely, in his ar icle before referred to, says:

"One of the greatest benefits to be derived from health resorts in winter is the inducement for exercise in the open air, and since invalids shrink from chilling temperatures there is a necessity of not only warm days, but also absence of high winds and low relative humidity, conditions which, especially the winds, tend to rapidly abstract heat from the body."

Besides clear, bright days, without too frequent rains, are needed to enliven and cheer the invalid and remove him from the depressing impressions which always result from confiement through stress of dull or stormy weather.

" Chart V gives for fourteen stations, covering the country most frequented in winter, the velocity of the winds at 3 P. M., about the hour at which the wind is at its highest. Winds below ten miles an hour may be considered satisfactory. El Paso, Charlotte and St. Paul show the least wind. Santa Fe, San Francisco and San Antonio are most liable to high wind."

The other stations in Chart V are Augusta, Knoxville, Sanford, Jacksonville, San Diego, Yuma, Sacramento and Denver, in about the order named.

The average hourly velocity in El Paso and San Antonio is almost the same for December, January and February, but San Antonio being in the " norther " belt is, according to Gen. Greely, " most liable to high winds."

PRECIPITATION.

The average monthly precipitation, October to April inclusive, is El Paso, 0.60; San Antonio, 2.04; New Orleans, 5.07.

SUMMARY.

The record of deaths of El Paso and the testimony of reputable physicians resident here since 1882, when the first railroad came into what was then a village with a few hundred inhabitants and which has since grown to over 10,000, by the census of 1890, prove that of the hundreds of children arriving at puberty and adult age here *not one has developed consumption*, and that only three white adults have developed the disease here since 1882. It is rare also among the Mexicans.

Having suffered from asthma for over thirty years before

coming here in 1886, and having experienced entire relief ever since coming, except when I have gone east of the Pecos, when it has generally returned, to leave me again immediately on getting back home, I have been constantly interested in asthmatics and I give it as my opinion that four out of five asthmatics find permanent relief here.

The same good results are experienced with bronchitis.

This part of Texas has a better summer climate than any part of the State east of the 100th meridian or south of the 30th parallel of latitude, except that part of the Panhandle east of the 100th meridian.

EXPLORATORY CŒLIOTOMY—BULLET EXTRACTED TWO YEARS AFTER WOUND WAS INFLICTED.

By T. E. SCHUMPEBT, M. D., Surgeon Charity Hospital, Shreveport, La.

GENTLEMEN—I present here to-night a report of an exploratory laparotomy performed by me on the person of Mr. E. J. H, October 23. Mr. H. is a man naturally of good physique, 25 years of age, native American, and a user of tobacco, whisky and morphine. While in a difficulty two years since received one pistol wound in the left thigh, about its middle third, and another in the abdomen, the latter bullet taking effect on a level with and about an inch to the left of the umbilicus, his assailant when the shots were fired being about nine feet in his advance. Paralysis of the right leg ensued almost immediately and lasted ten months, he having been confined to his bed a little more than a year. Three months after the receipt of injury gluteal abscesses formed and about the same time quite a copious discharge of pus was voided per urethram with incontinence of urine, both of which are present till this day, but to a lesser degree. Mr. H. had been constantly under the care of physicians until October 6, when he applied to me for relief. He came into the hospital without assistance, save that of two crutches, very pale and emaciated from the constant drain on his system, about twenty months, through the medium of this abscess. On further examination I found the right thigh contracted and considerably atrophied, but with both motor and sensory functions un-

impaired. In the gluteal region I found four or five cicatrices that marked previous pointings of this abscess, also a perfectly round cylinder-like hole about two inches from the anus with a circumference about that of a twenty-five-cent piece, with dry, indurated, sharply defined edge, about one inch and a half deep with an abrupt termination.

In the posterior middle third of his left thigh, a little below the surface of the skin, I was able to feel an encysted bullet, and, as I have before stated, just to the left of the umbilicus was observed the cicatrix of another, this being the only trace of the bullet that had entered his abdomen; complained (but only when interrogated) of a generally diffused dull pain in the lumbar region; was not able to place his or my finger on any spot as the focus of pain. He had an intermittent temperature of 101¼ deg., which I was inclined to attribute to a malarial origin, and responded to treatment directed to this end. I proposed an exploratory cœliotomy, explaining that I might find a bullet, a piece of necrosed bone, or possibly a piece of his clothing, but whatever the irritant might be proposed to remove. After I had demonstrated the rationality of the proposed operation he assented readily, willing to hazard anything because he had almost despaired of recovery. So after the second day of normal temperature, which was about two weeks after being admitted into the hospital, my patient was ready for the operation. After preparing the patient in the usual manner, *i. e.* by shaving the pubis, scrubbing the abdomen with hot water, tr. of green soap and a brush, then ether, then alcohol, and lastly 1-1000 bichloride mercury solution, my incision was made in the median line of a length sufficient to easily admit my whole hand and to see. I selected this point for my opening because, being in doubt as to the exact location of the irritating missile, it gave me the greatest command of the field for exploration.

My objection to a short incision being that since the seat of the trouble was not very apparent, it could not have been found without a prolonged search, which is often disastrous to the patient. The time comsumed in a laparotomy is one of the chief factors in its result, and is much more important than the length of the incision, while the free exposure of the abdominal

contents is likely to do less harm than a prolonged search with the hand in the dark. My hand was first passed along the right side of the spinal column without finding anything abnormal; but on the left side, against the spine and about one inch and a half from the crest of the ilium, I very easily located a non-encysted 38-calibre bullet, which was removed with a pair of curved pedical forceps, with my finger as a guide, after incising the omentum. Leading from this bullet downward was a fibrous pus tract which I did not disturb, save to ligate its upper extremity or apex.

His bladder was very much contracted and bound down by adhesions, but further than this I found no evidence of peritonitis; the wound was closed with interrupted silk sutures and dressed in the usual manner with first iodoform, then a strip of rubber protective, then iodoform and bichloride gauze, next a layer of absorbent cotton, and over all a many-tailed bandage. This dressing was allowed to remain until the eleventh day, when I permitted him to walk into the dressing room, where I removed the stitches and found firm union. After-treatment: For the first twelve hours I allowed him to have absolutely nothing to eat or drink; for the next twelve hours he was given two tablespoonfuls of hot water to drink every two hours, and for the next twelve hours he had at the same intervals the same quantity of water with an additional ℥ss of brandy. I now began to give small quantities of peptonized milk and later on beef tea, then strained soup.

His bowels moved naturally on the second day, and I saw to it that he had a passage every day thereafter. His temperature on the second day went to 100½ deg., but was at that point only a few hours, when it fell to 99¼ deg., and after the fifth day went to normal, where it remained. Prior to the operation the abscess had been dressed twice a day for months, after the operation was dressed only once, and on the thirteenth day threw away both crutches and went home free from pain and with the abscess entirely healed. I proposed to reduce the contraction of his thigh by a tenotomy of sartorius muscle and to develop his bladder by water pressure from an elevated fountain syringe, but he allowed his over-joyfulness to overcome his better judgment.

THE THERAPEUTIC PRISMATIC ACTION OF A WELL-CENTRED CONVEX LENS.

By B. A. POPE, B. S., M. D., Clinical Assistant to the "Eye, Ear, Nose and Throat Hospital."

Every one has noticed how often a moderate eye-strain is removed by a plus lens of moderate or low strength.

I do not refer to cases where such a lens is indicated theoretically, but to cases in which it is prescribed empirically.

This relief has been put down to enlargement of the type or to relief of the accommodation. Although both of these may help (and probably often do), a little closer observation of the cases will show that there is often relief when there is no hyperopia, no presbyopia, and no diminution of visual acuteness.

Now, in these cases, it can often be found by careful testing that there is an insufficiency (slight) of one or more of the extrinsic muscles.

This is sometimes hard to bring out, but one can find it in a majority of cases by tiring the muscles of the eye.

I think it is evident that the test of the muscles when tired is the true index of their real condition, as, in actual use, they soon become fatigued.

When it is once determined that there is insufficiency, the cause of the relief is plain, as I hope to show.

A lens may be looked upon as made up of numerous prismatic surfaces, the angle of these prisms increasing regularly from centre to periphery in a plus lens, and decreasing in the same way in a minus lens. As I am dealing with convex lenses, I will restrict myself to a consideration of these. From the ordinary laws of physical optics, it is not necessary for the eye to look through the centre of a lens in order to get a clear image.

The lens can either be decentred (which is often done) or the lens can be well-centred and the eye directed a little to any side of the optical axis, without any appreciable effect on the image formed. This follows from the fact that each portion of the lens forms an image of its own (independent of all other portions), and the image of the lens as a whole is the sum of all the images of the parts.

As I have said before, decentring of lenses is often resorted to in cases of insufficiency, but it is only done where the lens itself is already indicated by the refractive condition of the eye itself.

In addition, there are great disadvantages to the eye in such cases as soon as the insufficiency is overcome.

I do not think that it has been proposed before to use a plus lens (and certainly not a well-centred one) to correct muscular asthenopia in cases where the lens itself is not indicated by the static refractive condition of the eye itself.

According to Nagel's well-known formula:

x = the convergence of each eye.

$4x$ = the sum of the degrees of the prisms used.

$\frac{x}{1^{\circ}\ 50'}$ = number of metre-angles of convergence of each eye for a base line of 64 mm.

(This last number = the average distance between the eyes of an adult in this measure.)

Applying this formula:

+0.50 Dsp. on each eye would cause a convergence in each eye of a little less than $\frac{1}{7}$ of a meter-angle.

+0.75 Dsp. on each eye, one of about $\frac{1}{5}$ meter-angle.

+1.00 Dsp. on each eye, one of $\frac{3}{11}$ meter-angle.

Of course the same thing holds true of higher numbers, but it is useless to consider them, as, in practice, it is found to be difficult to cause the emmetropic eye to take the glass—even with the aid of a weak mydriatic.

Of course, in the hyperopic, this prismatic action of the stronger lenses becomes doubly useful.

Before making any more statements I will relate two cases, and then comment on them.

Miss M. F., æt. 20 years. Complains of asthenopia.

She has headache, both in and around the eyes, and also in the occipital region. She sometimes wakes with headache in the morning.

She has noticed that these troubles are worse after much continuous use of the eyes, and that print sometimes blurs while reading.

The conjunctiva is moderately congested. V=$\frac{20}{20}$ in each eye. She does not accept any plus glass without atropine.

Under atropine the fundus is seen to be normal, and she will accept a +0.25 Dsp., which "brightens" the letters, but V=$\frac{20}{20}$ without it.

By tiring the muscles with prisms and using Maddox' test, I succeeded in bringing out an esophoria of 2 deg.

This can, of course, be relieved by a prism, but the patient dislikes the sensations of this glass.

It may be noted here that patients as a rule dislike prisms.

As there was nothing else the matter with the eyes, I prescribed a simple plus spherical glass well centred.

+0.75 Dsp. for each eye was prescribed and a very weak atropine solution.

This glass gives perfect satisfaction.

The atropine solution was prescribed because it is in some cases difficult at first to induce an emmetropic eye to relax its accommodation.

Of course this glass was only prescribed for near work.

This was equal to one-fifth metre-angle of convergence added to each eye, because the eye has only to take its natural position (that of an esophoria of 2 deg., being 1 deg. in for each eye), when the lens on each eye becomes a prism of 0.75 deg., with base out.

Thus the very act that relieves the eye also puts it in the position of least strain. For, of course, it is not the esophoria but the effort to overcome it that causes the strain. I will give only one other case, as it is useless to enumerate more than is necessary to show the idea involved:

Mr. Wm. S., age 30 years; headaches. Subacute catarrhal conjunctivitis. Inability to read long, especially at night. Exophoria = 3 deg. Hyperopia (under atropine) equal +0.50 Dsp. Acting on the assumption that he would decentre his eyes with respect to the glasses, I gave him +1.00 Dsp. in each eye, and also an atropine solution containing gr. $\frac{1}{25}$ to ℥i of water, the lens acting as an equal prism, base in. The atropine was to enable him to relax his accmmodation sufficiently to stand the plus glass.

This gave complete relief, and, in time, he became so accustomed to the glass for near work that the weak atropine solution was no longer necessary.

The correction in this case (by Nagel's formula) $= \frac{\times}{1° 50'} = \frac{30'}{110'} = \frac{3}{11}$ of a metre-angle. If the degree of heterophoria present is too great to be overcome with a plus glass or prism (and I will state here that patients will not bear a strong prism, and only quite weak plus spheres), I would do a tenotomy, preferably a complete one, but in some cases graduated.

There are great advantages in a complete tenotomy, and an overcorrection is easily relieved by a slight secondary operation on the antagonist.

I would use a plus spherical glass when the degree of heterophoria does not exceed 3 deg., and I would not attempt to correct more than two-thirds of the error—using atropine to overcome a stubborn ciliary muscle.

From 3 to 6 deg. I would use prisms, or prisms and a graduated tenotomy together.

From 6 deg. on to strabismus I would do a complete tenotomy, and, if necessary, correct any excessive result by a graduated tenotomy of the antagonist. The treatment of low degrees of heterophoria by simple spherical glasses has much to commend it.

It is an automatic arrangement, and the eye can choose for itself whether it gives greater relief to look through the glass well centred, or to look through the glass acting as a prism.

It also has the advantage that the eye, as the weak muscles get stronger, can gradually approach nearer and nearer to looking directly through the centre of the lens—at which point it has no prismatic action (or rather where the prisms on all sides neutralize each other). If the lens itself has been decentred, as is often done in practice, the prismatic action is a fixed quantity and can never be escaped from without changing the glass, so the eye, when well, is constantly subjected to the strain of a prism. This will produce heterophoria of the opposite kind. I am somewhat skeptical as to the influence of the ciliary muscle in producing the worse forms of asthenopia, and that often the relief obtained from a plus lens in such cases is due at least in part to the prismatic action of the glass prescribed.

Although the minus lens has a similar action, unfortunately the action is exactly opposite to that of a plus lens, and the

position of rest in heterophoria would only put more work on the weak muscle.

From this it would be fair to draw the inference that one ought to be very careful in prescribing glasses for myopes—only prescribing them when absolutely necessary, and then as weak as possible—and correspondingly quick to give plus glasses to a hyperope.

One has often to use quite a little artifice to bring out the heterophoria, as the extrinsic muscles are quite as liable to spasm as the ciliary muscle, and we have no drug (like atropine in the case of the ciliary muscle) to paralyze them with. Both Donders and Landolt speak of the effect of a plus lens in removing (partially) the convergence effort.

This is true both of a normal eye and of an eye with a weak internus, but if the eye has a weak externus the eye will rather tend to turn in (relatively, of course, to the line of fixation for this distance in a normal eye when no glass is used), not because the nervous tendency to convergence is not lessened, but because the eye will tend to assume the position of least strain.

It will be seen at a glance that if these things are true of the rectus externus and rectus internus, they are equally true of all the other extrinsic eye muscles as well, and also of any combination of errors. So that hyperphoria is corrected at the same time as esophoria and exophoria.

It follows from this that in low degrees of error we do not have to trouble about the kind of weakness or about what muscles are involved—the correction is automatic. We have only to consider the degree of error in order to see if the case comes among those appropriately treated by this method.

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Editorial Articles.

THE LEPROSY BOARD.

Among the good deeds performed by our last State Legislature, not the least important was the passage of a law creating a board for the management of leprosy throughout the State. After protracted agitation the Legislature did its duty, and the control of leprosy was taken from the domain of municipal politics and advanced to the dignity of a question involving the interests and pride of the whole State. In the JOURNAL's opinion, this is the second of three steps that should be taken in the comprehensive management of this loathsome disease. Taking a brief glance at the history of leprosy in Lousiana since 1807 (when the old leper hospital was abandoned), we see the fruits of the first awakening of public sentiment in the attempt to establish protection in the immediate vicinity of the people interested. The unpleasant features of the abortive first attempt at protection are too recent to require any detailed description at our hands. Our people have been so far educated upon the leprosy question that they have demanded and secured legislation from the State authorities. In accordance with the provisions of the

law, Gov. Foster appointed the following gentlemen; Drs. Isadore Dyer, H. J. Sherck, E. C. Edwards, J. J. Hooper, Mr. Allen Jumel, Mr. A. G. Phelps. The Board of Control organized, electing Dr. Isadore Dyer president and Dr. H. J. Scherck secretary.

The board has applied itself to its task with the utmost enthusiasm. It is but human for ordinary mortals to be wrathful upon the curtailment of power by a higher authority; and no exception to this rule was developed when the board undertook to discharge the duties for the performance of which it was created. It would be difficult to imagine more obstructions and annoyances of an official and perfectly legal sort than were placed in the way of the Board of Control; but those little things were not unexpected, and when they came they did not cause alarm. Persistent and intelligent effort has at last succeeded in securing a country home for the unfortunate lepers, which is far from the busy haunts of men and yet easy of access. When the board was looking around for a site, the old Fort Pike reservation in St. Tammany parish was suggested. The storm of protest and angry denunciations of people of that parish, living miles and miles away from the old fort, had scarcely died out when a similar one was raised by the proposal to establish the leper hospital in the neighborhood of the city, on Gentilly road. As the contract of the former guardian of the lepers with the city expired on December 1, 1894, the board was naturally much exercised over the state of affairs; but the inhabitants of Iberville parish, up the river, were much more exercised when they learned that the board had purchased a comfortable old plantation house in its limits, and had quietly furnished it, so that it was ready for the reception of lepers when December 1 came around. That place is still the Lepers' Home, and it will remain such until better quarters are found.

We can not blame the Ibervillians for voicing their wrath at the establishment of such an institution in their parish. No man, whether in or out of Louisiana, could truly be said to hanker after the companionship of a lot of loathsome incurables. We would, however, recommend our angry neighbors to bring into action a little every-day philosophy. As the

Board of Control is a State body, it can not establish a hospital on ground not within the jurisdiction of the State of Louisiana. A moderate amount of logic would, therefore, bring us to the conclusion that the hospital must be established somewhere within the boundaries of the State. It needs no logic at all to make us believe that the residents of the locality honored by the establishing of the hospital would promptly and vigorously protest against the very measures that would protect the protestors as much as any other inhabitants of the State.

Our neighbors of Iberville have always been distinguished for their intelligence and public spirit. We may safely set down that they know, among a vast mass of varied information, these two things: first, they know how to get in out of the rain; and, second, they know how to keep away from a leper hospital. By the judicious exercise of this latter talent, they will effectually escape the dangers of infection so vividly and harrowingly portrayed by our esteemed contemporary, the *Iberville South*. About seven years ago, we paid a visit to Scranton, Mississippi, about 82 miles east of New Orleans, to see a man whose symptoms, as described by some of his relatives living in a neighboring summer resort were very peculiar. The journalistic and scientific curiosity having been aroused, we made a trip to Scranton, and saw an advanced case of leprosy. The leonine expression was typical and the fingers had begun to ulcerate. When we called on this unfortunate creature at his domicile, he was about to sit down to his dinner, in company with his partner in the fishing business. We very regretfully declined a cordial invitation to join them at dinner, and stayed only long enough to get a brief history of his disease; the ocular examination, however, sufficed to make a diagnosis. Now, what would have happened if the Mississippi Legislature had, during the lifetime of that poor man, established a hospital at Scranton for the isolation and care of lepers? We fancy that the Scrantonians would have had just as severe a fit of virtuous indignation as the Ibervillians. We have no statistics at hand showing whether or not there were any cases of leprosy existing in Iberville prior to the establishment of the Home. To resume: the founding of leper hospital at Scranton would have called forth angry protests from the very people who were pro-

tected by it, and who had for years been in intercourse with a leper, whose ulcerated hands had for months and months handled the very fish and oysters that they ate.

To cure a disease we must first recognize the fact that it exists. It is not the part of intelligent and patriotic people to ignore or conceal an evil that is a public danger. It has long been known that leprosy existed in certain parts of the United States, but it took a long time for the people to wake up and take hold of the matter in a vigorous manner.

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In the beginning of this article, we said that we regarded the formation of the board as the second step in the final and complete disposal of the leprosy question. THE JOURNAL has already expressed itself on this topic on more than one occasion, and we take advantage of the Iberville agitation to call attention once more to plans advocated by us, namely, to turn the whole question over to the Federal Government, since leprosy is not confined to any one State, and any beneficial measures adopted by one State may be rendered nugatory by the indifference of other States; to place the lepers on some healthful island, where the climatic conditions would enable the poor wretches to end their days in comfort, and from which escape and consequent spread of infection would be impossible; and, lastly, to place the leper-island in charge of some medical officers accustomed to strict discipline, it appearing to us that the Marine Hospital Service could furnish the best custodian for such an unwelcome trust.

In bringing forward once more our particular views on the subject, we mean no disloyalty to our friends on the Board of Control, nor do we wish to belittle their unremitting efforts in behalf of their unfortunate wards; but we do insist that the solution of the leprosy question for the whole country does not lay in laws made by a State Legislature, and having no force beyond the boundaries of that State, but in laws made by the General Government, having equal force in any part of the country where leprosy manifests itself.

Abstracts, Extracts and Annotations.

MEDICINE.

THE HYPODERMIC ADMINISTRATION OF MERCURY.

The number of compounds of mercury which have been used by injection into the tissues is very large, and the author formulates the following rules for their safe employment:

All irritant or caustic preparations are, of course, inadmissible. The liquid injected must be chemically pure and sterile. The syringe must be sterilized in all its parts, and an unoxidizable needle (such as iridized platinum), not less than one and a half inches long, must be used. All injections must be given deeply into the tissues, the needle being inserted perpendicularly to the surface.

The lumbar portion of the back and the gluteal region are the best positions. Care must be taken not to introduce the syringe into a vein. Subsequent injections ought to be two to two and a half inches distant from a previous one.

The interval between each injection varies with the effect produced and the preparation employed, from twice a day with small quantities of soluble preparations to once a month with large injections of insoluble preparations, such as calomel.

Soluble Injections.—Corrosive sublimate.

Corrosive sublimate	1 part.
Chloride of sodium	6 parts.
Sterilized water	100 parts.

A Pravaz syringeful (about 15 minims) to be injected every day.

To avoid such frequent injections, M. Lukesiewicz injects one-half to one syringeful of a stronger solution every four or eight days. Corrosive sublimate can also be dissolved in sterilized oil, so that fifteen minims contain one-sixth of a grain, which is the usual dose.

Periodide of mercury is also well borne and causes little pain. One-sixteenth grain may be injected, dissolved in fifteen minims of sterilized oil, and repeated every day or every other day, as the case may require.

Succinimide of Mercury.—One-thirtieth grain in sterilized water may be given every day.

Sozoiodolate of mercury is very active, but causes much pain. The following is Schwimmer's formula:

Sozoiodolate of mercury	8 parts.
Iodide of potassium	14 parts.
Distilled water	100 parts.

About 6 minims are injected every week, and the dose may be carefully increased.

Insoluble Injections.—Calomel.

Sublimated calomel	1 part.
Liquid vaseline	10 parts.

15 minims to be injected every fifteen days.

Yellow oxide may be given in the same dose and manner as calomel.

Gray oil is less active than calomel.

Mercury (purified)	20 parts.
Ethereal tincture of benzoin	5 parts.
Liquid vaseline	40 parts.

1½ to 3 minims are injected every eight days.

Thymolate of mercury, 1 part, mixed with 10 parts of liquid vaseline, and 7 to 15 minims given every eight days.

Salicylate of mercury may be used like the thymolate.—*Therapeutic Gazette.*

THE TREATMENT OF DIPHTHERIA.

By JOHN L. HEFFRON, A. M., M. D., Professor of Therapeutics and Clinical Medicine, College of Medicine, Syracuse University.

In discussing the treatment of any disease so well known as diphtheria, we are compelled at the very outset to choose one of two courses: to survey the entire field and pass in review all the remedies and methods that have been used and commended by therapeutists the world over, or to confine the discussion to the closer inspection of those remedies and those methods which clinical experience and laboratory demonstrations have proved to be of the greatest value and most frequently curative.

In no disease is the necessity for prompt, intelligent and effective treatment more urgent. Every physician should have a clearly defined line of treatment organized in his brain, so that he can carry it out without hesitation or doubt and with effective energy. Accordingly, in this paper no mention will be made of the various treatments proposed that have not been thoroughly tried and found acceptable by American physicians, and attention will be concentrated to the consideration of those remedies that have stood the test of time and that are still dominant.

To conform to its pathology, the treatment of diphtheria is both local and constitutional; but, before entering upon the consideration of the local and constitutional treatment, it is desirable to refer briefly to the prophylaxis. The method of the dissemination of diphtheria is so accurately known that there can be but little excuse, when once a diagnosis is made, for further infection from any individual case. The isolation of the

patient in a room prepared for his reception is imperative. Such a room should be commodious, free from all hangings and upholstered furniture, pictures and bric-a-brac; the floor should be bare, or the carpet should be completely covered with crash. The bed should be simply furnished with covers that can be washed, and these should be changed at least once daily. The nurse should wear a cotton gown, and a cap that completely covers her hair, whether it ornaments her head or not. The discharges from the affected membranes should be received into sanitary cuspidors or old cloths that should be immediately burnt up. In the use of any application directed to the throat, the nurse should stand at one side, or screen herself behind a piece of glass, as do laryngologists in treating a syphilitic throat. She should disinfect her hands after each contact with the patient. The air of the room should be kept moist by steam, so that the secretions can not dry and, becoming pulverized, float in the air of the room.

Except in epidemics or in hospital practice, the careful physician will not need the protection of gown and hood, as sometimes recommended. In poor practice where proper care can not be had, he can not take too great precaution, and should protect himself and his family and his general clientage by every means known to art. He should disinfect all exposed parts of his body, including hair and beard, by thorough washing with sublimate solution, and should not enter any unaffected house before making a complete change of clothing. After the disease is over, or the absence of the Klebs-Loeffler bacillus has been demonstrated by cultures, the patient should be thoroughly disinfected and returned to the family.

For general prophylaxis, all children with a sore throat of any description should be excluded from school and from our houses until they can bring a clean bill of health from a physician of recognized ability. Kissing on the lips should not be allowed, as is so common among children and women. The use of public drinking vessels should be prohibited. The proper treatment of nasal and pharyngeal catarrhs is an important matter. It is a possibility to inaugurate and keep up an efficient cleansing of the mucous membranes of nose and throat that is so nearly pleasant that a child with a catarrhal inheritance will submit to its daily use as gracefully as he does to the universally employed tooth wash.

Recognizing the tonsils, including Luschka's, as vestigial structures, which in man subserve no useful purpose, and that an enlarged tonsil is always a source of danger, I unhesitatingly advise their prompt removal in all cases where they are diseased or project into the fauces.

The local treatment has for its objects the destruction or limitation of the growth of the specific pathogenic bacilli and the frequent removal of the poisonous ptomaines produced in the process of their rapid development.

This is accomplished by the frequent irrigation of the affected mucous membranes with solutions of agents that are germicidal, but not irritating and not poisonous to the patient, and by the destruction of the pseudo-membrane by digestive substances. In the application of these remedies it is unanimously conceded by American physicians that any method that forcibly removes the membranes and does damage to the inflamed tissues is to be condemned as worse than useless; for, however active the agent used on the swab may be, the possibility of ptomaine absorption from the denuded and lacerated submucous tissues is so greatly increased as to more than overbalance any benefit that could accrue. Any method of the employment of an antiseptic agent that necessitates a hand-to-hand combat with the child is also to be most heavily condemned, because of the excessive strain thus thrown upon an already weakened heart. More than one child in the last stages of diphtheria has suddenly died in the midst of a struggle with its nurse, and because of such struggle. By the aid of a nasal syringe or a good atomizer and an effective remedy that is not disgustingly nauseating, such scenes can be avoided and a large number of patients saved. Personally, I do not consider the choice of a particular germicide of the first importance, but hold that a most effective local treatment can be carried out with any of the popular remedies, provided the irrigation is thorough and frequent. I much prefer half-hourly irrigation with a solution of boric acid in rose-water, that is accomplished without struggle and with regularity, than less frequent use of remedies more irritating, if not more effective.

Of the substances more recently come into prominence in the local treatment of diphtheria, peroxide of hydrogen stands first. It is a clear, transparent fluid without odor, and has the chemical formula of H_2O_2. Pure, it is a most violent escharotic, owing to the fact that in the presence of organic matter it is capable of liberating four hundred and seventy-five times its own volume of oxygen. The preparations ordinarily used are the ten or fifteen-volume solutions—*i. e.*, solutions capable of liberating ten or fifteen times their own volume of oxygen. There is no question but that it is capable of oxidizing pus and of killing the Klebs-Loeffler bacillus. It has one great disadvantage. In order to hold the extra molecule of oxygen in combination, all makers have been compelled to use nitric acid in the solution. This acidity is manifest in every specimen

which I have examined. It is a variable quantity, but sufficiently marked in every specimen to impart to it irritating qualities, not due to the strength of the solution, which, independently of the diphtheritic process, is sufficient, if persistently and frequently used for a day, to cause a thin pseudo-membranous deposit over the mucous surfaces with which it is brought in contact. Dr. Squibb has demonstrated that if this acidity be neutralized, at the moment of its use, by the addition of a little of a 10 per cent. solution of soda, the efficacy of the peroxide is not diminished, and it can then be used with perfect freedom, This irritating quality of the commercial peroxide of hydrogen has been productive of so much harm that many physicians, including Jacobi, have inveighed against it. I am told that the product sold by a French firm is neutral to test-papers, and should not, therefore, be so injurious; but I can not speak from personal knowledge. In "pyrozone," a liquid with a trade mark attachment, the manufacturers claim to have a peroxide of hydrogen made without pressure and without acid, essentially permanent under ordinary conditions. It is sold in ground-glass-stoppered bottles in 3 per cent. solution, for internal use, or in sealed glass tubes, 5 per cent. or 25 per cent, for surgical purposes. The 3 per cent. solution is not neutral, and is quite irritating to my own throat. In using peroxide of hydrogen it is observed that rapid oxidation of the pseudo-membranes and the accompanying secretion takes place, which is indicated by the accumulation of bubbles of gas, and the expectorations are foamy. After an application nearly an hour must elapse before the improved condition can be clearly seen. If the membrane be thin, the fifteen-volume solution can be diluted with ten times its bulk of water, and the solution applied by means of an atomizer; or it can be diluted with fifteen volumes of water and introduced through the nose by a syringe. If the membrane in the fauces is dense, a glass syringe is used and the fine point made to penetrate the membrane, and a few drops of a strong solution is introduced under the membrane. The repetition of this every second hour results in the disintegration of the membrane in a short time.

Carbolic acid in 1 per cent. solution, alone or combined with alkalies or borax, has long been a favorite, and of its usefulness there is little question.

The bichloride of mercury with citric acid, in 1 to 1000 or 1 to 2000 solution, is effective, not disagreeable, and (if not used in concentrated solution) not irritating, and it is not toxic except in those especially susceptible to the action of mercury. The same can be said of the biniodide of

mercury in solution of proper strength, say 1 to 10,000, or even 1 to 20,000. Where children are old enough to gargle and intelligent enough to eject the solution, there is no more effective medication than that afforded by corrosive sublimate or by carbolic acid. In very young children neither should be used, because of the danger from systemic poisoning. At the earnest solicitation of a patient for whom I had prescribed a gargle of permanganate of potassium, I made a personal trial of the solution. I have never prescribed it since, and I am glad to know that it is no longer mentioned as a remedy of power in the treatment of this or any other throat disease.

Salicylic acid in various solutions has been used, but it offers no superiority to other substances more agreeable.

Boric acid in saturated solution, fifteen grains to the ounce, is capable of greatly modifying the development of the specific bacilli, though it is not so quickly destructive of their energy. Its freedom from odor, from taste, and from colors makes it a favorite remedy with very many physicians. It is so little irritating that it can be used freely through the nose as well as the fauces, and because of this property is especially adapted for use by those who believe in the frequent flooding of the mucous membranes of the nose and fauces as a matter of routine practice.

I am quite sure that I have seen far better results by this method of procedure—injecting a drachm of a 4 per cent. solution of boric acid in rose-water through each nostril every half hour, day and night—with the peaceful co-operation of the patient, than I have from the use of other solutions, more powerful but more disagreeable, forced upon an unwilling child.

The vegetable acids—acetic, citric and malic—are of undoubted service in the treatment of diphtheria. The pineapple contains much malic acid and a peculiar substance claimed to have solvent power on fibrin. However that may be, the use of pineapple syrup or of lemon juice and sugar, as a vehicle for the medicine to be given internally, will be appreciated by every child, and the selection of Rhine wine as a favorite alcoholic will permit of the addition of vegetable acids as allies in our treatment which are not to be neglected.

Within a comparatively recent period the use of digestive ferments to destroy the diphtheritic membrane has been extensively practised. This use is scientific. The digestion of the membranes does not cure the diphtheria, but it exposes the germs to the action of whatever germicide may be immediately afterward used, and, equally important, makes it possible to wash away

their deadly product before it becomes absorbed. Pepsin was early used, but because it was less active in alkaline fluids it was supplanted by trypsin, which, again, has the disadvantage of being active only in an alkaline medium. Either can be used in concentrated solutions or as a glycerole, or the powder can be blown directly upon the membrane. Better than either pepsin or trypsin, because it is equally active in alkaline and acid media, and because its action is augmented rather than destroyed by the ordinary solutions of the various germicides, is the vegetable pepsin extracted from the melon-like fruit of the pawpaw tree. A friend tells me that in Florida, where the native beef is the toughest ever known to man, the Crackers have learned that the meat can be made tender by wrapping it in the leaves of the pawpaw, and the most refractory specimen yields to a night's action of the cut slices of this marvelous melon. I have often demonstrated its solvent powers upon fibrins, and have made use of it in solution with an atomizer, but quickly discovered that a watery solution underwent decomposition very rapidly, and inside of a very few hours developed an odor that rivaled that of some of the so-called pure pepsins. Accordingly I began using it as a powder, blowing it upon the affected surfaces, or sometimes as a thick paste, carefully painting it over the fauces. By recent investigations by Professor Chittenden, M. D., of Yale, it has been definitely established that a solution of papoid can be made permanent by the addition of boric acid or salicylic acid or bichloride of mercury, and that these substances, instead of interfering with the activity of papoid, actually increase its solvent powers, so that an application can be made that is at once solvent and germicidal.

If the diphtheria becomes laryngeal, local medication must then be carried out by means of medicated steam or by volatilized or sublimed drugs. Indeed, it has become habitual with me in every case of diphtheria, except of a very light grade, to order water evaporated in a shallow vessel over an alcohol or oil lamp, so that the air of the room shall be constantly charged with moisture, and to direct that into the water, from time to time, shall be put a tablespoonful of a mixture containing half an ounce each of pure carbolic acid or wood creosote and oil of eucalyptus and six ounces of spirits of turpentine. It seems to me reasonable to think that an atmosphere charged with these volatilized drugs, which are known to be valuable antiseptics and stimulants to the respiratory mucous membrane, should prevent the invasion of the larynx and trachea. It is in evidence that in cases where it has been early and persistently used complete obstruction has not occurred, and in cases of great malignancy and rapidity, where

tracheotomy was early necessary, the constant use of this steam and the occasional spray of lime water increased the percentage of recoveries. Lime water is chemically a solvent of the pseudo-membrane; it is also possessed of marked antiseptic properties; it is astringent and very soothing to an irritated mucous membrane. Sprays of finely atomized warm lime water should be frequently, almost constantly, employed in diphtheritic croup. It does not answer to slake lime for the accomplishment of this purpose, though in an emergency the slaking of stone lime gives large volumes of steam, which of itself is a gain. But steam can be generated so easily by dipping heated irons into water, or by rigging up a steam generator that can communicate with a tent-covered bed, that the crude method of obtaining that result with slaking lime is rarely resorted to.

The sublimation of calomel is highly recommended in laryngeal diphtheria. In a recent discussion to which I had the pleasure of listening, Dr. J. Lewis Smith said that his method had cured cases of larnygeal croup in which it seemed that an operation must be necessary, and he further asserted that O'Dwyer and others of wide experience say that in cases where operations have been necessary, the recovery has been more prompt and more satisfactory under the influence of this drug. The sublimation is accomplished by placing on a tin plate over an alcohol lamp fifteen grains of calomel, and confining the dense white fumes resulting inside of a tent. It is asserted that no case of systemic poisoning has occurred in a patient, though nurse and physician have sometimes become salivated. I have used a modification of this method, and have observed that while the fumes were very irritating to the attendants, the patient was unaffected, and indeed apparently enjoyed the procedure.

To summarize the local treatment that to-day seems the most effective, we would include the early and constant use of steam medicated with the turpentine mixture; the cleansing of the fauces with a solution of papoid, followed by frequent irrigations day and night with bichloride solution or boric acid or Dobell's solution, properly administered through a blunt-pointed nasal syringe; the sublimation of calomel as soon as the larnyx shows evidence of invasion the choice of vehicles containing fruit acids in the administration of medicine and of a sour wine as an alcohol.

The indications for the constitutional treatment are three —to support the system, to antagonize the ptomaines and to support the heart. For the fulfilment of the first indication

food is of the first importance, and any medical treatment that interferes with the ability to take and assimilate a full allowance of nutriment is worse than useless. The food should be easy to digest, bland, and for the most part fluid in form; and for this purpose milk and beef-juice answer admirably, though other suitable things may be allowed, like oysters, fresh eggs, oatmeal gruel and the various invalid foods, especially those partly digested. It should be given every three hours, day and night.

The experience of the past has taught us that in the tincture of the chloride of iron we have a remedy of absolute value, and that the combination with it of chlorate of potassium in small doses enhances its value and does not endanger the kidneys. A mixture containing these agencies in a fruit syrup, like pineapple syrup, is readily taken, and to be effective must be frequently given and in such doses as the general condition of the patient makes necessary. The chlorate of potassium has no specific effect upon the diphtheritic process, but it stimulates the non-infected membrane to healthful activity, and aids materially in preventing the spread of the disease.

The bichloride of mercury in small doses frequently given has been used sufficiently long to have gained a place in the list of effective remedies. It is my practice to give $\frac{1}{500}$ grain of bichloride of mercury, sufficiently diluted, every half hour, day and night, and I have yet to see any but beneficial effects from this employment of the drug. It supports the system, stimulates the appetite, and prevents fermentation of food, and has some antiseptic action locally as it is swallowed.

Small doses of quinine are sometimes of use, but, in my experience, the early and persistent use of therapeutic doses of strychnine sulphate or nitrate accomplishes much more; for, while it is stomachic and stimulates digestion, it is the best possible stimulant to cardiac and respiratory centres, and antagonizes the baneful effects of the ptomaines upon the nervous system as but one other drug in the materia medica does.

The use of alcohol is indicated in nearly every case. Under the influence of the ptomaines, it is astonishing what quantities of alcohol can be exhibited without producing characteristic effects. I hold with those who believe it demonstrated that alcohol, in cases of systemic poisoning, whether from snake bites or ptomaine saturation, supports the system and antagonizes the alkaloidal poisons more efficiently than any other remedy we have. It should be given early, and unless there be some indications for some other form, the choice should be an old, sound Rhine wine. If the acid of this wine fails to agree with the stomach, a pure whiskey diluted with water

should be selected. The dose depends only upon the necessities of the case; and yet it should not be forgotten that it is possible, even in diphtheria, to produce acute alcoholic effects.

If, with these drugs properly administered, the heart shows signs of failure, resort must be had to musk and digitalis. In cases of systemic poisoning, as in typhoid fever or in diphtheria, musk has seemed to me to be more effective than digitalis or any other cardiac stimulant. Indeed, I have come to feel that if musk fails to stimulate the heart where an arrest of the circulation impends in this class of cases, medical art is of no more avail.

The use of pilocarpine has been advocated by eminent authority, but fears of its depressing effects upon the heart seem so well founded that it would be well to wait for others to prove its safety before we advocate its use.

The list of possible remedies is very long, its very length being a proof that we have no specific as yet against a disease that takes more lives annually than does the much-dreaded yellow fever or the cholera.

If time shall prove that in the recent discoveries in the bacteriological laboratories of Berlin a specific has at last been discovered that will not only render our children immune from this disease, if given as a prophylactic, but also cure them safely and quickly when attacked by this dreaded destroyer of life, we can look into the faces of our little ones with a feeling of safety that we do not now know.

Since the preparation of the above, Professor Loeffler's paper on "The Local Treatment of Pharyngeal Diphtheria," read at the last International Medical Congress, has been published in the *Deutsche Medicinische Wochenschrift* for October, 1894.

Recognizing the great advance made in the therapeutics of diphtheria by the discovery of antitoxin, he is still loath to forego the local use of disinfectants for the following reasons: first, because in a very long series of cases the local use of the remedy he has evolved from bacteriological and clinical studies has proved of astonishingly great value; secondly, because true diphtheria is so often associated with other complicating pathological processes, the result of pus-producing cocci, none of which are favorably affected by antitoxin, but all of which are destroyed by his remedy; and, thirdly, because the remedy is inexpensive and always at hand.

Briefly stated, the remedy he has arrived at from years of bacteriological and clinical investigations is a combination of disinfectants stronger than any of its components, not at all injurious to the individual, though killing the Klebs-Loeffler bacil-

lus, the pseudo-bacillus and streptococci in five seconds, and the staphylococci in forty seconds *in situ* in the membranes and the secretions. It produces a sensation of burning, which passes off in a few minutes, and it is not disagreeable in taste or odor.

For the purpose of diminishing the disagreeable sensation at the seat of application, menthol has been added, and the completed formula is as follows:

℞ Menthol ..... 10.9 c. c. m.
Solve in toluol ..... 36 c. c. m.
Alcohol, absolute, ad ..... 60 c. c. m.
Liquor ferri sesquichlorat ..... 4 c. c. m.
M.
Put in a brown glass bottle with a glass stopper.

The solution keeps for months without losing any of its efficacy; its application is simple. The diseased area is to be cleansed of mucus by wiping it with a pledget of absorbent cotton, and then a second pledget saturated with the solution is to be held against the spot for five to ten seconds. The application is to be repeated every three hours in the beginning, and less and less frequently as improvement is noted; and, finally, but once a day, to prevent the redevelopment of the disease from bacilli that may have been deeply lodged in the crypts of an irregular tonsil.

The results obtained in cases seen on the first day of the appearance of the disease have been uniformly and rapidly curative. There has been no extension of the process downward into the larynx or forward into the nose, and convalescence has not been attended by any of the paralyses.

In cases seen later the results compare favorably with those attained by the use of antitoxin at a similar period.

The effect is shown by a return of the temperature to the normal in from twenty-four to forty-eight hours, and a decrease in the frequency of the pulse, which, however, does not return to the normal standard until about two days after the temperature becomes normal.

The improvement in the general condition is rapid and very marked. The membrane soon becomes changed in consistence, softening and shedding in large flakes in a comparatively short time.

In severe cases the mixture containing the iron solution is always to be chosen, but in cases where the patient is so sensitive as to be unable to bear the transitory smarting of the application, and in cases accompanied by putrefactive processes where the iron becomes changed into the sulphide, discoloring the pharynx and the tongue, and in all of the pseudo-diphtheritic diseases, he recommends that for the iron solution there be

substituted two cubic centimetres of meta-cresol or two cubic centimetres of creolin, and the alcohol be increased by the same amount, and asserts that the efficacy of the solution is but little impaired, though it does not exert its influence so deeply.

Since reading this paper I have had but one opportunity to test the remdy. In this case the results tallied exactly with those detailed above.—*Therapeutic Gazette.*

DEEP WELL POLLUTION.

The useful lesson that the mere depth of a well does not necessarily afford evidence of the purity of its water, is furnished in the history of a well near Edinburgh, bored to a depth of 204 feet from the surface. The well was sunk at the site of a spring, 800 feet from a quarry which received the sewage of some twenty-five individuals—the sewage disappearing, as is believed, into fissures in the rock. At a depth of 114 feet the water was found to be pure, but when the well was subsequently bored to an additional depth of 180 feet it was found to contain organic impurity. This additional boring had pierced an impermeable bed above which the water was pure, but below in the sewage had found its way through rock fissures from the quarry 800 feet distant and 60 feet higher. The source of pollution of the deeper water supply was made clear by bacteriologic examination; the cracks and fissures had allowed the sewage to pass in an almost unaltered condition, so that the bacteria discovered were not materially modified in their morphologic and biologic characters, as would have been the case had the sewage been subjected to the usual processes of filtration and aeration. The case is also cited by Dr. Houston, in the *Edinburgh Medical Journal*, as another argument for the necessity of combining the bacteriologic with the chemic examination of suspected water supplies.—*Journal of Am. Med. Assn.*

A NEW CURE FOR HAY FEVER.

Fuber, of Hamburg, who suffered a great deal from hay fever during last summer, noticed that in winter a coryza was accompanied with hot ears, which regained their normal temperature when the discharge from the nose was established. He tried a reverse order of things on the hay fever, and rubbed his ears until they became red and hot. It is now the third summer he has led an endurable existence. As soon as

there is the least amount of fullness in the nose, the ears are noticeably pale. A thorough rubbing of the ears has always succeeded in freeing the nasal mucous membrane from congestion. The rubbing must be thorough and repeated.—*Med. Reporter, Calcutta.*

LARYNGEAL AFFECTIONS IN TABES DORSALIS.

Dr. Schlesinger divides the laryngeal affection in tabes into three groups, viz.: 1. Laryngeal paralyses. 2. So-called laryngeal crises. 3. Other disturbances of innervation. Not all laryngeal disturbances ban be included in this classification, as, for instance, laryngeal vertigo. The first group is distinguished by a regularity in the order in which the muscles are affected. The paralysis is generally bilateral and effects at first only the abductors. Patients are able to speak without effort, but suffer from inspiratory stridor. The laryngoscope shows typical posticus paralysis. The rima glottidis can not be enlarged and dispnœa and sometimes unconsciousness results. In milder cases of paralysis the patient experiences disagreeable sensations in the region of the larynx, with attacks of vertigo, a condition termed by Charcot "laryngeal vertigo." The laryngeal crises need not always be complicated by laryngeal paralysis. The symptoms are sudden disagreeable sensations in the laryngeal region, followed by dyspnœa and a cramp-like fit of coughing. Patient becomes cyanotic, excited and anxious. Twenty attacks may occur in one night.

Authorities differ in regard to the etiology of these attacks. Burger believes they are due to changes in the peripheral nerves and muscles caused by degeneration of the vagus and accessory nuclei in the medulla, together with an increased excitability of the superior laryngeal nerve. Prof. Obersteiner, however, found these nuclei intact in a case of tabes. Semon's hypothesis is that with every impulse sent to the larynix not only the respective muscles, but their antagonists are innervated, and the latter cause cramp-like closure of the glottis, because the abductors are paralyzed. The last group embraces the so-called ataxic disturbances of the larynx, as ataxia of the vocal cords, producing disturbances of innervation and scanning speech. Schlesinger refers to two cases of laryngeal hemiplegia characterized by twitching of the arytenoid cartilages in one case and of the vocal cord of the paralyzed side in the other, although the recurrent nerve was paralyzed. Exner has thrown some light on these cases. He has found that the oblique and transverse muscles are supplied by the superior laryngeal nerve, so that when the latter is in-

tact, the normal respiratory impulse can produce twitching of the arytenoid cartilages. *Wien. Med. Blaett., No. 19, 1894.*—*Review of Insanity and Nervous Diseases.*

TREATMENT OF CHOREA.

Dujardin-Beaumetz remarks (*Bull. gen. de Therap*, March, 1894) states the first procedure in treatment of chorea is to determine the type; chronic chorea, double athetosis and cerebellar heredoataxy are incurable. True chorea may be divided into two classes: Chorea of rheumatismal origin and chorea, due to hysteria (which is pretty frequent in childhood). In the first it is wrong to rely on the salicylates alone. Antipyrin in gram doses four times daily in punch syrup gives better results. Neither phenacetin nor asaprol are of much value, but exalgin is. Legroux finds potassium bromide of more value. The dose of exalgin is 4 to 75 centigrammes, taken in four, five, six, seven doses. The single dose should not exceed 30 centigrammes at any time.

TYPHOID FEVER OF IRREGULAR TYPE.

The teacher of medicine, whether he teach by lecture or text-book, finds it necessary to create, in the mind of the student, a definite, coherent picture, including certain symptoms and pathological conditions to which the name of a particular disease is attached. And too often the student is content to take this distinct impression as a complete acquaintance with the subject, instead of taking it as merely a foundation or skeleton on which his acquaintance with the disease may subsequently be built up. The distinct impression answers well enough for the examination-room (provided the examination be by verbal questions and not clinical), but, in practice, it does not find its counterpart—the typical case is the rarest of cases.

This tendency, that we have all to associate a particular clinical picture with the name of each disease, begets the inclination to sharply classify all our cases. Each disease being regarded as a distinct entity, a particular case must either be an example of that disease or it must be something different. A case of fever must be either a case of typhoid, or it must be something else, as a simple febricula; and, between the two—in the mind of the doctor—a great gulf is fixed.

This tendency to rigid classification and sharp distinction is exaggerated in the careful and accurate medical thinker,

by the disgust he feels when he encounters the work of the practitioner who has never grasped even the first distinct clinical picture of any disease, and diagnoses at least two or three different diseases in every instance, whose cases are all complicated, whose sore throats are apt to be "diphtheritic," whose simple fevers show "a tending to typhoid." And the tendency to rigidity of classification is by no means relaxed by hearing of the doctor who "aborts" pneumonia, and "just prevents" his patients from having scarlet fever or measles.

Definite classification and systematic arrangements have their value. Nevertheless it remains a fact that nature is continuous, that natural phenomena defy rigid classifications, and that pathological conditions, which can separate so nicely in our treatises, will overlap and run into each other and get badly tangled in the actual case. It is not inconceivable, therefore, that the specific cause of typhoid fever may be capable of producing simple fever, and, starting from that, may produce in different individuals every possible grade or association of symptoms, up to the most typical or malignant case of typhoid.

It is less than half a century since Gerhard, Shattuck and Stille, working out the problems attacked by the French clinicians, established the claim of typhoid fever to recognition as distinct from typhus and all other continued fevers. And it was unavoidable that the discussions incident to the adoption of the new view, should predispose the professional mind toward a sharper separation of typhoid from other allied conditions than the whole facts of the case warranted. Everything that was not clearly typhoid was rejected. Cases not running a typical course, it was held, were cases of mistaken diagnosis.

But the tendency ever is for the pendulum of thought to seek the position of nearest approximation to truth. And with the place and general characteristics of typhoid fever well established, observers have busied themselves with atypical and anomalous cases. The most widely recognized of these are the walking cases in which the bowel symptoms are not violent and the sense of weakness and sickness is not sufficient to cause the patient to stay in bed; although the other classical symptoms, the fever, eruption, bronchial irritation, and enlargement of the spleen may all be typical. It has been recognized, too, that constipation might replace diarrhœa or bowel symptoms might be absent—a case is reported where the autopsy showed no lesion of the intestine; and, as with other specific fevers, the eruption may, at times, be atypical or absent.

The last symptom to be retained as essential to the recognition of a case as properly to be classed as a typhoid fever has been the fever. Perhaps this has been due to the introduction of the clinical thermometer into general use within the last generation. It is a characteristic of the human mind to seek some ultimate test or guide to which appeal can be made in cases of doubt, and for the general practitioner of medicine, this has very often been the clinical thermometer.

The course of the fever, its gradual rise and decline with evening exacerbations and morning remissions have been regarded as pathognomonic. But it is now generally admitted that in exceptional cases any of these typical characters may be absent.

The latest work upon the subject (*Flinn's Practice*, edited by Henry), says: "More or less increase of the heat of the body is invariable." Of course, fever without elevation of temperature, is etymologically absurd; but when the term stands for a specific disease, of which pyrexia is only one symptom, the absurdity vanishes. Cases of typhoid without rise of temperature have been recorded by some of the German observers, and in a paper read before the Colorado State Medical Society (*Medical News*), Fisk reports two such cases, in one of which the temperature was persistently abnormal. He says: "I have repeatedly noticed in typhoid seasons patients with normal or subnormal temperatures, whose condition I could only describe as typhoid, upon whom treatment at my hands would make but little impression. These conditions I have come to regard as a species of a febrile typhoid, and am learning to put these to bed at once and treat them as such, in which way I acquire the speediest and surest results.

"Unquestionably, we shall have to divest ourselves of the belief that the typhoid state is invariably accompanied by the typhoid temperature, and we are learning that the condition to which we have given the name of 'enteric' or 'typhoid' fever is one that admits of wide variations from that which has been regarded as the type."—*Philadelphia Polyclinic.*

THE BIOLOGY OF THE AMEBA: DYSENTERY.

Prof. Celli (Rome) reported some of the results of an investigation which he had undertaken into the life history of ameba. The best method for study was in the hanging-drop culture, which rendered it possible to follow the development of the organisms. By this means it had been found easy to

obtain pure culture of six species, that is to say, as far as regarded the ameba themselves, for it had not been possible to exclude entirely bacteria. Ameba resisted the action of alkalies, and by using very alkaline media it was possible to obtain cultivations almost free from bacteria. A classification of the ameba could be founded upon a study of their ameboid, reproductive, resting and cystic stages. The first and the last stages were of the greatest importance in this respect. Reproduction took place always by scission, never by sporulation. Since sporulation was constant in the plasmodium malariæ, it might be concluded that this organism was not an ameba but a sporozoön. The resting stage presented characters which were only transitory, but it was important to be acquainted with them, since in the stools they might be met with in this stage. The time occupied by the cycle of development was constant under similar conditions of culture material and temperature, and afforded a means of distinguishing between the ameba. The species so far cultivated were (1) ameba lobosa (var. guttula, oblonga, ondulans, coli); (2) A. spinosa, (3) A. diaphana, (4) A. vermicularis, (5) A. recticularis, (6) A. arborescens. Several species might be found in the same intestine. The commonest was A. spinosa, which had been found under very different conditions in healthy persons, as well as in patients suffering from dysentery and intestinal catarrh.

In 34 cases of dysentery which he had carefully examined Professor Celli had found A. diaphana 5 times, A. coli 4 times, and A. spinosa, A. vermicularis, and A. reticularis once. In the other cases no amœba were found. These facts showed that these protozoa must be of very secondary importance in the etiology of dysentery. On the other hand, bacteriological investigation had shown that in the stools of dysenteric diarrhœa, the bacterium coli was constantly present, often in pure culture, at other times associated with the pseudo-typhoid bacillus. This observation did not prove that the bacterium coli was the cause of dysentery. It was indeed far from being proved that this microbe could acquire a virulence so great and so specific as to produce a disease as typical in its clinical and epidemiological characters as dysentery.—*British Med. Journal.*

STROPHANTHUS AS A REMEDY IN ALCOHOLISM (SKWOZOW).

The author communicates three observations on intermittent or periodical drunkenness treated by tinct. of strophanthus, in doses of seven drops, three times a day. Before the dose the patient was nauseated, but had no vomiting. After two or

three minutes he experienced a sense of heat, with profuse sweating, and disappearance of the nausea. After the second dose the desire for alcohol vanished. There were neither delirium nor hallucinations. This reaction of strophanthus is limited strictly to alcoholism; it does not so react in persons, healthy or sick, where there is no alcoholic intoxication in question.—*Times and Register.*

WATER-CRESS AND TYPHOID FEVER.

The Medical Officer of Health to the parish of Lambeth has been drawing attention to the connection between water-cress and typhoid fever, diphtheria, and other ailments. His attention was first attracted by several cases of typhoid which had occurred in his district after the victims had eaten some water-cress. He traced the plants to the place of their growth. The water-cress beds were situated on the outskirts ot London, and occupy a superficial area of twenty to twenty-five thousand square yards in extent. Through the length and breadth of the farm, which is terraced and subdivided into sectional beds, a gentle current is maintained through the steady inpour of a stream presenting the appearance of water that had traversed a peaty soil. The stream enters the beds lying at the highest level, and finally empties itself into a way-side stream. Dr. Verdon took a sample of water from the streams, at the upper beds, where the foliage was thickest and the growth most luxuriant. Upon analysis the fluid presented all the chemical characteristics of liquid sewage, containing innumerable colonies of micrococci and bacteria, the results leading Dr. Verdon to believe that the connection between sewage and water-cress is a prevalent one, and that many cases of typhoid fever, diphtheria, and other diseases of obscure source derive their orgin from the noxious elements of sewage that must at times be ingested when this green stuff is eaten.—*London Cor. Am. Pract. and News.*

GLYCOSURIA FROM TAKING THYROID EXTRACT.

Dale James records a case in which a man of forty-five, an old psoriatic, took, without effect on his psoriasis, two tabloids daily. A week after he began to take four; however, he experienced depression with flushing and palpitations. The nervous symptoms increased; he found difficulty in writing, and felt and looked a very old man. A week later there were

all the symptoms of marked glycosuria, which disappeared when the thyroid was discontinued, and he was put on a diabetic diet, but the psoriasis was in no way benefited.—*British Journal of Dermatology.*

BACTERIA IN BREAD AND BUTTER.

The New York *Medical Record* of the 17th ult. gives a summary of a report recently published in the *Lancet*, wherein Drs. J. Waldo and David Walsh give the results of their studies, from the bacteriological standpoint, made upon cultivations, "from sixty-two loaves of bread taken from the various bakeshops of London. Some one of thirteen kinds of bacteria were found alive in all these loaves."

Bacteria (or their Spores) Found in a Living Condition in Freshly Baked Loaves of Bread.—Bacillus subtilis, Variety 1 (hay bacillus); bacillus subtilis, Variety 2 (hay bacillus); bacillus subtilis, Variety 3 (hay bacillus); sarcina (*a*), large; sarcina (*b*), smaller than (*a*); bacillus A (large, thick, rounded ends); bacillus B (large, thick, smaller than A); bacillus C (small, copious spore formation); bacillus D (smaller, still some spore formation); bacillus E (bacillus figurans); micrococcus A (small white colonies); micrococcus B (rosaceus [?]); accidental; staphylococcus (very regular, larger than staphylococcus aureus).

From a number of experiments made on loaves baked in a small laboratory oven it was found that: (1) The average maximum temperature in the middle of an ordinary quartern loaf during baking varies from 163.4 to 186.8 deg. F. and in small loaves from 186.8 to 203 deg. F. (2) There is a steady increase of temperature in the centre of any loaf during baking; thus in a quartern loaf during one hour it rises from 25 deg. to 75 deg. C., and in a half-quartern loaf from 25 deg. to 88 deg. C. during the same time. For the first forty minutes the maximum temperature is probably not more than 48 deg. or 50 deg. C. The practical inference is that any organisms that might be present in the centre of a loaf would be exposed for a short time only during baking to a maximum temperature of 73 deg. to 86 deg. C. (163.4 deg. to 186.8 deg. F.) in a quartern, and of 86 deg. to 95 deg. C. (186.8 to 203 deg. F.) in a half quartern loaf.

It is known that most bacteria are not destroyed by an exposure to the temperatures above mentioned as the average for the centre of a loaf during baking, The death point of bacteria has been generally expressed by Kock and Wolfhiigel in

the following passage: (1) Sporeless bacteria are destroyed in one hour and a half by hot air at a temperature slightly exceeding 100 deg. C. (212 deg. F.) (2) Spores of fungi require one hour and a half at 110 deg. to 115 deg. C. (230 deg. to 239 deg. F.). Spores of bacilli require three hours at 140 deg. C. (252 deg. F.). It should be noted that these statements apply to dry heat only. In the middle of the loaf there is presumably moist heat, which is of course more destructive to organisms, and on that account we must make a considerable reduction in the figures of Koch when we apply them to fungi and their spores inside a loaf.

The authors draw the significant conclusion:

"We see no particular reason why the origin of many mysterious septic invasions of the human body may not eventually be traced to the agency of bread. A generation ago milk was not suspected of being the means of spreading disease, and a similar observation applies to water. At any rate, the subject dealt with in this paper seems to us to be well worthy the attention of all who are interested in the scientific developments of preventive medicine, no less than in the protection of the public that consumes the bread."

The above brings forcibly to our remembrance a case of diphtheria which we discovered in the manufacturing department of a bakeshop not more than two years ago. The patient was a girl, aged ten years. She was coughing up and spitting out, and when we examined her throat, vomiting out the bacilli of diphtheria among the boxes and barrels which held the ingredients which were to go into the bread and cakes which were to be distributed among the customers of her father the next day.

We had the child speedily removed to an upper story, but we could not condemn the baker's stock, nor under the law institute any effective measures for the protection of his customers. The many tuberculous sellers of things to eat who are permitted to spit at random upon their floors, and to cough *ad libitum* over the things which they sell, are, as every doctor knows, the opprobrium of public hygiene, and yet it is seldom that even the physician can suggest to the offender or his family the danger to the public without giving offence, and much less can he institute any effective measure for its prevention,

But these aside; if bread after passing through the oven can be a carrier of the germs of disease, what shall we say of butter, which often comes from cows themselves diseased, and is always made from uncooked milk, which, from the stable-boy who milks the cows to the butter-maid who pats the greasy

mass into the cake for the consumer, must run a gauntlet of germs, specific and non-specific?

Volumes have been written about milk as a carrier of disease, but the sanitarian seems to have overlooked the fact that all the mischief that milk can do may be done by butter with only this grewsome difference: Milk can be sterilized without prejudice to its palatability or reduction of its value as a food; but butter can not be sterilized without serious damage to its best qualities.

The editor says that the authors offer no specific remedy for this menace to public health, except "that bakehouses and bakers should be kept clean, and that the whole process of bread-making be placed under sanitary control."

It might be possible to sterilize the raw materials of the bakeshop by submitting them to a sufficiently high temperature for a sufficient length of time; but this would seal up but one of the many avenues of infection, and the results of this investigation go only to confirm what every thoughtful and observing physician, with the facts of science, and the behavior of those who prepare food for the people, before him, knows too well, to-wit: that most, if not all, diseases gain entrance to the bodies of their victims through food and drinks. He knows, moreover, that immunity of contagious and infectious diseases can be attained only by placing all caterers to the human palate under absolute governmental sanitary regulation.—*Editorial, American Practitioner and News.*

THE USE OF PEPTOMANGAN FOR ANÆMIA IN PULMONARY TUBERCULOSIS.

The anæmia of tuberculosis differs from some other forms in being as a rule the result of the deleterious effects of toxines upon the blood or upon the blood-making organs.

Simple anæmia at times precedes the development of tuberculosis, and becomes a predisposing factor to infection with the specific germs, and in the course of the disease such anæmic states may also result from gastro-intestinal complications. These do not come within the limits of this paper. While the toxic form can not always be distinguished because requently associated with the other, toxines must be recognized, nevertheless, as a chief cause of anæmia in all contagious and infectious diseases. In its treatment the indication is, of course, the prevention of the production of the toxines within the body, which can only be accomplished by the removal of the pathogenic germs, or by the production of immunity from their toxines.

The destruction of the specific germs of tuberculosis within the living organisms, or immunity from their toxic products, occur naturally in strong and healthy persons who show no predisposition to the acquirement of tuberculosis. If infection occurs in such, their tissues, and especially the blood, are capable of offering successful resistance, and the organism is preserved in its integrity.

In the established disease, the resisting power of the particular patient has evidently been insufficient, either by reason of the organism being overpowered by the excessive quantity of infecting material, or by reason of the minor resistance on the part of the tissues where the specific germs gained entrance. This view is so uniformly accepted, and in the light of pathological investigation as well as of clinical experience it is so well proved, that there is no necessity for me to dwell upon it further, neither is its elucidation contemplated in this paper.

While our direct treatment of the disease with specific germicidal remedies, inaugurated by Professor Koch four years ago, is now still further advanced toward success through the purification of the remedy by Prof. Edwin Klebs, and by the experience obtained since its introduction, we must, nevertheless, not lose sight of the resisting power of the patient and of its increase; as far as that may be possible, it must be accomplished, if we expect to deal most successfully with the disease. In the application of the specific culture products in pulmonary tuberculosis my observations have amply confirmed this view, and the best results are being obtained in cases where the general strength of the patient is still good, and especially when the blood approaches a normal standard in corpuscles and hæmoglobin.

Most tubercular patients show a considerable loss in these respects, even in the early stages, and these losses I have often observed to progress despite a good appetite, and in patients who for the time gained in weight. That the anæmia in such cases is of toxic origin is proved by the fact that the losses become balanced under specific treatment, and my records show many instances in which the administration of turberculin, and more particularly larger doses of antiphthisin (Klebs), showed that a slow regeneration of the blood followed their use, while the febrile movement accompanying the resorption of toxines disappeared.

It is therefore quite rational to seek to aid the regeneration of the blood, the more so as in all advanced cases it takes place very slowly if at all; and in addition to proper dietetic and hygienic management one looks nat-

urally to ferruginous remedies for its accomplishment. This has been my endeavor under every method of treatment, but the available preparations have not only failed me in the majority of instances, but they have frequently interfered with the improvement in other respects by disturbing the digestion and assimilation of food. After many more or less indifferent results I came to discard iron in all pharmaceutical forms, and resorted to rectal injections of defibrinated blood, which, although very inconvenient and frequently objectionable to the patient, accomplished my object most satisfactorily, until some twelve months ago, when I rather reluctantly undertook the administration of peptomangan, chiefly because some of my patients positively refused the blood injections, and because of the laudation of the remedy in German medical literature by authorities personally known to me to be reliable.

In its clinical use I found, in the first place, that the remedy was palatable and readily taken by the patients, and from its first use to the present time I have had only two cases in which I was obliged to abandon it. These were cases with tubercular ulceration of the epiglottis, and they complained of more smarting pain and distress than from the swallowing of ordinary liquids and foods, even when the remedy was largely diluted; in all other cases it was well borne by the stomach; in quite a number the appetite improved very early; neither is there evidence of its producing constipation in any case.

It would extend this paper beyond reasonable limits to give the details of the comparative examinations of the blood made from time to time in upward of seventy patients who received this remedy; suffice it to say that the most improved instruments and apparatus were used, and that all sources of error were carefully excluded.

We find that in the six weeks previous to the use of the peptomangan we have ten patients in whom the loss or gain in their blood condition could be compared; seven of these patients gained in all 1,408,000, or an average of 200,000 each, whereas, these same patients gained under peptomangan 3,609,000 corpuscles, or an average of 510,000 for each.

As to hæmoglobin, a similar increase is perceptible. In six weeks preceding, of the seven patients, six also gained in hæmoglobin in all 56 per cent., or an average of 9 per cent; but under peptomangan these same six patients gained in all 81 per cent., and on an average 13½ per cent.

Further, whereas of the ten patients only seven gained in corpuscles and six in hæmoglobin in the six weeks preceding, under the peptomangan nine gained in corpuscles and hæmoglobin, and no loss occurred except in one, and she lost only a

third as much as in the six weeks before. Cases VI and X are particularly to be noticed. In Case X, the patient, having suffered a loss of half a million corpuscles and 13 per cent. of hæmoglobin, gained in the six weeks' treatment with peptomangan two million corpuscles and 41 per cent. of hæmoglobin. It is, however, true that he also received local treatment for his gastric catarrh; but that treatment was applied during three of the previous six weeks without being able to check the rapid loss. In Case VI, the patient, having previously lost 301,800 corpuscles and 7 per cent. hæmoglobin, gained 933,000 corpuscles and 29 per cent. hæmoglobin.

When these comparisons were completed, examinations were made at less frequent intervals, and the use of peptomangan was more generally adopted in my institution.

Another series of cases was more accurately observed within the last six months, and the results were practically the same as in the table. In all cases the improvement of the blood condition was highly satisfactory; in quite a number phenomenal. The degeneration, fragmentation, and disappearance of the tubercle bacilli from the patient's sputum, while heretofore also observed under tuberculin, and more particularly under antiphthisin (Klebs), was certainly more rapid in the cases in which the blood examinations showed rapid improvement—to my way of thinking, a good proof of the germicidal action of the blood, and of the great importance of improving its condition whenever any impairment becomes manifest.

As to the superiority of this particular "iron and manganese" preparation over others, and as to the value of the manganese in the combination, I will not pretend to offer any explanations. I simply wish to record clinical facts, in the belief that all practitioners will gladly welcome any remedy which can so apparently aid in the anæmia of tuberculosis, as appears from the preceding table, and in other anæmic states, as shown from the reports of Dr. H. P. Loomis and other observers.—*New York Medical Journal.*

MORAL TREATMENT OF EPILEPSY.

Epileptics met in general practice hardly require any moral treatment. In a few cases moral reform is necessary, and, in spite of the alleged incurability of epilepsy generally, it is sufficient for all purposes. The epilepsy in these cases is only an episode, a result of excess, sexual, alcoholic, etc., and the epileptic habit not being set up, a moral reform cures the

disease. Moral treatment is applicable solely to epileptics who have undergone mental deterioration, or who are mentally below par from the beginning. These cases require guidance and control.

Epilepsy is not in itself a disease, but merely a symptom of cortical irritability. The theory now generally accepted is that epilepsy is primarily a cortical affection. There may be exceptions, yet this is the rule. When the epileptic lesion, whatever it may be, involves the physically functioning elements of the cortex so as to bring the subject within this, psychic irritability is the result. In general terms, irritability is the key-note of the epileptic character. This is the indication for moral treatment, and the reason why in many cases it is even more important than medical treatment. Many are insensible to, or intolerant of, ordinary remedial agents.

Moral treatment is the only practicable resource. This psychic irritability shows itself by its reaction on the physical system, often in a very marked way. Those who have had to deal with the epileptics know how readily they react to all sorts of suggestion. It is often observed that one epileptic having a fit in a ward will seem to cause others to have them. The effect of operative procedures on the attacks is also in point. While I have never seen permanently good results follow any operation on old confirmed epileptics, I have seen just as good temporary ones from slight surgical procedures (such as setons) as from the most radical cerebral operations.

Hysteria has been mentioned as a complication of epilepsy; the fact is the two conditions continually overlap, and moral treatment is required for both. By many unconsciousness is made the criterion of epilepsy, in the post-and-pre-epileptic states, and all that is done by the individual in these conditions is called automatic. If this were true, moral treatment would be useless in these conditions, but according to my observation it is not generally true. Often there is not even subsequent amnesia. I am not prepared to say that consciousness is necessarily or invariably lost in the epileptic attack itself. Even in epileptic furor patients are more or less susceptible to "prudential considerations." I have often noticed epileptics in that condition avoid attacking other patients who they knew would be likely to do them injury. I have had the testimony of epileptics themselves as to this fact given in such a way that it could not be doubted. This probably is the secret how some of the patients are managed outside of asylums; but while intimidation and force fall under the head of moral, or perhaps immoral, treatment, they would be out of the question in the

proper management of these cases, As ordinarily described in text-books the epileptic is a very unamiable character. It is admitted, however, that there are exceptions, and one Italian has estimated the proportion of epileptics who are altruistic as about 16 per cent. of the whole number. Under proper conditions, taking account of, and allowing for, the predominant element of irritability, one can find a much larger proportion than that. Many apparently very vicious epileptics, under judicious management and proper conditions, develop very amiable qualities. An insane or mentally deteriorated epileptic still has his natural disposition, plus the irritability and the mental weakness.

The latter is comparatively unimportant and may even aid in his management; the irritability must be controlled largely by moral measures. I have found it best to treat them as reasonable beings, explaining to them that their physical disease necessitated certain restrictions which have not been enforced. Then by granting them all the privileges I could consistently with their welfare and that of others, letting it be understood that it was a favor not a right, I made friends; while the opposite course of giving them liberties as a right, and having to restrict them when they were least fit to be reasoned with, made them vicious and unmanageable.

The very marked religious tendency of epileptics, so often spoken of to their disadvantage, may often be utilized as a valuable aid to treatment. They are generally sincere. Their inconsistencies are the result of their irritability and disease. As religion is one of the greatest social forces in the world, it is not difficult to see how it may be of advantage here. In individual cases I observed it to be of the very greatest value. Colony treatment is the best that has yet been devised for a large part of the mentally deteriorated epileptics. They are not wanted in the insane hospitals for very good reasons both on account of others and themselves. If the colonies be completely to relieve the insane hospital there will have to be restrictive arrangements for a certain proportion which can not safely be allowed, at all times, at large.—*Med. Standard.*

ICHTHYOL, INTERNALLY, IN URTICARIA.

Dr. Lanz (*Med. Week.*, 1864) claims that experience proves ichthyol to be an efficient internal means of treating urticaria of alimentary origin. Having developed a violent eruption of urticaria, in consequence of drinking lemonade and failing to obtain more than temporary relief from taking a dose of 3 grains of menthol twice a day, it occurred to him to try a

cachet containing 3 grains of ichthyol. Within half an hour the urticaria completely disappeared. For additional safety, Dr. Lanz took also on the following day 3 grains of ichthyol after each of the two principal meals, and since then there has been no recurrence of the affection.—*Med. Standard.*

SURGERY.

HOW TO ARREST A BOIL, CARBUNCLE OR MALIGNANT PUSTULE.

Dr. Barker writes to the *Medical Summary* that he has used the following procedure for several years with unvarying success: Take a large hypodermic syringe, holding, say, half an ounce, fitted with a small needle. Fill it with a 1 to 500 solution of mercuric chloride, insert the needle into one of the peripheral openings, in case it is a carbuncle, and wash out the little cavity. Then direct the needle toward and into the surrounding induration and force a little of the solution into it. Treat each opening and its corresponding peripheral circumference in the same manner, carefully washing out the necrosed connective and other tissues that have become separated. Repeat this daily with the solution, gradually reduced to one-half the original strength, until all induration has disappeared and granulations have begun to appear. If the first injection be thoroughly performed, the spread of the carbuncle will be arrested at once and there will be no more pain. Washing out the little cavities is painless, but the injection into the indurated tissues is not free from pain. The same treatment is applicable to the little feruncles that invade the meatus auditorious externus and the inner surface of the alæ nasi.—*Medical and Surgical Reporter.*

TWO CASES OF SUPPURATIVE PYELITIS; REMARKS ON DIAGNOSIS AND TREATMENT.

Two cases of pyelitis recently operated upon present some points of interest which I thought would repay us for a few minutes' consideration.

Case No. 1 was a young man, twenty-nine years of age, operated on six weeks ago. He gave the following history: Was born and raised on a farm, and while never robust had no special illness until after moving to Texas seven years ago, when, getting very much run down from close confinement in

an office, he developed a continued fever which lasted two months; after a year's residence in Texas, with continued ill health, he returned to Tennessee and Kentucky. Since that time he has never been perfectly well and strong, but has suffered off and on of headache, backache, and dyspeptic symptoms. Has lost fifteen or twenty pounds in weight in four months; is very despondent, complains of a constant dull frontal headache and pain in his back and legs, pain in stomach, and flatulence after eating. His skin is dry and muddy looking, tongue coated, bowels irregular, pulse 90 and regular, temperature 99.5 deg.; examination of heart and lungs negative.

By the introduction of the stomach tube, and by the examination of the withdrawn contents at intervals of from two to eight hours after a test meal, the stomach was found to be moderately dilated, secretion of acid diminished, and digestion slow, but fairly good for a light meal. Palpation of left kidney region revealed some tenderness extending down over the course of the ureter, but the kidney could not be felt. On the right side there was a very noticeable bulging of the loin and a tender, firm, movable mass, seemingly about the size of a normal kidney, but varying from day to day; could be felt rising and falling with each respiration. Daily examinations of the urine revealed the fact that there were intermittent discharges of small quantities of blood and pus with the urine, which in the interval was in this respect practically normal, but at all times contained large quantities of oxalate of lime crystals. The bladder was slightly irritable, requiring him to get up once or twice at night, but held a good quantity of water. No stone could be detected. Urethra very sensitive. Has never had gonorrhœa. Temperature taken thrice daily for a week showed an evening rise of from one to three degrees.

As stated, there was in the right loin a movable, sensitive mass, which varied somewhat in size from day to day, moved with respiration, and which could be pushed up under the ribs in the normal situation of the kidney. Coincident with the diminution in the size of this mass was the appearance of pus and blood and oxalic crystals in the urine; the colon lay in front of the tumor.

An operation was advised for the purpose of drainage and of anchoring the kidney to the abdominal wall, and—as I stated to some of the bystanders, if there was anything certain in kidney surgery—to remove an oxalate of lime stone from the kidney pelvis, as there was every indication of its presence. The kidney was readily exposed by a transverse incision and carefully palpated between the thumb and forefinger, but no stone was found. The introduction of a needle in various di-

rections also gave a negative result. The organ was then drawn into the wound and an incision, admitting the forefinger, made in the convex border. The hæmorrhage was not great and was controlled by the pressure of the finger. The kidney structure seemed healthy, the pelvis was dilated and contained a very small amount of pus (there had been a discharge the day before the operation), but the most careful search failed to reveal a stone. The ureter was pervious. A rubber drain and a strip of gauze were carried well into the kidney, and all brought out of the centre of the external incision for the double purpose of drainage and causing adhesions which would hold the kidney in its position. Muscles and fascæ were brought together by buried catgut sutures, the skin by silk-worm gut; gauze removed on the second day and tube and stitches on the sixth. The fistulous opening, which at first drained freely, closed by the fifteenth day.

The highest point of temperature reached was 100.5 degs. on the fourth day, falling to normal at the end of the week. Since that time there has been a slow, but steady improvement in the general condition; the urine still shows some oxalate crystals, which are gradually disappearing under a strict diet, nitro-muriatic acid, and lavage of the stomach and bladder.

The sequence of events in this case seems plain. The unusual close confinement of an office and the Texas fever resulted in a derangement of the digestive and assimilative processes, dilated stomach and oxaluria. Following and dependent upon the oxaluria was the irritation of the whole urinary apparatus and subsequent emaciation, absorption of the perineal fat, movable, displaced kidney, kinking of the ureter, and pressure on the blood-vessels: a dilated pelvis, which was frequently distended by urinary and septic products, absorption of these, more fever, more dyspepsia, less patient.

Case No. 2 was a woman, aged 40 years. Father and mother, two brothers and two sisters, all living and in good health, except mother, who is now under treatment for lupus of the nose. Patient herself had good health as a girl, menstruation regular and painless. She was married nine years ago, had two miscarriages and two children carried to term, one now four years old, the other seventeen months. No history of any inflammatory trouble in the pelvis.

Twenty months ago, or three months before birth of last child, she began to suffer with pain and soreness in the left side, increased frequency of micturition, and swelling of the lower extremities. The swelling soon subsided after the birth of the child, but the trouble in the side increased. For the past eighteen months she has had repeated attacks of pain,

with a feeling of fullness in the left side, accompanied by vomiting, rigors, fever, and sweats. These attacks would last sometimes for days, and sometimes for weeks, until as she expressed it, forcibly if not elegantly, the "bile would break inside of her," and she would get easy. She has been under medical treatment the greater part of the time, being treated for dyspepsia and ovarian trouble.

She has constantly lost flesh and strength, and is now the perfect picture of long-standing septic infection. She has retained little or no food for the last two weeks. Respiration rapid, pulse weak and compressible, and beating 130 to the minute. Examination of heart, lungs, and stomach region negative. Uterus normal, no induration or tenderness in ovarian region, but in the anterior vaginal vault the lower end of the ureter could be felt enlarged and tender. Palpation of right side of abdomen negative. On left side, by deep bimanual palpation, a very tender, soft, semi-fluctuating mass could be felt in region of left kidney. Urine passed, after thorough and repeated irrigation of the bladder with solution of permanganate of potash, still contained a large quantity of thick, greenish, fetid pus. The bladder was free from stone.

Operation on Friday last by a transverse incision, beginning below tip of last rib and carried back for five inches, which readily exposed the kidney. The kidney pelvis was dilated and contained a teacupful of very offensive pus. The kidney structure was softened, thinned out, and, at the point where my incision was made on the convex border, was on the verge of rupture. The ureter was thickened and dilated until it would admit a finger. Irrigation fluid passed into the bladder. Drainage was effected by a large rubber tube and gauze packing, which served to control hæmorrhage, and kidney was attached to the abdominal wall by two silk-worm gut sutures.

The patient was in rather a precarious condition for twenty-four hours from the persistence of the nausea and exhaustion, but is now doing nicely. Gauze was removed in thirty-six hours, and the urine is draining freely through the tube. Right kidney seems to be doing its work all right.

The original cause of the trouble in this case I believe to have been the compression of the ureter by the fetal head.

The most noticeable feature in connection with both of these cases is the fact that both of them "had suffered much of many physicians," and that neither of them had gotten that all-important thing to physician and patient alike—a correct diagnosis. Why? Not because these men were ignorant of diagnostic methods, but because they were guilty of that sin, to which we are all so prone, of jumping at conclusions with-

out a thorough and painstaking examination of the case in hand, not only of the organ to which the trouble is referred, but of the whole body from top to toe, with due regard at the same time for the family history.

This custom of snap diagnosis or no diagnosis is a growing evil that we, as surgeons, led on by the fascination of the "exploratory incision," are too often guilty of fostering to our own and patient's hurt.

In these cases the pathological process is usually a complex one, the symptoms often misleading, the kidney lesions very often overlooked.

A diagnosis of pyelitis being made, the treatment should be directed to the removal of the cause where possible, to keeping the bladder in an aseptic condition by antiseptic irrigation with or without continuous drainage, to flushing the urinary tract from above by the free use of pure or medicated waters, and lastly, in the severer cases (with continued suppuration and evidences of retention of pus and urinary products in the kidney pelvis), by direct drainage.—*American Practitioner and News.*

TUBERCULAR JOINT DISEASE.

The usually accepted explanation of atrophy is that it is due to a reflex action through the trophic centres in the anterior horns of the spinal cord. But why does the atrophy affect certain muscles earlier and more than others? Hilton has pointed out that the same nerves which supply any joint supply also the muscles acting on the joint. In this way he explains the unconscious fixation of a diseased joint, which always occurs, and to which I have already referred. In the same manner he explains the flexion that usually takes place (knee and elbow) by the greater power of the flexors over the extensors. But he does not explain the atrophy. Ferrier does this by telling us that extensor muscles are always earlier and more quickly atrophied than the flexors, because they are the weaker. "The vitality of the extensor centres and nerves is the first to become exhausted by any condition tending to lower the vitality of the nerve centres and nerves in general."

Charcot has shown that muscular atrophy from disease of a joint is not the same as that from want of use, the latter being a fatty degeneration, which the former is not. He was of opinion that nerve irritation alone is capable of determining rapid and early atrophy of muscles, and that the diseased joint irritation does so markedly, because its irritation is continuous. He points out also that atrophy started by joint disease is apt

to persist and to cause general atrophy of the limb (to which I have already referred). In the *British Medical Journal* there are references to investigations made by German and French observers, who found a simple degeneration in the atrophied muscles connected with joint disease. The muscles "were obviously atrophied and of a paler color than those on the other side, and they had lost their firmness and elasticity. The microscope showed "no trace of degeneration," but the "fibres were considerably smaller than they should be." This, it appears to me, points to what I have already suggested in my paper on Bier's Method of Treating Tubercular Joints by Congestion, viz., that the reflex action, acting through the trophic centres in the anterior horns of the cord, causes a contraction of the arteries. It seems natural to suppose that diminution in the size and power of a muscle should be due to a diminished blood supply; and if the object, so to speak, of a reflex action is to cause atrophy of a muscle, surely the quickest and surest way would be to shut off the blood supply. Then one must remember that though the atrophy begins in certain muscles, it ultimately extends to the whole limb and tends to persist.

Muscular atrophy can not be due to muscular spasm in the cases we are considering, because the muscles affected with spasm are not those most atrophied; for example, in the case of the knee the hamstrings are most contracted and the quadriceps is most atrophied. Again, this theory will not explain the atrophy of a whole limb, muscles, bone, and all.

Another explanation has been offered of the muscular atrophy, in tubercular joint disease; for instance, of the deltoid in shoulder and the quadriceps extensor in knee affections, viz., that the tubercle bacilli enter the muscular substance from the subjacent joint and cause a low form of inflammatory process which produces the atrophy. No proof of this has, however, been adduced; indeed, as we have already seen, the atrophy has been proved to be a simple one, unconnected with any degenerative or other change in the substance of the muscles themselves.

At the same time, one must admit that it is very likely that the muscular substance is tubercular in some way, for it has been demonstrated that muscle from tubercular animals, although it may seem perfectly sound and good, is capable of affecting guinea pigs with tuberculosis.

In what way is the apparently healthy muscle infective? Does it contain spores? Are bacilli derived from the blood and lymph vessels? How do the lower animals get their tuberculosis? Why has muscle tubercle not been observed in man? These are questions that suggest themselves, but can not, of course, be discussed in this paper.—*Mr. A. G. Miller, in Edinburgh Medical Journal.*

MUCOUS PATCHES.

Nearly every syphilographer not only recommends constitutional treatment, but insists further that such treatment, to be of benefit, must be pushed to that point which insures a rapid and thorough action of the remedy which is administered. Unless this be done the lesion remains *in statu quo*, or destructive action sets in, thus complicating the condition present.

All are agreed upon the avoidance of all local irritation. Anything which is irritating should be kept from coming in contact with the affected membrane, and this is particularly necessary in regard to the cavity of the mouth. Acid food, or that with much pepper or vinegar, or condiments with a sharp and burning taste, should be avoided as much as possible, as they are very apt to become irritating. Tobacco should be absolutely interdicted. Smoking is more injurious than chewing, but both are harmful. Smoking not only aggravates existing mucous patches, but is also a prolific cause of new ones. The point of contact of a cigar or of the mouth-piece of a pipe will often be marked by an opaline plaque, and in its neighborhood new lesions will readily develop. This particularity is not confined to the smoking pipe, but is found to exist in connection with the mouth-pieces of glass blowers' tubes, of clarionets or similar instruments or tools. Should the portion which comes in contact with the mucous membrane be rough, the development of the mucous patch is much more rapid and extensive.

So far as therapeutic measures are concerned they are various as well as varied in character. There exists one complication which is apt to render all eflects nugatory so far as producing good eflects in the buccal cavity is concerned, unless it be avoided or rapidly ameliorated—the condition often brought on by an over-zealous disposition to indulge in heroic internal treatment, to "touch the gums"—and unless great caution be exercised this condition will supervene and the patient be a sufferer from mercurial stomatitis. This inflammatory affection of the cavity of the mouth not only favors the extension of mucous patches and their destructive action, but prevents the exercise of the curative powers of such treatment as would otherwise prove of benefit so far as the patches are concerned. Should such a stomatitis manifest itself, it should be treated efficiently so as to improve the soil and thus render the patches less refractory.

Direct treatment of mucous patches varies with different practitioners. A favorite method is to touch them with pure silver nitrate in the stick, or strong solution of salt. Another

favorite application is that of the acid mercury nitrate in solution, varying its strength in direct ratio to the severity of the lesions. Chromic acid has also found its advocates, as well as strong solutions of mercury bichloride. An agent which has given me the best results and which presents a number of advantages, is c. p. nitric acid. Contrary to what might be supposed, it is not particularly painful nor destructive in its action. It possesses the marked advantage of not masking the lesion, of being applicable to all the forms, from the superficial elevated to the deep and destructive, and of procuring rapid results. The modus operandi is about as follows: A piece of soft white pine wood is whittled so as to make a small paddle about one-fourth or one-eighth of an inch broad, and thin in proportion, the remainder being about the length and thickness of a lead pencil. The end of this improvised applicator is dipped in the nitric acid, which readily takes up the liquid.

The flat surface is swept over the patch, which immediately turns white, whilst the healthy mucous membrane remains unchanged. The affected area is thus sharply defined. Should the lesion be deep or irregular, the form of the wood must be changed to suit the circumstances. With the aid of a tongue depressor the pharynx, tonsils and pillars of the faces can be readily reached. In the the treatment of fissures of the tongue (a frequent symptom of syphilis) the edge of the small wooden paddle answers the purpose admirably. The patient experiences no pain worth mentioning, and by instructing him to expire during the application he is not incommoded by the fumes of the acid. The sour taste which follows the use of the acid is not particularly disagreeable. Should extensive areas of the mucous membrane be involved, this method must yield to the spray; and, in using the latter, I order the internal medicine to be used in small doses, as I use a one to five-hnndred solution of bichloride in an atomizer for local treatment, and a certain quantity of the mercurial is absorbed. To these methods cleanliness and care of the teeth and gums should be added.—*Medical Standard.*

SECTION OF SPERMATIC CORD IN ENLARGED PROSTATE.

Dr. G. A. Harman (*Medical Age*), in view of the instinctive reluctance with which man would part with his testicles, even when he has arrived at that age when they can be of no possible service to him, and the fact that he does not wish to be known as an eunuch, proposes simple division of the spermatic cord as a measure for causing atrophy of the pros-

tate in lieu of castration, which is now being practised. He recites the case of a man who would not submit to castration, but was easily induced to have the spermatic cord cut. He had been suffering several years with an enlarged prostate, until he had reached the state where something had to be done. The cord was worked over to one side and the scrotum pressed closely around it. A hawk bill bistoury was thrust through behind and cut its way out. The severed end of the cord and the cut scrotum were held in two fingers a minute or two to allow the blood vessels to contract, and when let go there was little bleeding. The wound healed promptly. Atrophy of the testicles followed, as was expected, the size of the prostate diminished and the patient much improved. His patient is not well, but is growing better instead of worse. He asks for a name for the operation.—*Medical Compendium.*

ENLARGED LYMPHATIC GLANDS TREATED BY THE SUBCUTANEOUS INJECTION OF GUAIACOL AND IODOFORM.

Ramcharan, a Hindu aged 30, from Patna, was admitted into hospital on the 8th of December, 1891, for onychia. He had been in hospital on two former occasions during that year, for colic, in the first instance, and in the second for dysentery.

The man was well known in consequence of his disfigured appearance, resulting from the presence, on the right side of the neck, of a long chain of enlarged cervical lymphatic glands.

While under treatment for the various affections for which he was admitted into hospital, remedies were at the same time applied to the enlarged glands, but no obvious effect was produced on them.

On the last occasion it was determined to make a trial of a form of treatment then in vogue for bacillary phthisis, consisting of the injection, under the skin, of a solution of sterilized olive oil, of iodoform and guaiacol. When the treatment was commenced, the glands in the neck, some twelve or fourteen in number, were fully the size of pigeons' eggs and were very prominent and hard. Furthermore, in the right axilla there was a soft lymphomatous mass as large as an orange.

The cervical glands had been in a swollen and indurated condition for a year and a half, but the glandular mass in the axilla had entirely formed during the preceding three months.

The first injection was given on the 20th of December, the site chosen for it being just below the angle of the scapula; it consisted of not more than one-sixth of a grain of iodo-

form and one-half of a minim of guaiacol. The second and subsequent injections were given below one or the other of the scapulæ, on the dates shown on the accompanying chart. In all, six injections were administered. The dose was gradually increased until the fifth injection, given on the 12th of January, when the quantity injected was two and two-thirds grains of iodoform and one and one-third minims of guaiacol, dissolved in two drachms of olive oil.

The sixth and last injection was of the same strength as the fifth.

The injections always produced a good deal of pain and were followed by local symptoms resembling diffuse cellulitis; and a certain but variable amonnt of constitutional disturbance was always set up.

Although the treatment effected a speedy reduction in the size of the glands, the patient declined to submit to any long continuance of it, in consequence of the unpleasant local and constitutional after-effects. Nevertheless, the glands continued to get smaller, and in the course of a month from the date on which the last injection was given, had practically disappeare.—*Medical Reporter of Calcutta, Nov. 1, 1894.*

A NEW OPERATION FOR INTERNAL HEMORRHOIDS.

Dr. Janes (*Provincial Med. Jour.*, Vol. XII) reports a new method for treating internal hemorrhoids by means of a clamp and suture instead of the cautery. After divulsing the sphincters he seizes each hemorrhoid and applies the clamp to its bone, cuts away the pile and approximates the mucous membrane of the stump with catgut sutures as follows: The ligature is threaded with two needles beginning at one end of the wound, one needle is made to transfix each side of the mucous membrane; then by means of a double continuous suture the surfaces are united with a cobbler's stitch, and in addition each time the needles are drawn through an over knot is tied. This form of suture is unique, as it prevents any possible bleeding, and greatly lessens the risk of the deeper part of wound becoming infected.—*Medical Progress.*

TREATMENT OF FURUNCULOSIS.

W. van Hoorn (*Monatshefte für Praktische Dermatologie*, July, 1894) for many years has used the following method in cases of multiple furuncles, based upon general disinfection of the skin and isolation and disinfection of the affected area.

A general bath in warm water and soft soap is given; then the furuncles and the region about them are washed with a 1 to 1000 sublimate solution, dried with wadding (Bruns), and over the furuncle is applied a mercury-carbol mull plaster, after which the patient puts on a fresh suit of underclothing. Each day, or twice a day, the plaster is renewed; any soft points or perforations are lightly pressed, and contents washed away with the sublimate solution. If there is no fluctuation, the infiltrate is rapidly reabsorbed; but if fluctuation is clear, perforation is the rule, but the healing is much hastened.

What is of especial importance is the non-appearance of new groups of furuncles, and when a single one now and then does break out, it is quickly reabsorbed.—*Therapeutic Gazette.*

THE DANGER OF ANÆSTHETIZING DIABETICS.

Baxer (*Deut. Med. Woch.*, 1894) calls attention to the danger of narcotizing diabetics. He has reported three of his own cases and nine collected from medical literature. Even in slight cases of diabetes the patients became comatose and died. Coma did not develop until after the chloroform narcosis had passed off, in twenty-four to forty-eight hours. The patients then became indifferent, stupid and confused, finally lost conciousness, urine and fæces were passed involuntarily, and they perished in coma. This communication is important, since it shows that the administration of chloroform is dangerous even when there is a slight degree of diabetes, it being impossible to predict whether or not coma will develop.—*Therap. Gazette.*

TREATMENT OF HERPES AND FOLLICULITIS VULVÆ.

In the *Journal des Maladies Cutanées et Syphilitiques*, Lutaud prescribes the following:

In beginning herpes of the vulva one of the following formulæ:

I.

Resorcin	2
Cocain. muriat.	1
Spirit. vin.	100

II.

Acid. carbol	25
Cocain. muriat	1
Spirit. vin	100

Compresses moistened in these solutions are laid upon the vulva and covered with impervious paper; they are changed three or four times a day.

Mostly, however, one sees the herpes fully developed, when this salve will be more appropriate:

III.

Borac. porphyr	1
Glycerole d'Amidon	10
Tinct. myrrh., gtt	10

After which a powder of—

Bismuth subnitratis	4
Calomel	1

should be dusted over them.

When the crusts have been removed—

Pulv. lycopod	10
Tannin	
Bismuth subnitratis, of each	20

will be efficient.

When the folliculitis does not yield to simple remedies, then sitz bath or full baths of bran and starch, the vulva being washed morning and evening with hot soap-suds and powdered with—

Acid tannic pulv	2
Bismuth subnit	1
Amyl	50

In obstinate cases, painting the surface with 5 per cent. cupric sulphate once a week and washing off with strong solution. Pustules should be opened when they appear.—*Monatshefte für Praktische Dermatologie.*

GYNECOLOGY AND OBSTETRICS.

WHEN IS THE ADMINISTRATION OF THE SULPHATE OF STRYCHNINE CONTRA-INDICATED DURING GESTATION?

In presenting this subject for consideration and discussion this evening it is not my purpose to depreciate or undervalue the great benefit the sulphate of strychnine is capable of rendering in a majority of the cases of pregnancy. The claims made for it by my friend, Dr. Duff, of Pittsburg, who has devoted himself with much enthusiasm to the study of this drug in its relation to obstetric practice, are not, I think, without justification; but, with the estimable conservatism of a seeker after scientific truth, he leaves the subject open for further study and research, awaiting until time and a wider experience shall prove its merits. In a paper read before the South Side Medical Society, of Pittsburg, and in one presented to the American Association of Obstetricians and Gynecologists, in

1893, he gives his clinical experience. At the forty-fifth annual meeting of the American Medical Association, recently held at San Francisco, he again calls the attention of the profession to the value of strychnine, and points out that it renders abortions and premature deliveries less frequent by giving tone to the uterine muscles and nerves, as well as by its general tonic influence.

These statements are beyond question correct in the vast majority of instances; but he who would avoid error and misfortune must bear in mind that every rule has its exception, and that the latter, though often overlooked, is no whit less important than the former.

The sulphate of strychnine I have given to a score or more of women during gestation with the happiest results, and so general was the improvement in their condition that I began to think there was no exception to this rule; but I was not long left in doubt, for, as the following case reported will show, I met the exception in a most unexpected but none the less pronounced form.

Mrs. G., primipara, aged 29 years; white; general health good. Last menstruated in October; previously regular. Suffered greatly from morning sickness and distressing nausea for nearly four months, which was influenced by internal medication. There was, besides these symptoms, costiveness, and a more or less irritable bladder. The appetite was poor, and loss of flesh was quite marked as the pregnancy advanced.

In the early part of the sixth month she first complained of a sense of weight felt in the abdomen and pelvis; this was soon aggravated by soreness and pain which persisted throughout the day and night. The nervous depression in this case was all out of proportion to the severity of the symptoms, and seemed to trouble the patient more than almost anything else.

There was no kidney trouble of any kind, nor evidence of swelling of limbs or face. The heart was normal save a slight anæmic murmur. The blood was deficient in red blood cells, and showed a condition typical of that found associated with pregnancy. The woman, when married, weighed some 130 pounds, but now was much emaciated. The vagina and cervix were normal, and the uterus in good position; there were no adhesions.

To judge from the size of the abdomen and the activity of the fœtus, development was progressing favorably. There existed, however, double ovarian tenderness, which denoted congestion of a pronounced type, and to this I ascribed in part the great mental depression, though, of course, much depended upon the anæmic blood supplied to the nerve centres.

Deeming this case one suitable for the administration of sulphate of strychnine from a careful analysis of the above objective and subjective symptoms, I determined to place the woman upon one-twentieth of a grain, twice a day, with the hope that it would stimulate a healthy nerve action, and relieve, as has been claimed, the uterine irritability which threatened to result in an abortion. I reasoned that the nervous disturbance was due to anæmia of the central nervous ganglia and involved the sympathetic system as well; that the uterus threatened to expel its contents because the nerves controlling its muscular coats were in a state of hyperæsthesia dependent upon insufficient nutrition. With this idea I placed my patient upon the drug which experience had proved to be the best suited to overcome just such a condition as I found present.

With what result? Within thirty-six hours the uterus became more rebellious; its muscular contractions increased rather than lessened in violence, and recurred with greater frequency. The dull pain which had persisted for several days now became acute and intermittent, and radiated from the umbilicus to the loins. An abortion was undoubtedly threatened, and might almost be considered inevitable. The sulphate of strychnine was promptly discontinued, as it had undoubtedly only made matters worse, causing a passive uterine contraction to become active, and thus augmenting the expulsive uterine forces.

A sedative mixture containing morphine, chloral, and bromide of soda in solution, was ordered to be taken every hour and the patient put to bed and directed to keep perfectly quiet. In a few hours the pains were allayed and the uterine contractions became feebler and recurred at longer intervals. These signs gave rise to a hope that the patient might yet escape an abortion.

Twenty-four hours elapsed with no return of the contractions. The prospect seemed to brighten, but only to give place within another twelve hours to a sudden and aggravated attack of pain, followed by strong uterine contractions, which, acting upon the cervix, soon overcame its constricting fibres, and an abortion was the result. In a few hours the whole uterine contents were expelled, much to the regret of both physician and patient.

Thus ended one case of gestation in which strychnine may be said to have been the exciting cause of the abortion. Here we have what Duff probably refers to when he remarks in his paper, "I am not unmindful of the fact that I have seen apparent evil results from its administration in a few cases."

In looking over the history of the case reported, one can not fail to be impressed with the fact that here was an instance where, had one known the exception to the rule, he would not have given strychnine, since clearly it was contra-indicated. Instead of its acting as a sedative to the hyperæsthetic nerves through its tonic influence, it played the role of an excitant, and thus brought about the very result most to be deplored, namely, an abortion.

Some may take exception to the size of the dose (one-twentieth of a grain) twice a day; this, I grant, is not a small dose, but at the same time it is one I have frequently given with the best results, and I have found that a much smaller dose fails to be beneficial. I do not, therefore, think that the amount administered made any material difference. That strychnine requires to be given during gestation with much more care than has heretofore been exercised, I think is very evident. Moreover, when there exists great mental depression associated with symptoms of distress and pain, referable to the pelvic region, with involvement of the uterus, I think the administration of strychnine is contra-indicated, for under such conditions it is more than likely it will act as an irritant and not as a sedative, and so will tend to produce an abortion, the very danger one is struggling to avoid.

Strychnine, then, it would appear, is indicated in cases of gestation which require a powerful nerve tonic, but contra-indicated when such cases are complicated by pronounced pelvic disorders of a nervous type.—*College and Clin. Rec.*

THE BACTERIA OF THE VAGINA AND THEIR INFLUENCE ON THE COURSE OF THE PUERPERAL STATE.

In surgery as in midwifery, no sooner did antisepsis find a place than it was closely followed by asepsis. At once the question arises whether the presumption that determines our recent action is correct. Are there not etiological factors that make it desirable to retain the approved methods of antisepsis? In cases of laparotomy, trephining of the skull or spine, removal of tumors and the like, the surgeon has an aseptic region for operation before him requiring only the elimination of bacteria in the approaches—the skin in most instances. This end is easily achieved by well-known and rational methods. It only remains for the surgeon to exclude accidental infection during the operation. Furthermore, he performs his operations under an anæsthetic, thus securing ample time and opportunity to prepare his patients. But the emergency character

and the anatomical peculiarities of obstetrical cases, with the natural modesty of the parturient female, interfere with this object. During the last few years the question has arisen whether it is permissible to do without vaginal antisepsis, and if this question is decided in the affirmative, what rules should govern the obstetricians? This question is inseparably connected with the discussion of the theory of auto-infection during birth. It has also called out the systematic bacteriological investigation of the parturient canal before and during the delivery; and investigation has given rise to the postulate to conduct deliveries as long as possible without external examination.

Auto-infection of the parturient woman will find its loyal partisans as long as puerperal fever exists. It is the object of this paper to show whether this theory can be sustained scientifically, and to show its consequences in practice.

The study of this question demands a close supervision of the patient, before, during and after the delivery. It is evidently impossible for the general practitioner to meet this requirement. We have to be informed of all influences that interfere with the normal course of the puerperium; to have at our disposition regularly kept tables of temperatures and reliable bedside records of trained nurses. It is evident from this that we must confine our observations to the patients of well managed hospitals. Errors are inevitable even here, but their discovery in a hospital is easier than in a home. The following data refer only to cases observed in German obstetrical clinics where close observation was made a special feature.

Nowadays we understand by infection a local or general pathological affection caused by micro-organisms. The conception of self-infection supposes therefore the pre-existence of pathogenic germs in the body, or, what is more probable, within the parturient canal. It is a well-known fact that the external genitals, vulva, urethra and perineum, especially the hairs on the pubes, are inhabited by pathogenic germs. But as they can only be brought into the deeper parts of the parturient canal by mechanical transmission, namely, the fingers or instruments of the obstetrician, they are excluded from our present observation. We wish to consider at present only the bacteria that are ordinarily found in the vagina at the beginning of delivery. For it should be noted that the bacterial flora of the vagina of the pregnant woman differs from that of the non-pregnant. From the innumerable different kinds of bacteria we include only those known as pathogenic bacteria, or those that might exercise a direct influence on the tissues and secretions.

By macroscopic inspection of the vagina we note a distinct difference between the secretion of a normal and of a diseased mucous membrane. Döderlein, of Leipsic, to whom we are indebted for the first exact information in this line, distinguishes normal and pathological vaginal secretion. The normal secretion presents a whitish material of the consistency of coagulated milk, without the admixture of mucus. Its reaction is intensely acid. The bacteriological examination of the normal secretion reveals the predominant existence of one kind of bacilli, whose individual features are characterized in the vagina as well as in the culture-tube. On the other hand, the pathological secretion has a yellowish or yellowish-green color, and is of the consistency of cream. At times it contains small innumerable bubbles of gas, and is foamy or mixed with yellow grumous mucus. The reaction of the pathological secretion is slightly acid, neutral or even alkaline. In these secretions are found various kinds of micro-organisms, bacilli as well as cocci, in great numbers. In the normal vaginal secretion of the adult we regularly find slender bacilli without self-movement. It may be usually noted here that the secretion of the new-born is free of germs.

The bacilli of the vagina belong to the so-called group of facultative-anærobic parasites, which is to say, while they can generate in the open air they propagate luxuriantly only when the air is excluded. They develop on agar at 78 degs. as an extremely thin covering, composed of very fine drops as clear as water. The culture is very sensitive to dryness and low temperature. In the incubator the layer grows to a moderate height and remains clear and transparent. This bacillus produces lactic acid; the vaginal secretion contains 95-100 per cent. of this acid. The secretion of the new-born being without bacilli has a neutral reaction. The normal secretion is histologically characterized by the prevalence of well-preserved epithelial cells cohering in large plates. The pathological secretion shows only epithelial débris, nuclei and innumerable leucocytes; between these we find imbedded in infinite variety streptococci, staphylococci, gonococci, yeast-cells, and in a few cases the bacterium coli commune.

Inasmuch as recent investigations have demonstrated that puerperal fever is caused by an invasion of the connective tissue of the pelvis by streptococci (less often with staphylococci), our attention is at once directed to the importance of the quantitative and qualitative existence of these two kinds of bacteria. We must determine the frequency of their occurrence and their virulence.

Döderlein, Steffeck and the writer made extensive investigations of this subject in the clinics of Leipsic, Würz-

burg and Basel respectively, and we found with striking sameness that 41-44 per cent. of all cases showed pathological secretions; of these 8-9 per cent. showed the existence of streptococci, the others predominantly staphylococci. Experiments made on the lower animals by inoculating pure cultures of streptococci and staphylococci, taken from the vagina, revealed the surprising fact that they were of a marked pathogenic and pyogenic character, but that their virulence was weak. On the other hand, streptococci cultures, made by streptococci from the pubic hairs, show a great virulence. Inasmuch as the original bacteria, which in all likelihood imigrated there from the outside, we have to consider what influence weakened their virulence. Döderlein proved that it is owing to the influence which the vaginal bacillus and its products exercise on the pathogenic germs. On making a mixture of plain cultures of the vaginal bacillus and streptococci on agar-agar, he soon observed that the vaginal bacillus spread rapidly, whereas the cocci were slow to develop and finally died out. The same results occurred when an infusion of vaginal bacilli was injected into the vagina having a pathological secretion. In a few days the pathological secretion had turned to a normal secretion. The same result followed the injection of a 1 per cent. solution of lactic acid, which constitutes the chief product of the vaginal bacillus.

Before I pass on the clinical part of this paper I desire to emphasize the fact that in the vagina we do not deal with a secretion in the physiological sense of the word, that is to say, a product of the glands. It is a well-known fact that we have only a very few glands in the mucous membrane of the vagina. What we call normal vagina secretion consists of epithelial exfoliation and the scanty glandular secretion. In the pathological secretion we have the same, and also the products of inflammatory processes.

The following questions suggest the practical importance of the bacteriological investigations: Should the disinfection of the external genitals always be followed by an antiseptic cleansing of the vagina? Is an antiseptic preparation only necessary where pathogenic germs exist? Is it only necessary in cases requiring obstetrical operations, or may we omit it in the latter case, even if the secretion be of the pathological character? The real value of the different methods can only be decided by the subsequent course of the childbed; that method is of course preferable which shows the least number of feverish affections. It must be here stipulated that we are to consider that childbed is a pathological process in which the temperature exceeds 100 deg. F., and where the cause of the higher temperature may be referred to the genitals only.

During my investigations I tried, first, to determine whether at normal delivery the character of vaginal secretion, normal or pathological, exercises a noteworthy influence on the course of the puerperium. For this purpose I examined the vaginal secretion of 116 pregnant women macroscopically, microscopically and bacteriologically. Sixty per cent. of all cases showed a distinctly normal secretion, 38 per cent. a pathological secretion, and 2 per cent. could not be well defined. The first group of normal secretion had a morbidity in the puerperium of 23 3-10 per cent. The latter group of pathological secretion a morbidity of 50 per cent.

I desire to emphasize the fact that the increase of temperature in cases having a pathological secretion was mostly moderate, and that the extreme cases occurred equally in those of normal and pathological secretion. The bad influence of the pathological secretion on the course of the puerperium appears clearly by the percentage given above. It is the custom of those favoring antiseptic remedies to refer to the fact that 40 per cent. of all cases have pathological secretion, and that hence we had better use such remedies in every doubtful case. According to the investigations of Steffeck the vagina can only be rendered free of germs if we wash it carefully by aid of a speculum; the simple irrigation does not succeed in reaching the recesses and folds of the mucous membrane. In order to ascertain the relative merit of a disinfecting scrubbing of the vagina and cervix, this method was pursued in all cases during six months. In the following six months neither scrubbing nor irritation was resorted to. We were surprised by the results. In the former class 20 7-10 per cent. were feverish during the puerperium, whereas in the second class only 13 1-10 per cent. showed an increased temperature.

It seems to me that this striking difference in results is to be explained by the slight massage and mechanical injury imparted to the cervix uteri, which can hardly be avoided during scrubbing. For instance, after dilatation of the rigid os uteri we observe most invariably an increase of temperature. The fever occurring during parturition in cases of protracted delivery in spite of the most careful cleanliness finds its explanation in this way. Fever during delivery is frequently observed when the head, after a premature discharge of the waters, is detained for a long time in the passage, and exercises a continued pressure on the highly hyperemic walls. The premature rupture of the sac of water has a similar effect, because the dilatation of the os uteri by the relatively inelastic skull of the fœtus is slow and often leads to laceration.

In other words the officious endeavors at disinfection demonstrate anew the deleterious effects of "meddlesome midwifery." We have seen that after the thorough cleansing of the external genitals the course of the puerperium shows almost the same number of patients afflicted with fever, whether the vagina be irrigated antiseptically or not. It has been shown that manipulations of the cervix of any kind promote the infection by bacteria. I am, therefore, convinced that we may avoid infection by omitting repeated internal examination, which partially does away with the needfulness of disinfecting irrigations. If in case of pathological secretion we make an internal examination before the waters have broken, the danger threatens from the great number of pathogenic germs present.

If, on the other hand, we make the examination after the waters have broken, the vagina is washed by the amniotic fluid, but cocci are retained in the folds of the mucous membrane and may prove harmful, because now the cervix is often lacerated. Additional rude examination may further impair the tissues and increase the danger of infection. The considerations above given should entail the following rules in midwifery:

1. Internal examination during delivery should be abstained from whenever possible.

Delivery should be effected whenever possible with only external examination.

3. The internal examination when needed must be brief and gentle.

In operative cases a thorough disinfection of the instruments and the external genitals is sufficient without vaginal irrigation, if pathological secretion may be excluded. In the latter case the vaginal may be antiseptically cleansed under anæsthetics. The kind of antiseptic has to be chosen with regard to its innocuousness to the tissues as much as for its bacteriological properties. The writer has given preference to lysol.

The finding of pathogenic germs in the vagina is seemingly in support of the theory of self-infection of the puerpera. But, at the same time, the observations related show that the danger of self-infection is rather small. We must consider the chief danger as coming from outside. The efforts of the obstetrician must be to eliminate the introduction of infectious germs. If we carefully accomplish the antisepsis of the external genitals and all objects coming in contact with the genital canal, such as hands and instruments, we can be satisfied with asepsis concerning the parturient canal.

Looking backward on the facts set forth in this paper, we learn that we can discriminate between a normal secretion and a pathological secretion of the vagina; that we find in the normal secretion a characteristic vaginal bacillus producing lactic acid, and that the vaginal bacillus in the cases having a pathological secretion wages a bitter and more or less successful fight against pathogenic germs. We must accept the reality of self-infection, but it must be accepted at once, that the danger of self-infection is by far less than that caused by mechanical injuries plus a lack of cleanliness. Finally we must learn to rely on external examination and restrict internal examination to the utmost.

It is a very interesting observation that there exists within the vagina a bacterium which stands sentinel and combatant at the vaginal port of the abdominal cavity against invasion by pathogenic germs. This, seemingly, is the only instance known where the somatic cells are protected in their function and existence by an extraneous organism. Possibly further investigations will reveal more such symbiotic relations existing between man and bacterial life.—*Indiana Medical Journal.*

CASE OF CONCEPTION WITHOUT RUPTURE OF HYMEN.

I was consulted early in 1893 by Mr. and Mrs. G., aged respectively 38 and 21 years, married three years. They had never had complete intercourse on account of hyperesthesia of the vulva and hymen. Digital examination was impracticable without anæsthesia, and this the patient declined. Inspection revealed the hymen intact, with an orifice not exceeding one-quarter inch in diameter. The slightest touch was attended with what seemed to be excruciating pain. Two appointments were made for an operation, but the patient's fear and timidity prevented any such procedure. In February, 1894, Mr. G. came to me with the statement that his wife thought she was pregnant, and on inquiry said that her physical condition was unchanged.

Her opinion proved to be correct. August 17, I was summoned to attend her in confinement. An effort to make a digital examination proved as unsuccessful as before. The patient was thoroughly anæsthetized. The opening in the hymen was not sufficient to admit the tip of the index finger. Under firm pressure it was felt to give way and an abundant flow of arterial blood gave additional evidence of rupture. With the exception of difficult and protracted labor, which was terminated with forceps, further history of the case was uneventful. Mother and eight and a half pound boy are doing well.—*Indiana Medical Journal.*

FORMALIN FOR CHANCROIDS AND VENEREAL WARTS.

Gaylord having tried formalin as a local application in a series of cases of this kind reports (*Medical News*) his results as uniformly favorable. The best results are obtained by using full strength solutions, and then one application is usually sufficient. The pain produced by the full strength (40 per cent.) is not markedly greater than that produced by any solution above 10 per cent. Pain while excessive can be deadened by cocaine, when it is probably not more severe than that caused by nitric acid. The drug should not be applied over large surfaces except in weak solution. When continued for a protracted period of time it tends to cause an intolerance on account of the pain produced.—*Philadelphia Polyclinic.*

VOMITING OF PREGNANCY.

Dr. Berry, in the *Memphis Medical Monthly*, says that where the patient is of a nervous temperament, can not retain even a sip of tea or water, a formula composed of one ounce of fluid extract of valerian, sixteen minims of Fowler's solution of arsenic and one drachm of sodii bicarb. has never failed in his hands of producing prompt relief, when given in teaspoonful doses every two or three hours.—*Medical and Surgical Reporter.*

Book Reviews and Notices.

A Dictionary of Medicine, Including General Pathology, General Therapeutics, Hygiene and the Diseases of Woman and Children. By various writers. Edited by Richard Quain, Bart., M. D., Lond., etc. Assisted by Frederick Thomas Roberts, M. D., and J. Mitchell Bruce, M. D. With an American appendix by Samuel Treat Armstrong, M. D., Ph. D. New edition, revised throughout and enlarged. Two volumes. New York: D. Appleton & Co. 1894.

Quain's Dictionary has long been a classical book of its sort among medical men. Its object was to supply a concise digest of the mass of knowledge on the various diseases. The cordial reception which the profession gave to the work attested at once the need of such a book and the satisfactory man-

ner in which the need had been supplied. This new edition is constructed on the same lines as its predecessor; but as twelve years, fruitful in discovery, elapsed between the two editions, it was necessary to make changes demanded by medical progress. The addition of seven hundred pages of new matter will give an idea of the manner in which the editors have striven to make this new edition be for its time what its predecessor was in 1882, namely, a clear presentation of the substantial facts of contemporaneous medical and surgical practice. It was the predominant idea to give a busy practitioner a condensed bit of information on any disease in which he might be interested, so that he could in a few moments obtain a fair idea of the existing knowledge on that subject. No controversial matter was admitted; nothing, indeed, except standard facts that were worth knowing and that had been condensed from a vast mass of literature by men specially fitted for the task.

The new edition contains all that the old one contained and a large amount of new matter besides. Instead of one volume, the publishers have issued it in two large volumes of convenient size, containing over 2500 pages. The contributors number more than two hundred men whose work in medical literature is of itself a guarantee of excellence. The only writer from New Orleans is Dr. Jos. Jones, who contributes the article on Yellow Fever. A dictionary is not a work to be analyzed. While there are many dictionaries that are useful to medical men, we feel that Quain's Dictionary will always occupy a high place in the esteem of the busy practitioner. The American edition is enriched by an appendix on the mineral springs of the United States, serum-therapy, toxines, quarantine in the United States, etc., by Dr. Samuel Treat Armstrong, a contributor to Foster's Encyclopedic Dictionary. These topics have received a good deal of attention, and deserve a place in a standard work; and their addition, after the bulk of the work had been compiled, brings Quain's Dictionary up to the state of medical science as it exists at the present moment.

A. McS.

A Modern Wizard. G. P. Putnam, New York and London, 1894.

In putting down this book, one is impressed with the degree of care with which the author has prepared himself for the medical suggestions which find place. The use of hypnotism in literature is far from new, and there is nothing original in the work under consideration. A chapter or two in Bernheim or Björnstrom would readily elucidate the method of the au-

thor's leading character. The truly unique element of interest in this odd book is the criminal use of animal poison in the shape of diphtheria inoculation. The plot of the story is weak, but clearly drawn. A physician, with natural talents for scientific investigation, is tried for poisoning his wife with morphine, of which he is acquitted. The interest of the reader is maintained by the details of the trial, in which the point is made prominent that the patient was affected with diphtheria at the time of death, and that she was addicted to morphine to control the pain incident to Bright's disease, with which she was also diseased. The doctor later marries, and is content until his second wife threatens a scandalous exposure, when she is suddenly taken with diphtheria and dies rapidly. A detective, who had been unsuccessful in finding evidence against the doctor in the trial of the first wife's murder, is impressed with the coincidence of both wives having diphtheria. After informing himself upon the bacteriology of the disease, he conceives the brilliant idea that the second wife has been inoculated. He confronts the doctor with his suspicions and so draws from the latter the confession that he had been experimenting with various morbid germs. In demonstrating this, the doctor states that he has found the germ of insanity, and, in the presence of the detective, inoculates himself. The insanity follows, and the author leaves the reader with this finale.

To accomplish his ends, the doctor hypnotizes nearly every character in the book. He is portrayed as somewhat of a mind-reader, and endowed with a remarkable general acumen.

The skeleton of the story is worthy of a better telling. There is throughout a lack of finish, and the story is concluded with a cheap climax. As a study of medical jurisprudence, it is hardly worth the reading; it lacks depth. Its merits are only calculated to meet popular endorsement, and that for a short time.

ISADORE DYER.

ANNOUNCEMENT.

E. B. Treat, publisher, New York, has in press for early publication the 1895 *International Medical Annual*, being the thirteenth yearly issue of this eminently useful work. Since the first issue of this one-volume reference work, each year has witnessed marked improvements; and the prospectus of the forthcoming volume gives promise that it will surpass any of its predecessors. It will be the conjoint authorship of thirty-eight distinguished contributors and specialists from America, England and the Continent. It will contain the progress of

medical science in all parts of the world, together with a large number of original articles and reviews by authors on subjects with which their scientific reputation is identified. In short, the design of the book is to bring the practitioner into direct communication with those who are advancing the science of medicine, so he may be furnished with all that is worthy of preservation, as reliable aids in his daily work. Illustrations in black and colors will be freely used in elucidating the text. A most useful investment for the medical practitioner. The price remains the same as heretofore, $2.75.

NEW AID SERIES OF MANUALS FOR STUDENTS AND PRACTITIONERS.

Mr. Saunders is pleased to announce that the above works are in active preparation.

As publisher of the "Standard Series of Question Compends," together with an intimate relation with leading members of the medical profession, Mr. Saunders has been enabled to study, progressively, the essential *desideratum* in practical "self-helps" for students and physicians.

This study has manifested that, while the published "Question Compends" earn the highest appreciation of students, whom they serve in reviewing their studies preparatory to examination, there is special need of thoroughly reliable handbooks on the leading branches of Medicine and Surgery, each subject being compactly and authoritatively written, and exhaustive in detail, without the introduction of cases and foreign subject-matter which so largely expand ordinary text-books.

The Saunders' Aid Series will not merely be condensations from present literature, but will be ably written by well-known authors and practitioners, most of them being teachers in representative American Colleges. This new series, therefore, will form an admirable collection of advanced lectures, which will be invaluable aids to students in reading and in comprehending the contents of "recommended" works.

Each Manual, comprising about 250 pages (5-12x8 inches), will further be distinguished by the beauty of the new type; by the quality of the paper and printing; by the copious use of illustrations; by the attractive binding in cloth; and by the extremely low price, which will uniformly be $1.25 per volume.

State News and Medical Items.

The Shreveport Medical Society gave a banquet recently, the occasion being the instalment of the officers for the ensuing year. The officers elected to serve for 1895 were Dr. A. A. Lyons, president; Dr. J. M. Calloway, vice president; Dr. J. F. Griffin, recording secretary; Dr. Randall Hunt, corresponding secretary, and Dr. J. J. Scott, treasurer.

Dr. W. H. Ross and wife, of Pensacola, Fla., were in New Orleans on a short visit.

Married.—December 12, 1894, Dr. W. B. Payne, of Virginia, and Miss Amelia M. Choppin, of New Orleans, La.

Dr. Thomas M. McIntosh, of Thomasville, Ga., has been appointed principal physician of the Penitentiary by Governor Atkinson.

The Houston District Medical Society has thirty-four members, and meets the second and fourth Mondays in each month. The officers are: Dr. J. W. Scott, president; Dr. N. P. Dolin, vice president; Dr. J. B. Massie, secretary; Dr. S. C. Red, treasurer; Drs. E. N. Gray, R. G. Turner, R. W. Knox, board of censors.

A late act of the New York Legislature established the Craig Colony for epileptics at Mount Morris, near Buffalo.

The following are the presidents, secretaries and dates of meetings of the different State medical societies:

The Louisiana State Medical Society.— Annual meeting at New Orleans, May 7, 1895. R. Matas, M. D., president, 72 South Rampart street, New Orleans, La.; P. B. McCutchon, M. D., secretary, 559 Prytania street, New Orleans, La.

Mississippi State Medical Association.—Annual meeting at Jackson, April 10, 1895. P. W. Rowland, M. D., president, Coffeeville, Miss.; H. H. Haralson, M. D., secretary, Forest, Miss.

The Texas State Medical Association. — Annual meeting at Dallas, April 24, 1895. J. W. McLaughlin, M. D.,

president, Austin Texas; H. A. West, M. D., secretary, Galveston, Texas.

Florida State Medical Society.—Annual meeting at Gainesville, April 16, 1895. J. D. Rush, M. D., president, Apalachicola, Fla.; J. D. Fernandez, M. D., secretary, Jacksonville, Fla.

The Medical Association of Georgia.—Annual meeting at Savannah, April 18, 19 and 20, 1895. Willis E. Westmoreland, M. D., president, Atlanta, Ga.; Dan. H. Howell, M. D., secretary, Atlanta, Ga.

Medical Association of the State of Alabama.—Annual meeting at Mobile, April 16 to 19, 1895. Richard Matthew Fletcher, M. D., president, Madison, Ala.; James Reid Jordan, M. D., secretary, Montgomery, Ala.

The Arkansas Medical Society.—Annual meeting at Little Rock, May 1, 1895. A. C. Jordan, M. D., president, Pine Bluff, Ark.; L. P. Gibson, M. D., secretary, Little Rock, Ark.

Dr. W. S. Haryey and wife, of Chicago, have been visiting friends in this city the past month.

During the months of July, August and September there was an epidemic of paralysis among the children of Vermont. One hundred and twenty cases were reported. A number of the cases were fatal. Horses and fowls were likewise affected. It is the first epidemic of the kind in America and the third in the world.

Dr. I. J. Newton, of Monroe, La., is in the city attending lectures. The doctor has just returned from a trip to Hot Springs, Ark.

Recent statistics show Berlin to be the healthiest city in the world.

Dr. C. P. Graves, Enon, Tex., who graduated from the Medical Department of Tulane last year, is located at that place.

At the first meeting of the Middle Tennessee Medical Association held in Nashville recently, nearly a hundred members were enrolled. Dr. Robt. Pillow, of Columbia, Tenn., was elected president.

A DOCTOR received the following in reply to his bill: Dear Doctor—Don't you worry about my bill. I'll owe you forever before I'll cheat you out of it.

DR. L. G. WILLE, formerly of Marksville, La., has removed to Loreauville, Iberville parish. The doctor was a graduate from Tulane, class of 1892.

DR. J. W. MCCLELAN, of Teneha, Tex., has located at Morgan City, this State.

STORIES OF DR. HOLMES.—In the older days of the Harvard Medical School, when funds were scarce and professors scarcer, Dr. Holmes was the lecturer on anatomy, physiology, medical chemistry, and a few other subjects. One day the president of the college met him in the street, and congratulated him on his then recent election to a professional chair of medicine. "Chair!" flashed out the doctor. "You're mistaken, my dear sir; it isn't a chair of medicine that I occupy. It's a whole settee!" Another tale is also a medical one, and relates to a meeting of several of the leading physicians of a by-gone generation. They were all, except Holmes, big men physically as well as mentally, and for some time the little doctor walked disconsolately about amid his six-foot colleagues. Then, jingling the loose change in his pocket, he said, calmly: "Do you know, gentlemen, I feel like a three-cent piece among a lot of pennies."—*Boston Budget.*

DR. D. P. BECTON, of Sulphur Springs, Tex., has been appointed superintendent of the State Institute for the Blind.

IN THE MEDICAL SCHOOL AT GALVESTON.—Dr. Cary H. Wilkinson, Galveston, has been elected Lecturer on Clinical Surgery, and Dr. William M. Gammon, Demonstrator of Pathology.

NORTH TEXAS MEDICAL ASSOCIATION.—This flourishing association held a successful meeting at Gainesville last month. The following officers were elected for the ensuing year: Dr. S. D. Moon, of Van Alstyne, president; Dr. Potts, of Bonham, vice president; Dr. Taylor, of Sherman, secretary; Dr. Stinson, of Sherman, treasurer. The association will hold its next meeting at Bonham next June.

OLD MEDICAL THESES.—The following are a few theses,

authentically titled, that will serve to give our gentle readers some idea of the curious thoughts of former Parisian medical students:

"Does the fœtus resemble the father more than the mother?" (1376.)

"Is water more healthy than wine!" (1622.)

"Does the worship of Venus drive away disease?" (Affirmative.)

Francois Le Sage: "An mulieri preferatæ vir succulentus?" (1612.)

Dennis Joucquet: "An aurora veneris amica?" (1637.)

Robert Debonnaire: "Are infants born with a caul the happier?" (1637.)

Andre Guget: "Are heroes not born at the tenth month?" (1643.)

Hippolite Duval: An ex salacitate calvities?" (1662.)

"Is music efficacious in disease?" (1634.)

"Should a young girl in love be bled?" (1639.)

"Is getting drunk once a month healthful?" (1643.)

"Is woman an imperfect work of nature?" (1646.)

"Does libertinage induce baldness?" (1662.)

"Should literary men marry?" (1745.)

The daily mortality from consumption in the United States is now estimated at 450.

Typhoid in Paris.—The death rate from typhoid fever in Paris has been reduced from 147 in 100,000 in 1882 to 27.7 in 1893. This is all said to be due to the better supply of water.

Profitable Journal.—The receipts of the *British Medical Journal* last year were $176,000; expenses, $150,000.

It is interesting to note that while the death rate among children has been perceptibly lessened, that among adults has increased. Nineteenth century progress and research protects the life at one end, only to overtax and snap it off suddenly at the other.

Dr. W. B. Rogers, of Memphis, Tenn., has been appointed dean of the faculty of the Memphis Hospital Medical College, vice Professor F. L. Sim, deceased.

Many members of the class of 1879, Jefferson Medical College of Philadelphia, are desirous of having a class reunion on the occasion of the fifteenth anniversary of their graduation. Owing to changes, comparatively few addresses are known, and, therefore, this means is resorted to, with the hope that every member of the class of 1879 who reads this notice will communicate at once with their class president, Dr. Philip R. Koons, Mechanicsburg, Cumberland county, Penn.

Commissioner of Pensions Lochren has issued an order forbidding bureau employés from engaging in outside medical practice. The order is a result of the recent small-pox cases in this city, the first persons having been attended by a doctor employed in the Interior Department.

Dr. Featherson, of Macon, Miss., was in the city recently, and called at the Eye, Ear, Nose and Throat Hospital.

Dr. Fulton, of the University of Louisville, Ky., was here for a short visit last month.

Dr. V. M. Bass, who has just returned from the New York Polyclinic, will locate here and open an office corner of Canal and Bourbon streets.

Dr. G. Frank Lydston will lecture every Monday at 8 p. m., beginning January 7, 1895, on the third special course in Regional Surgery, at the Masonic Hospital, 369 Washington Boulevard, Chicago. Subjects: Surgery of the Prostate, Bladder and Kidneys, including Calculus, Appendicitis, Surgery of the Rectum and Urethra, Varicocele. The lectures will be illustrated by special charts and drawings, and are free.

Officers searching for a stolen body in Indianapolis found twenty bodies of various ages in an empty house.

Chicago covers 186½ square miles and has 1,625,000 inhabitants, of which 3400 are physicians, which is about one physician to 478 inhabitants.

The *North Carolina Medical Journal* is now issued semi-monthly.

The Kentucky School of Medicine has a new hospital and dispensary.

Illiterate Boors in the Profession.—The *Texas Health Journal* provides its readers with the following treat:

The Cheap-John medical colleges and reckless medical examining boards of the country are daily turning out large numbers of ignorant fellows with the title of M. D., who are a burning shame and disgrace to the noble profession of medicine. This is not all. They are dangerous to the public welfare. Who is to blame? The colleges and boards who, for a paltry sum, permit these fellows to roam at large. These colleges and boards are always "ethical." Certainly each and every one must endorse the code of ethics or he is not eligible for the position in a college or on a board. I give below a letter sent me by Dr. H. Riley, of Bowie, Texas, and written by one of these boors to the postmaster at Bowie. It is only one of many such letters sent the *Journal*. The *Journal* occasionally publishes such letters with the hope of raising the standard of medical education by holding colleges and boards up to shame, as they deserve. The following is a verbatim copy of the letter written from Memphis, Texas, to the postmaster at Bowie by an alleged "doctor:"

Memphis Hall co texas 12—2—94

Mr. Postmaster at Booey

Please tell me what the popolation of yor town is and how meney Dos thair is thair and is the soronding coontrey a fertill coontrey or not and eff yo have soft water & . doo yos Rais corne & oats & cotton il not ask aney more questions as . i may wairey yos with questions. I am in the Pan handle trying too dispose of some cattle after so dooing i am Ready for .a. Location whair thair is sChools .& Churchis . i am 51 yairs of age have a wife & 1 grone sone. &. 3 small boys all too school. i. am from Lee. co. Missippi hop yo will anser this and oblige at once

P. S

i am not very ancios to Locat in town i am a. graduat of Medison and sergery so acknowledg By the state Board of Texas

Respectfoly,

Dr. T. G. H.

Memphis

Chinese Surgery scarcely figures in the present contest with Japan. The recent dispatch stating that Red Cross

nurses had been turned back, because the Chinese had no use for them with their armies, is probably a simple statement of fact. Western surgery has entered China chiefly through the missionary hospitals, which the war party look on with no favor; and the Chinese have absolutely no operative surgery of their own. Dr. Kerr, in discussing the prevalence of stone in the bladder, near Canton, and its relief by lithotomy, says: "No surgical instruments of any kind have been devised, and of course, none are found for such an operation, or for exploring the bladder, or for relieving retention of urine. We stand amazed at the fact that a people having so much mechanical skill, high literary culture, and giving so much attention to the cure of disease, should never in the many centuries of their history have made any attempt to devise instruments for the relief of diseases so terrible in suffering and so surely fatal as obstructions of the urinary organs. In cases of difficult labor there is the same condition of ignorance and helplessness."—*Phil. Polyc.*

Dr. J. W. Dupree and wife, of Baton Rouge, La., spent the holidays at Tampa, Fla.

Married—At the the residence of the bride's parents, in this city, Dr. E. E. C. Pollock to Miss Margaret Barr. The Journal extends congratulations.

The Charity Hospital, at Birmingham, Ala., recently destroyed by fire, narrowly escaped a second visitation in its temporary quarters, in the Lunsford Hotel building. Fire was discovered simultaneously in two places, showing the work of an incendiary. Several of the patients were badly frightened and shaken up. The damage by fire was small.

Dr. Wilcox died December 2, 1894, at Hico, La. The following resolutions attest the esteem in which he was held by his confrères:

Whereas, In the dispensation of All Wise Providence our confrère, Dr. Chas. K. Wilcox has been cut down in the bloom of manhood and usefulness; therefore, be it

Resolved, By the physicians of Ruston, La., that in the death of Dr. Wilcox we feel that we have lost a courteous, affable gentleman, ethical brother, and talented physician and surgeon. We deplore our loss in the death of Dr. Wilcox,

and extend our warmest sympathies to the bereaved widow, and also to his relatives in Dallas, Texas.

R. F. Harrell.
N. B. Null.
C. H. Griffin.
Alphonse DeSeay.
Hiram T. Smith.
M. A. Laurence.

A HISTORICAL CASE OF DIPHTHERIA.

The influence which epidemic disease has had upon the course of history is a curious subject for speculation, but most of the instances which have been adduced by various writers who have occasionally touched upon the subject have been instances of wide-spread epidemics, such as the plague at Athens and the "Black Death" in England; but the effect which certain infectious diseases, more or less constantly present in temperate climates, may have had upon historical events is less clearly perceived. A curious instance is afforded by the death of Napoleon Charles, Prince Royal of Holland, the son of Louis, brother of Napoleon Bonaparte and of Hortense, his stepdaughter. This child died, when not quite five years old, of a disease, which, there can be little doubt, was diphtheria. The boy was a favorite of his imperial uncle and was generally taken to St. Cloud when Napoleon stayed there in the summer. Though Napoleon never seems to have expressed himself clearly upon the subject, it was thought by many that he proposed to make this child, who was his nearest male relative in the second generation, his heir. Among those who shared this opinion was Meneval, who, as private secretary to Napoleon, had special opportunities of forming an opinion as to the Emperor's intentions. If this child had lived Napoleon, Meneval thinks, would not have divorced Josephine, would not, therefore, have exposed himself to be insulted by the Emperor of Russia's refusal of the hand of a grand duchess, and in all probability would not have gone to Moscow, and might, therefore, very possibly have founded a lasting dynasty. It is curious to remember that this boy's brother —his uterine brother at least—did actually sit on the throne of France. Napoleon, who was very much moved by the death of his nephew, offered a prize of 12,000 francs to the author of the best work on the means of preventing and curing croup. The boy died on May 5, 1807, and Meneval remarks that the superstitious looked upon it as a curious coincidence that Napoleon himself died on the same day of the same month fourteen years later.—*British Medical Journal.*—*Medical Record.*

MORTUARY REPORT OF NEW ORLEANS.

For December, 1894.

CAUSE.	*White.....*	*Colored...*	*Male.....*	*Female....*	*Adults ....*	*Children.*	*Total .....*
Fever, Yellow							
" Malarial (unclassified)	5	7	6	6	9	3	12
" Intermittent							
" Remittent	2	3	3	2	4	1	5
" Congestive	1		1		1		1
" Typho	6	4	5	4	7	2	9
" Typhoid or Enteric	18	1	9	9	16	2	18
" Puerperal	1			1	1		1
Leprosy		1	1		1		1
Influenza	6	3	2	7	6	3	9
Measles	2		1	1		2	2
Diphtheria	9	1	4	6		10	10
Whooping Cough	1			1		1	1
Meningitis	6	5	6	5	4	7	11
Pneumonia	26	28	29	25	29	25	54
Bronchitis	17	12	14	15	11	18	29
Consumption	38	30	44	24	64	4	68
Cancer	6	7	2	11	13		13
Congestion of Brain	2	1	2	1	2	1	3
Bright's Disease (Nephritis)	22	10	16	16	31	1	32
Diarrhœa (Enteritis)	27	24	24	27	20	31	51
Cholera Infantum	6	3	4	5		9	9
Dysentery	10	5	10	5	14	1	15
Debility, General	3		1	2	3		3
" Senile	20	15	9	26	35		35
" Infantile	2	7	6	3		9	9
All other causes	229	125	198	156	229	125	354
TOTAL	464	291	397	358	500	255	755

Still-born Children—White, 29; colored, 30; total, 59.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 30.17; colored, 50.24; total, 35.66.

L. F. FINNEY, M. D.,
Chief Sanitary Inspector.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

GONORRHŒA IN WOMEN.*

BY J. B. S. HOLMES, M. D., ATLANTA, GA.

There is no disease that affects women that should engage the serious and thoughtful consideration of the physicians more than gonorrhœa, that deadliest of all enemies to female health. Most of us, that is, the members of this association, who began the practice of our profession twenty to twenty-five years ago, were taught to regard gonorrhœa in the female as a most trivial disease; nothing more than a vaginitis, easily cured by a few injections with some simple astringent. I well remember in my college days that a distinguished Philadelphia professor, now dead, taught us that equal parts of apple vinegar and cold water thrown into the vagina was a sure cure, an absolute specific. I wrote down this prescription, and in the beginning of my professional career, and as my work was largely in the lower classes, where gonorrhœa was often found, God only knows how many women I left as ultimately to be relieved only by the surgeon's knife. Doubtless many of my hearers, especially the older ones, have received the same teaching and furnished their quota for the operating table. Happily science has thrown much light upon this, formerly,

* Read before the Southern Surgical and Gynecological Association, Nov. 13, 1894.

very dark field of our professional labor, and the man who now lightly treats gonorrhœa in the woman is either ignorant of his professional duty or, what is even worse, indifferent to the result. So great an authority as Lawson Tait says: "Early in life I heard an eminent surgeon say that if he was doomed to have a venereal disease he would rather have syphilis than gonorrhœa. I marveled and disbelieved, but now I know that if he included women in his thoughts on the subject, he spoke truly. Syphilis is relatively a harmless disease. It may and does cause discomfort, distress and even pain, but I doubt if it ever kills the woman. Even if it does, where syphilis kills ten, gonorrhœa kills its thousands, and it would take the suffering of one hundred cases of syphilis to make up for the long weary years of agony of one case of gonorrhœal pio-salpinx."

Truly such a statement from one of such broad learning and extensive experience as Mr. Tait must impress us with the great importance of the subject.

Sinclair says: "Surgeons, until late years, have accepted gonorrœha as only a trifling incident, and it is clear that obstetricians who have had better opportunities for knowledge have entirely overlooked it. Modern gynecologists have unearthed the conclusion that it is a terrible and fatal scourge to women." The above language from Sinclair is strong, pointed and undoubtedly true. I have no doubt but that many of the chronic diseases of the ovaries and tubes that come under the observation of gynecologists are due to gonorrhœa. In the majority of cases the poor woman is entirely ignorant of the fact that she has or has ever had any specific disease. Indeed, her husband may tell you, if examined or questioned, that months, or even years, before his marriage he was a subject of gonorrhœa, which was cured and has since shown no evidence of a return. Many of the higher authorities now seriously doubt whether gonorrœha in the male is ever cured; that the subject may be apparently well for months, or even years, and under certain excesses, notably venereal, the urethritis, simple in character as he suspects, for he knows he has taken no risks, returns and the wife is promptly infected; indeed, she may be without any perceptible return of the urethri-

tis in the husband. From such excesses as above mentioned the poison or gonococcus, which has been latent for so long, quietly resting in its bed, is aroused to fresh life and vigor to do its deadly work upon the innocent and unsuspecting wife. As general practitioners we have all been too careless in the treatment of gonorrhœa in the male; we have regarded it is a disease, under ordinary circumstances, easily cured, and have discharged our patients as well and ready for marriage soon after the discharge and other local symptoms have disappeared.

Since science has removed the veil from our beclouded eyes, we must look back with awe when we contemplate the danger and damage to the good women of our country caused by our ignorance. Certainly with the lights now before us every man who has to deal with gonorrhœa in the male will be more careful, not only in its treatment and the persistence thereof, but especially in his advice as to the safety of marriage. Mr. Tait says: "We know a man never really gets cured of gonorrhœa. Under any stimulus of wine or women it will come back and be effective. From the enormous number of cases of damaged uterine appendages that have come under my care in the young married women who have remained sterile, after having been a few months married, I am almost disposed to believe that it is unjustifiable for a man who has ever suffered from gonorrhœa to enter the married state at all." What a startling statement from so high an authority! While I am not prepared to accept the above as literally true, I do believe that no man who has been the subject of gonorrhœa should marry until he has tested fully the possibility of any latent trouble in the urethra by violent horseback exercise and the excessive indulgence, for a few days, in beer, and, if he can use it, tobacco also. If this shows no return of the trouble, he might, with great safety and prudence, wait a few months and repeat the above, and if there is then no return, it would probably be safe for him to marry; but, in every case he should be made thoroughly familiar with the advanced views as to the possibility of his trouble returning to such an extent as to infect his wife.

Gonorrhœa in the female is not always easily diagnosed,

and doubtless many hundreds of cases are passed, by competent and intelligent physicians, as a simple vaginitis. It must be remembered that the gonococcus can not always be found in the gonorrhœal virus—so at least some high authorities assert. On the other hand, the coccus is often said to be found in the troublesome vaginitis of children, where we know there has been no specific contact. Mr. Tait does not believe in the existence of the gonococcus as the cause of the disease, but merely the result of it. In many cases of vaginitis it is often an impossibility to get a history of the specific infection, and it is often unwise to press our questions too far. The history of distinct and unmistakable infection is the only guide, and this is often impossible to obtain, for in many cases it is a delicate matter, and one that, as above mentioned, it is not well to press too far.

The sudden occurrence, especially if with urethral symptoms, which, however, are not always present, of a vaginitis in a patient who has formerly been free from leucorrhœal discharges, absence of other causes to explain these symptoms, protracted duration of symptoms, and resistance to treatment, tend very strongly to convince us as to the specific nature of the trouble. Even in many cases where we are convinced beyond a doubt as to the real nature of the disease, the domestic unhappiness that would be occasioned by the expression of a positive opinion should often deter us from giving it, except in such cases as the cause is admitted. The urethra is much more apt to be involved in gonorrhœa than in simple vaginitis. Often it is swollen, tender, and frequently blood and pus escape from it. The pus from vaginitis of a specific nature is of a yellowish or greenish color and very ill smelling. Warts and condylomatous growths are apt to be found on the external genitals. Many, in fact most, of the cases of acute gonorrhœa in women go to the family physician for advice. They are ignorant of even the possibility of any specific trouble, for they well know that no unfaithfulness to their husband has been practised, nor do they suspect infidelity on his part. The family physician, knowing the character of the lady and not fully realizing the possibility of re-development of the disease in the male, never suspects gonorrhœa, regards the trouble as

trivial and so treats it, when, if its real nature had been recognized, and the disease treated accordingly, the future ill effects upon the poor woman might have been averted.

Many cases of gonorrhœa exist where no vaginitis exists, at least to an extent to make it noticeable, the virus entering the uterus direct. The mucous membrane of the uterus is better fitted for the culture of the coccus than that of the vagina, because, most likely, of the unfavorable circumstances dependent on the acid secretions of the latter, together with the coexistence of the numerous bacteria that are always found in it. The gynecologist is rarely consulted until the uterus and its appendages are seriously involved; perhaps months or years have passed before he sees the patient. She is then probably broken in health—a great sufferer—perhaps bedridden, a confirmed invalid with great pus sacs in the Fallopian tubes or ovaries, or both, but it is rare to have pus in the ovary without also having it in the tube.

While the acute symptoms of gonorrhœa in the woman usually subside without immediate trouble, still, there are, in my opinion, many cases of acute and even fatal peritonitis where the cause has been, and is clearly and undoubtedly, due to acute gonorrhœa. As has already been mentioned, there may be entire absence of vaginitis, the virus affecting the uterus direct, giving us sometimes an endometritis of the most intractable character, and may pass from the uterus to the tubes, ovaries snd pelvic organs. The entire uterus, after a while, will become affected, and by extension through the tubes, we have pelvic peritonitis, resulting in adhesions of all the pelvic organs and causing an endless amount of suffering and pain and finally resulting in chronic invalidism or death. Inflammation of the tubes is soon felt by a restriction in their calibre, as is clearly shown by the terrible suffering occurring frequently twenty-four to forty-eight hours before the menstral flow begins. Finally, the tube is entirely sealed at its uterine end, and we have hopeless and incurable sterility. Sinclair says, "a woman who has suffered from gonorrhœal peritonitis is barren," and from a careful examination of many tubes, the subjects of gonorrhœal infection, I believe he is correct.

Many of the cases of sterility we see are doubtless due to

an unsuspected and unrecognized gonorrhœa, a disease that the husband has as little suspected as the wife. Distention of the tube, the result of gonorrhœal inflammation, by water, blood or pus is frequently found, and more suffering from the latter cause is produced by gonorrhœa than all other troubles due to it combined. The poor woman soon becomes a confirmed invalid, looking to the return of each menstruation with dread and horror, for she well knows the pain and suffering that awaits her. Her digestion is deranged, her nutrition impaired, and she becomes weak, exhausted and unable to stand or walk without the greatest suffering; the approach of her husband is productive of most intense pain, and, in short, she never knows a moment of relief from her suffering.

Such a picture, I am sure, should enlist the most determined effort on our part to arrest the spread and extension of the gonorrhœal virus. Many cases of abortion are due to the changes in the uterine mucous membrane from gonorrhœa. Many of the cases of the so-called puerperal fever are due to the rupture during labor of a pyo-salpinx, most likely of gonorrhœal origin. One tube has remained patulous and healthy, while the other was the seat of an undetected pus-sac. Rupture of these produce septic peritonitis or so-called puerperal fever. Of course the presence of pus in the tubes is much more dangerous to the woman during pregnancy and labor than at any other time. Many cases of ruptured pus-tubes have resulted in death to the poor woman, when the cause has been overlooked and perhaps attributed to other things.

Thousands of cases of ophthalmia neonatorum, resulting in blindness to many children, is traceable directly to an unsuspected gonorrhœa in the mother. Happily the obstetricians of the country are realizing the importance of gonorrhœa in its relation as a causative factor in producing this disease, and now, I am glad to say, the number of cases is very greatly reduced, and I predict that in the near future it will be an affection seldom met with; and when it is met, it is due entirely to the carelessness and ignorance of the attending obstetrician.

So high an authority as Dr. J. Price, of Philadelphia, regards fibroids as caused, in many instances, by gonorrhœal inflammation of the uterus. Cystitis, sometimes of a very severe

character, the result of gonorrhœal inflammation, is occasionally met with. I might mention other complications in connection with gonorrhœa, but will desist for fear of making this paper too long.

In regard to treatment, the patient should be kept as quiet as possible and the diet made simple and plain. The bowels should be kept open, preferably by salines. Cleanse the vulva and vagina thoroughly with soft cotton and a solution of bichloride of mercury, 1 to 1000. Do not, under any circumstances, use, either for cleansing or applying remedies, vaginal douches, as there is too much risk in this way of carrying the disease into the uterus. After thoroughly cleansing, brush the affected parts thoroughly with carbolic acid and glycerine, equal parts, and then dry well and blow over all diseased surface a powder of iodoform and boracic acid, one to four. Then fill the vagina with iodoform or sublimate gauze and cover the vulva with a pad of the same. Repeat this daily, or if too much irritation should be produced by the application, then repeat only every second, third or fourth day, but cleanse the parts daily and reapply the dry dressings. I have sometimes used, instead of the carbolic acid and glycerine, nitrate of silver, one drachm to an ounce of water.

Good results are also obtained by inserting daily, after the cleansing, a suppository of ten grains each of tannic acid and iodoform, with cocoa butter; allowing this to remain twenty-four hours, when the parts are again cleansed and the suppository is again introduced. I, however, like the dry treatment better. For the urethritis I use two-grain solution of nitrate of silver, applied to the mucous membrane, with aseptic absorbent cotton wrapped on an applicator, once a day. A pencil of two to four grains of iodoform prepared with cocoa butter inserted into the urethra is an excellent application. Weak injections daily into the urethra of sulpho-carbolate of zinc, five grains to an ounce of water, is also an excellent remedy; of course keeping the urine alkaline and diluted as much as possible, by securing a free flow, which I have generally been able to get by having my patient drink freely of Bowden Lithia water.

In cases of cystitis I have also advised the free use of Bowden

Lithia water and have given ten grains of benzoate of soda, with a capsule of three to five drops of Venice turpentine, four or five times daily, having the bladder washed once a day with a warm boracic acid solution, four to eight grains to the ounce of water. The warts can usually be relieved by dusting them freely with a powder of calomel and starch, one to four, and should this not prove effective, clip them off with the scissors and touch their base with pure carbolic acid. If the endometritis is seen before the tubes become involved I would, after a most thorough cleansing of the vagina, dilate and curette the uterus, wash it thoroughly with a bichloride solution, one to one thousand, brush the endometrium with pure carbolic acid and pack lightly with iodoform gauze. If the tubes, ovaries and pelvic perineum should be inflamed, would purge the patient freely with salines, giving chlorate and citrate of potash with quinine freely. If the temperature should be excessive, the patient restless and nervous, would use phenacetin as a sedative, avoiding opiates of every character. Locally I would apply glycerine and boracic acid tampons and use hot water rectal and vaginal douches. If pus should form in the tubes, there is but one remedy—removal by abdominal section. It is worse than foolish to attempt to drain them by gauze in the uterus. It can not be done. Nor can I understand how this line of treatment can be advocated.

To convince the most skeptical it is only necessary that they should examine a few tubes filled with pus, where there will be found from one to half a dozen or more impermeable strictures, so dense and tight that in attempting to pass the smallest probe it will be found impossible to accomplish it. It will pass through the walls of the tubes at any point except the one of constricture. With this condition of things is drainage by capilarity possible? Most assuredly not.

Not only does this line of treatment offer no relief to the poor woman, but I can conceive of nothing more dangerous than curetting the uterus in the presence of immense pus-tubes, with pelvic adhesions. The drawing down of the organ necessary for curettage may break up pelvic adhesions and pour out the contents of pus-sacs into the perineal cavity, which would result, in the majority of cases, in death to the woman. If her

life is saved at all, it will only be done by a prompt abdominal section, with thorough irrigation and drainage of the abdomen. Then why not in the first instance, when pus is detected, promptly remove it by surgical procedure? You then treat the woman rationally and give her the very best and only chance of relief and restoration to health.

SULPHATE OF ESERINE.

By CHAS. W. HEITZMANN M. D. C., New Orleans, La.

As experimental physiology has thrown a great deal of light upon the functions of the human body, so also does comparative medicine afford valuable information that may be applied to human practice.

Physostigma, and also alkaloid, eserine, is so potent a factor in combatting tetanus that it becomes our duty to contribute the results of our experience with the drug in this formidable disease. Eserine has not received from therapeutists the share of attention that it deserves. To all but oculists this valuable agent is practically unknown. It is a remedy which exercises its influence with great certainty when given in line of its direct indication. Expressed briefly its physiological actions are as follows: It is a muscular stimulant and a direct spinal paralyzer, producing complete general paralysis and abolishment of the reflexes, but does not affect muscular irritability, or the brain. It stimulates secretion and is laxative by stimulating the muscular coats of the intestines, as well as by increasing intestinal secretions. It first lowers, then raises the arterial tension, increases the heart-beat in frequency, but depresses the power of the cardiac muscle, though not destroying it. In toxic doses produces dyspnœa by a tetanic action on the respiratory muscles, causing CO^2 poisoning, and death by paralysis of respiration. It contracts the pupil when applied locally *and dilates it when exhibited hypodermatically.* It is eliminated through the skin, kidneys and salivary glands. Its physiological antagonists are atropine, strychnine and chloral.

The object of this paper, as before stated, is specially to call attention to the efficacy of this agent in the treatment of tetanus. Having used this drug for six years in the treatment

of this disease in animals, we feel prepared to state that it is nearly a positive remedy. Out of thirty-five cases occurring in our practice within the past six months *thirty-one have recovered.* Trismus was not present in all the cases, but where it is present a full dose, two to three grains of the *crystals, not tablets,* are given hypodermatically, and in the course of fifteen to forty-five minutes the physiological actions are observed, to-wit: disappearance of the extreme nervousness, discharge of fæces and relaxation of the muscles of mastication. If the case is under our personal supervision, the eserine is continued hypodermatically in three-fourth to one grain doses every one to four hours, according to the severity of the symptoms. Otherwise, the fluid extract of physostigma is ordered in from one to two drachm doses as above. Of course, in addition, the cause—traumatism—is treated on antiseptic principles. As we have said something regarding its laxative properties, this paper would not be complete without saying that eserine is equally, and if not more, useful where a quick and certain purgative is required. We employ it in the treatment of impaction, colic, spasmodic and flatulent. In the latter case it does away with puncturing the intestine with the trocar and canular. In this connection might also state that if any internal parasites be present eserine usually brings them away.

APPENDECTOMY.

By Dr. DORSEY MASON, Houston, Texas.

On September 27, 1894, I was called to see Sam Briscoe: age 10 years, 6 months. Found him with a temperature of 105 F., pulse 120, tongue coated and border slightly red. He said that fever had come on in the morning. In the beginning had had a good deal of pain, which had subsided when I saw him. I prescribed calomel 3 grs., podophyllin ¼ gr. and bicarbonate of soda 4 grs., in two powders, one at once and one in three hours. Quinine ½ drachm, powdered capsicum 6 grs., in 12 capsules; one every three hours. Called the next morning; bowels had acted well, temperature 104, pulse 120. Said he had a great deal of pain in stomach. Upon examination I found tenderness and swelling in the right inguinal region.

Diagnosis, appendicitis, probably with pus. Told the family that an operation was necessary, and that I would like to have a consultation. Drs. R. W. Knox and D. F. Stuart were called and agreed with me. Four o'clock was the time appointed. Drs. J. R. Stuart and L. A. L. Lamkin were invited. Dr. D. F. Stuart gave chloroform. The abdomen was washed off with one one-thousandth bichloride of mercury solution. An incision was commenced one inch above and one and one-half inches in front of anterior superior spinous of the ilium process and extending downward four inches, curving a little toward the pubic bone. Two inches from the beginning of the incision the abdominal cavity was entered. About one and a half ounces of pus flowed out. The wound enlarged and the omentum found adherent to walls of the abdomen, colon and the appendix. The appendix was doubled up on itself, with hole in it near the bend. The adhesions were torn and cut loose and the omentum and appendix ligated with catgut and cut off. The abdominal cavity was washed out with hot water, and iodoform gauze drainage introduced. The edges of wound were brought together with six silk ligatures, washed, dried and dressed with bichloride gauze, carbolized cotton over that, and the whole held in place by a bandage.

The operation was performed on Septmber 29, at 4 o'clock P. M. Hypodermic injections of drachm doses of whisky were given. After the second, patient reacted fairly well. Slept some during the night from morphia ¼ gr. and atropia 1-150. September 30, patient weak. Temperature 103, pulse 120. Gave 1-100 nitroglycerine, which acted well, 3 grs. quinine with teaspoonful of whisky every three hours during the day. Evening, temperature 104, pulse 120. At 10 P. M. gave teaspoonful of fl. ext. cascara. Octber 1, temperature 103, pulse 120. Tympanites. Introduced large soft rubber catheter 10 inches into the bowels and injected 30 grs. quinine. Then gave turpentine enema, which produced copious action. Examined wound, found stitches had cut through. Adhesive plaster was used to support abdominal walls. October 2, no fever, pulse somewhat better. Pus in wound, washed out with equal parts of solution peroxide of hydrogen and water, iodoform gauze laid in and covered over with boracic acid 2 parts iodoform 1 part.

Prescribed elixir cinchona and strychnine three times a day. Patient progressed favorably, and sat up on the 21st day. Wound healed by granulation. Six weeks after operation a gain of 14 pounds was recorded, and at present, four months after operation, the patient is in perfect health.

BROMOFORM IN MENTAL DISEASES.

Dr. Ponticaccia (*Wiener Medizinische Presse*, No, 41, 1894) recommends bromoform very highly in acute maniacal states. He begins the remedy with fifteen drops a day, which are divided into hourly doses, and increases it every day by five drops until from twenty to fifty drops are given a day. Employed in this manner it causes no disagreeable after-effects and in general does not influence the health beyond a slight diarrhœa, which is easily controlled by opium. Its sedative action is always prompt and decisive, so that it need not be administered for more than fourteen consecutive days. He relates eight cases, accompanied by violent maniacal attacks, where the remedy gave him prompt results. The first one may be presented in full as an illustration of its action. A merchant of 41 years and an habitual drinker was seized with a violent attack of delirium tremens, with great restlessness which persisted for twenty-four hours in spite of large doses of chloral hydrate. Therefore in the evening twenty-five drops of bromoform were prescribed, and in half an hour the patient was in a deep sleep with quiet and regular respiration, with full and heavy pulse, normal heart's action and perspiring slightly. The following morning he awakened quietly with complete consciousness and only complained of slight headache and a feeling of heaviness in his head. In the course of the day he became still quieter. This improvement continued so that the following day there was no sign of restlessness nor at his discharge from the institution, six days later. From his experience the author concludes that the remedy in progressively increasing doses, twenty to fifty drops a day, in patients with delirium in combination with intense maniacal excitement, exerts a marked sedative action; that it does not act the same in all mental diseases, but it influences the symptoms, excitement and delirium. On the contrary, its action varies more according to the duration of the disease than its intensity, for it has a very favorable action in acute conditions and a less decided one in those having lasted for several months.—*Med. and Surg. Reporter.*

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Editorial Articles.

THE THERAPEUTICS OF TRAUMATIC TETANUS.

In this number of The Journal we publish a brief but very interesting contribution to the literature of the treatment of traumatic tetanus, which, though dealing with the disease in the lower animals, possesses great value to the surgeon who may be so unfortunate as to meet with the disease in human beings. We will anticipate the objection that may be raised by some persons, that human beings are not cattle, by reminding them that almost the whole fabric of modern physiology is built upon experiments on the lower animals; and, as the results in these experiments are, with certain corrections, applicable to human beings, so do therapeutic results in the domain of comparative medicine offer us a very fair assurance of success when drugs are applied to man for the cure of the same disease. In tetanus, the horse falls a victim to the disease more readily than man does; and a remedy that effectually throttles it in the more susceptible horse should act all the more surely in less susceptible man.

In previous numbers of The Journal, Dr. Geo. H. Lee, of Galveston, Texas, published reports of three cases of

tetanus cured with eserine. There is at present in this city a physician who has notes of an unpublished case of tetanus cured with eserine; this gentleman was encouraged to use the drug by Dr. Lee's reports, and it gave the happiest of results in a case that seemed doomed.

Although physostigma has been known to civilized man since 1846, it has not acquired the widespread use that it certainly seems to deserve. It is true that oculists employ eserine very largely in their practice, but diseases of the eye form but a small though important fraction of the ills which men inherit or acquire. In summing up the thereapeutic uses of physostigma, Rabuteau tersely says that it is used to obtain contraction of the pupil, to overcome constipation, and in tetanus Calabar bean stimulates intestinal secretions, and thus produces catharsis. English physicians have used a glycerine extract of the drug with very satisfactory results in constipation. Physostigma has been given in tetanus since 1867. The use of the drug in that disease was suggested by the apparent antagonism between it and strychnia; the antagonism is only apparent, for they act on different parts of the nervous apparatus. Eserine does, however, control the convulsive movements of tetanus. To produce this effect, the drug ought, according to Rabuteau, be administered in repeated doses; after each dose the pupils contract and the muscles relax for about an hour.

In the last edition of Quain's *Medical Dictionary*, Dr. N. C. Macnamara condemns Calabar bean unqualifiedly. This writer, after observing that patients suffering from traumatic tetanus can take almost incredible amounts of opium and Indian hemp, says that he has given Calabar bean a fair trial, and that he has found that the drug hardly affects the spasms in severe cases unless it be pushed to the extent of rendering the patient collapsed, the temperature of the body falling to 95 or 94 deg. and the pulse being hardly perceptible at the wrist. In the milder forms of the disease, Dr. Macnamara says, there is no necessity for resorting to such a dangerous means of relief. The experience of Dr. Lee and Dr. Heitzman seemed to disprove the extremely dangerous nature of the drug when used intelligently. Nowadays the dosage of alkaloids is very

exact, and no surgeon need give more eserine than is required to do good.

Since 1891 a new factor in the therapeutics of traumatic tetanus has been developed. In a small book just from the press, Dr. George E. Krieger, surgeon to the Chicago Hospital, informs us that Tizzoni and Cattani prepared in their laboratory an antitoxin to the toxin of tetanus. On June 3, 1891, Dr. Gagliardi, a physician of Mollinelli, province of Bologna, injected 0.25 ccm. of Tizzoni's antitoxin, obtained from a strongly immunized dog. Three injections, amounting to less than 1 cubic centimeter of the antitoxin, effected a cure. Other cures were obtained by Dr. Swartz, in December, 1891; by Drs. E. Pacini, J. Taruffi and G. Cassali, in 1892. These favorable cases caused an active demand for the antitoxin of tet anus. According to Krieger,the mortality from traumatic tetanus without antitoxin was 88 per cent.; under its use the mortality is reduced to 20 per cent., with a prospect of a still further reduction with furiher improvements in the method. The testimony as to the value of the antitoxin is not uniformly favorable. In the last issue (1894) of *Sajous' Annual*, the members of the French Academy of Medicine are reported as not being enthusiastic over the antitoxin. Paul Berger admitted that improvement in some cases may have been due to inoculations, but thought that the experiments of Tizzoni and Cattani and Roux all indicated that the serum had only a prophylactic value, but had no effect when the disease was once established. Verneuil said that we were still without a means of positively destroying in the body the bacillus of tetanus and its toxins. Although these learned gentlemen were not prepared to decide in their own minds as to the precise curative value of the antitoxin, still we ought not to ignore the eloquent argument of statistics, which speak in no uncertain tone.

The surgical cleansing of the infected wound was, of course, carried out in all the cases reported.

The therapeutics of traumatic tetanus is still in an unsettled state. In pressing the claim of eserine upon the attention of the profession we feel that we are advocating the cause of an agent of undoubted value, which, when wisely used, can bring a patient through a most dangerous sickness, and not add any new morbid condition to his existing state.

THE "INDEX MEDICUS."

It is with great regret that we learn that the *Index Medicus* stands in imminent danger of suspension. We have already had occasion to speak of this unique publication, of which American medical journalism may well feel proud; and it causes us sorrow to be compelled to plead before the bar of the Americal profession in behalf of what is source of pride to us at large and an absolute necessary to literary men who wish to make conscientious researches along any particular line of investigation.

The *Index Medicus* grew out of conditions that do not exist in any other country, and hence the unique nature of that publication. When Dr. Billings started it, he saw that he had a vast amount of literary treasure that would be buried forever in the library of the Surgeon General's Office unless some means of communication were established with the great body of the profession scattered over the land, to whom three or four medical journals every year, besides books, formed the limit of expense. The *Index Medicus* was born in the library of the Surgeon General. A corps of trained assistants drew up accurate lists of authors and titles of papers and books, and these lists were given out to the world in the *Index*. A writer interested in any given subject could, by consulting the *Index*, see how many papers had been written on that subject before; he could thus put himself abreast of his subject, and prepare himself to handle it in a thorough manner.

The *Index* has never been a paying institution. From the very beginning there has always been a large, if not beautiful, deficit in the cash receipts. When Dr. Billings and his associates felt that they were no longer able to carry on this work of love, they reluctantly announced to their friends that the *Index* was threatened with early dissolution. Mr. Geo. S. Davis, of Detroit, a manufacturing pharmacist and medical publisher, happened to learn of the difficulties that beset the *Index*, and at once volunteered to assume the responsibility of publishing it. When Dr. Billings felt assured that he *Index* would be safe in Mr. Davis' hands, he made the transfer. It is unnecessary here to dwell on the thorough and

conscientious manner in which this generous publisher has discharged the responsibility as a matter of pride in journalism; but we regret to state that his generosity has not found a very marked appreciation on the part of the profession that has benefited by it. During all the years that Mr. Davis has been carrying the *Index*, he has constantly had to face a deficit; and now things have reached such a point that he can no longer keep the *Index* going. The profession should feel itself under great obligations to the publisher for his labor of love cheerfully done; but there is such a thing as riding a willing horse to death, which is something that the medical profession would not wittingly do. We take this opportunity of reminding our friends in the profession that they have a duty to perform by subscribing to the *Index Medicus*, if they do not wish to witness the suspension of invaluable aid to all earnest workers in medicine.

Abstracts, Extracts and Annotations.

MEDICINE.

OUR INSANE.

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IS INSANITY INCREASING?

The subject of insanity is of great interest to all of us. We know not but that our beloved ones may become afflicted, if they are not now. Leaving out the consideration of self, we owe it to the cause of humanity that those who are so unfortunate—yea, more, it is a calamity—to become so afflicted, should have the results of our best humanitarians as well as our highest skill and most intelligent care.

The army of the insane is a very large one and still increasing. Our State asylums are all full and calling for more room, and in every other State where the population is increasing a similar condition exists, the record of 1892 indicating an average of over one hundred thousand in the United States and still increasing, and in looking up the answer to this oft-repeated question, "Is insanity on the increase?" I find not a

little difficulty in arriving at anything like a correct answer. The general impression is abroad that it is. In the New England States it is said to be decreasing with one possible exception, namely, Massachusetts. There are no statistics as to the number of the insane in the whole State except the general census, which is not very reliable, as the census enumerator, not being a medical man, is unable to determine what constitutes insanity; and also the existing prejudice of relatives and friends, causing them in many instances to withhold their names. There are more cared for in our asylums than formerly, even in proportion to the population. The prejudice that existed in reference to institutional care of the insane is not nearly so strong as formerly. The intelligent management and humanitarian methods now almost universally carried out have had a very beneficial and salutary effect on public sentiment.

HISTORY OF THE INSANE.

There hangs on the wall of one of our State asylums a picture of the insane in chains and shackles; treated like criminals, confined in dungeons with the worst of criminals. These barbarian conditions existed until about the beginning of this century, when an organization known as the Friend's Society was formed, and through the efforts of this body public sentiment was aroused to the great and criminal injustice being done to these poor unfortunates. It was at the close of the last century that what is known as the New York Retreat Asylum was founded under the management of this same society of friends, and under their guidance a new system of caring for the insane was adopted. The chains and shackles were thrown off, and those confined in dungeons were brought forth. Many who had been in chains and dungeons for years were released. The old system was abandoned, and a new method consisting largely of moral influences was adopted, and the result surprised even conservative England. This system only needed a trial to convince the most skeptical that it was based on correct principles, and after this great awakening in public sentiment more attention was given to the study of insanity by medical investigation. It is necessary to remember that our knowledge of the intimate working of the human body, and likewise of the human mind, was very limited at this period, and the scientific investigation in relation to the function of the brain and nervous system, as well as many of the important internal organs, was meagre. Not even did we know that the blood ran through our bodies. But a better knowledge of the study of pathology, the changes that take place in the brain and nervous system of those who are suffering from insanity, revealed unmistakable evidence of this

very important fact that insanity, under all conditions and all varieties, depended upon some derangement, disturbance, or abnormal state of the brain or nervous system; or, in other words, a disease, and must be relegated to the domain of medical science; and in the light of recent labors in relation to cause and effect, we are compelled to conclude that diseases of the heart, and likewise diseased conditions of the reproductive organs of the female, will cause a derangement of the functions of the brain; and every physician well knows the relation which syphilis bears to the operations of the mind. Dr. Alice Bennett has reported to the Pennsylvania State Medical Society a series of sixteen patients, generally past the middle of life, where the delusion appears to be due to a cardiac disease. This same authority gave also a report of a remarkable coincidence: in three hundred patients a certain distinctive form of mania had been found to be associated almost without exception with valvular disease of the heart.

IMPROVEMENT IN ASYLUM CONSTRUCTION.

In 1874, at the first meeting of the National Conference of Charities and Corrections, Dr. Chapin, of New York, attacked most vigorously the system then almost universally in vogue of constructing expensive congregate buildings at a cost of from $1500 to $3000 per patient, while the commonwealth was still unable to provide for many of its insane. Soon advanced thinkers in the profession and out of it advocated a more simple, less expensive and safer method of construction, namely, what is known as the cottage system. Instead of one large lineal building with a capacity for hundreds, several buildings are now erected two stories high with a capacity of from twenty-five to fifty. The trustees of the new asylum now being built in this State, after careful investigation, have adopted the cottage system on account of economy and affording various facilities for classification of the various forms of insanity, greater security from fire, and better ventilation, and in every particular is this system superior to the old. This advanced method of asylum construction, in possibly a modified form, is being adopted in the Eastern States, and instead of a cost to the State of $1000 a person, good buildings have been erected for $300 and furnished, in the State of Massachusetts, and for a little more cost in our own State.

COMMITMENT VOLUNTARY.

There are a certain percentage of persons in every community who appreciate their condition even before medical assistance is consulted, or even the attention of friends called

to them. I refer to those in the incipient stage of insanity, or what some are pleased to designate as the "border land" of insanity. The notoriety necessitated by complying with the legal form causes delay, and in this class of cases, the longer proper treatment is delayed, just so long is recovery retarded, and, as one eminent superintendent puts it, the most valuable period, namely, the first stage, is passed, and subsequent treatment does not yield as good results. There are others who have what is known as lucid intervals, and yet another class, says *The Journal of Insanity*, that are nervous invalids, who have not so far lost their reason that they could be declared lunatics, but yet whose minds and nervous systems are so far disordered that they need the same care and treatment as is given at an insane hospital. And there is still another class, who are not strictly insane, but whose minds are as much disordered as are the intellects of many regularly committed. I refer to victims of various drug habits. They may or may not be responsible for their condition. Many have become slaves to the use of opium, or alcohol or cocaine, or other fascinating drugs from their prolonged, and, in some instances, indiscriminate, use in disease. The above is only a partial list of those who would be vastly benefited if they could avail themselves of voluntary commitment. There might be added the neurasthenic from whatever cause, cases suffering from hysteria, chorea, hypochondria, worry and fatigue, with inability to sleep. In the State of Pennsylvania the law permits of the admission of voluntary patients to an asylum on their signing a request for admission, witnessed by a friend and approved by a physician of the asylum. The admission being for a period of seven days with privilege of renewal. In the State of Connecticut a patient can commit his or her self upon his own written application to any asylum in the State, but must also be discharged on a written application within ten days.

The English Lunacy Act passed in 1890 provides for the voluntary admission of patients into an insane asylum, permission being granted by the members of the English Lunacy Committee or by two justices of the peace, subject to permission to leave if patient makes a written application within twenty-four hours after application is made.

Perhaps the most beneficial results for voluntary commitment is instanced in the State of Massachusetts, at the McLean Hospital. Dr. Edward Cowles, superintendent, in speaking of the results of this system in connection with this very high standard institution, said: "It has been in practice here for nine years and has yielded most excellent results. Not only has it been a blessing to the many patients who have gladly availed themselves of its benefits, but it has done good to

the asylum itself in stimulating improvement in the cure of all its patients. Intelligent patients appreciate the privilege of avoiding a formal examination and the dreaded declaration of insanity. By being able to avoid publicity they seek care and treatment earlier and under the consciousness that it is their own act." It is a significant fact, says Dr. Cowles, that in nine years' working of this voluntary law in Massachusetts little criticism has been made upon it, much good has come out of it, and of a kind that none but those who make use of it can properly appreciate. About one-third of the cases at the McLean Hospital come of their own volition, and there is a record of 38 per cent. recoveries.

This line of argument could be further enlarged, but the evidence would be only cumulative, which is beyond the scope of this paper. The time is ripe for such an act in our State, and I hope that steps will be taken in the near future providing for voluntary commitment.

COMPULSORY OR LEGAL COMMITMENT.

It is very interesting to pass in mental review the various methods of legal commitment of the insane in the different States and to notice also the progress made in the legal steps taken at different periods during the last hundred years. But I shall not dwell on this part of my subject further than to notice that commitment is made by or on the decision of a justice of the peace, and in five States the form is still (if not recently changed) just about the same as was used a century ago. These States are Virginia, North Carolina, West Virginia, Tennessee and Indiana. Commitment by trial by judge and his decision as to a person's insanity in eighteen States and two territories—Louisiana, Florida, Rhode Island, Wisconsin, Oregon, Washington, Nevada, Michigan, Idaho, South Carolina, Missouri, New Jersey, California, Alabama, Arkansas, Ohio, Montana, Massachusetts, Territories of Utah and Arizona.

There is not a uniformity of method in the above mentioned States. Although the judge is the final arbiter, still, usually, if not always, the testimony of witnesses, including one or more physicians, is considered. Maryland, Mississippi, Colorado and Wyoming require a jury trial by laymen, no medical testimony being necessary, the State functionalizing as plaintiff, and the patient as defendant, the county attorney representing the State, and the patient being represented by his counsel. This method of procedure is essentially that adopted for minor criminals in police courts, and has but one element to recommend it, namely, that the testimony of two qualified physicians shall be a part of the proceedings, but the latter have no power

to prevent the alleged insane person being treated with all the rudeness and forcible restraint which characterizes the arrest of a common criminal. Many times the poor unfortunate insane, owing to the peculiar nature of their delusions and hallucinations, become the sport of officers, very often aggravating the condition of the patient when quiet, sympathy, and seclusion are absolutely requisite. Illinois, Kansas and Minnesota require commitment by a mixed jury of laymen and physicians. Iowa, Maine, Dakota and Nebraska have a Lunacy Commission made up of one or more competent physicians, a respectable practising lawyer, and a judge of probate, who are permanent. In some States a committee is composed of officers of the asylums, who decide as to the necessity for commitment. In one State the superintendent and board of trustees of the asylum may admit on application any person being a lunatic and resident of the State, and with no other lunacy proceedings. This method has the advantage of the skill of the specialists but is not without objections. In England, and in many of the States, the testimony of a physician connected with the asylum in which the patient is to be committed is not considered wise or judicious, and is illegal in our State, although there is an evident advance in public sentiment in the recognition of a higher grade of medical examination.

In our own State the law is much the same as in the States of New York and Pennsylvania, and has some features which commend it above the methods of commitment in many other States. It requires the personal examination of the alleged insane person by two physicians of reputable character, graduates of a regular incorporated medical college, and having at least three years of actual practice (Pennsylvania five), their findings to be subsequently passed upon by a judge of record. This latter method has received the commendation of the distinguished ex-Commissioner of Lunacy of New York, Dr. Stephen Smith, but he deplores the inadequate teachings of our medical schools respecting the different forms of insanity. It is a fact that a practitioner in our State may fulfil all the legal requirements of the above statutes, and yet have very little or no knowledge of the science of psychiatry. It is true that in many cases the lines are so distinct between sanity and insanity that any person could detect the difference, on the same principle that any intelligent person can distinguish a raging fever from a natural and normal temperature, but it must also be conceded that there are very many cases of suspected insanity that require and demand of the examining physician more knowledge than has heretofore been taught, as in many of our colleges no lectures, either didactic or clini-

cal, have been given during the whole collegiate term, hence the insane person is to many an enigma.

I am compelled to admit that this condition or want of opportunities for the study of this important subject is not to be laid at the door of the management of our asylums. Only recently the National Association of Asylum Superintendents passed a resolution that clinical study should be encouraged when an opportunity offered, and Superintendent Richardson, of the Columbus State Hospital, refers to the lack of desire on the part of medical colleges for a closer alliance with the hospitals for the insane, stating that they had even tendered the colleges there the use of the institution for clinical instruction without any steps being taken to accept. There are a few of the progressive medical colleges, both East and West, which have had special courses established for a long time. I can well remember the classic lectures of the late eminent Dr. John P. Gray, superintendent of Utica Asylum, New York, at Bellvue College, which were supplemented by his exhibition of patients for each form of insanity in different stages, giving the student knowledge which formed the basis for subsequent study similar to that which is taught in referring to the pathological condition of other parts of the body. In our own State this subject has not received the attention that its importance demands, and I can not but refer to the vast opportunities offered in our asylums since they contain all grades and stages of insanity. During the past few years the superintendent of our eastern asylum has received brief visits from the classes of our colleges, and he has given them all the attention and instruction that such visits afforded, the benefits of which are hard to estimate.

FORM OF COMMITMENT.

Without unnecessary amplification it is a recognized fact that the form of commitment in use in our State by the physicians called upon to examine patients before our Probate Court is deficient in many essential elements referring to requisite information that should be elicited in regard to patients—heredity, treatment, etc. The questions to be answered in the prescribed blank forms in use in our courts are very primitive, and do not necessitate anything more in relation to the person's condition than a mere statement as to what the grounds are upon which the opinions of the examining physician are based. The patient being adjudged of unsound mind, he may be suffering from mania, melancholia, or dementia; it may be acute, subacute or the chronic form; or he may come from a family with a strong hereditary taint of insanity; or it may be due to some obscure or recognizable disease; or he may have served

time in an asylum before. There are many questions which ought to be answered, and such information should accompany the certificate of insanity. This information would be of great value to those who have charge of the patient, not only for proper and immediate classification and treatment—the value of which can not be overestimated in a certain class of cases—but because it supplies valuable information that can not be secured from the patient. Our legal form of commitment has been considered so incomplete that our asylum superintendents of this State have formulated a list of printed questions embodying information as above indicated and to be used by examining physicians voluntarily, but I learn from the court authorities that these are scarcely ever used.

Dr. Stephen Smith, of New York, in his recommendations, pleads for greater uniformity among the different States in the form of legal commitment, and after careful study submits a list of very appropriate questions, which are to be answered in writing by the examining physicians and to accompany each certificate of insanity. They are as follows:

Patient's name, age, address, married or single?

When patient was born?

Where parents were born?

Occupation?

How many children, if married, and age of youngest?

Is this first attack; if not, when and how often did other occur, also duration of attack?

When were the symptoms first manifested, and in what way?

Does the disease appear to be increasing, decreasing, or stationary?

Is the disease variable, or are there rational intervals; if so, do they occur at regular periods?

On what subject, or in what, is derangement so manifested? State fully.

Has the patient shown any disposition to injure others?

Has suicide ever been attempted?

If so, in what way is the propensity now active?

Is there a disposition to filthy habits, destruction of clothing, etc.?

What relatives have been insane?

Did patient manifest any peculiarities of temper, habits, disposition, or pursuits before the accession of the disease, any predominant passions, religious impressions received?

Was patient ever addicted to intemperance in any form, or the habitual use of narcotics?

Has patient been subject to any severe disease, to epilepsy, to convulsions, or had any injury of the head?

Has any restraint or confinement been employed? If so, of what kind and how long?

What is supposed to be the cause of the disease?

What treatment has been presented for the relief of patients? Mention particulars.

STATE HOSPITALS.

There has been a gradual evolution going on for some years in reference to eliminating the words "insane" or "lunatic" as applied to our asylums, and indeed the title of asylums, in the sense in which it has been used, is employed much less than formerly. The knowledge, although meagre as yet, that we have obtained from pathological study of the insane has wrought many desirable changes in the care and treatment of this dependent class. With other changes for the better the term asylum has been dropped and the more definite and humane term, hospital, takes its place in not a few States. The name of the term asylum, as formerly applied to a haven for criminals and refugees from justice, and as lately applied to places of shelter for unfortunate or destitute persons, and especially to places for caring for the insane, is not very suggestive of the many improvements and advanced ideas and cheerful surroundings which are found in our beautiful buildings of which we all feel so proud. While in many of our States the term hospital is in general use, they still retain the name of insane in contradistinction to hospitals for all kinds of infirmities. It remains for the McLean Hospital, in Massachusetts, to take the initiative in this new departure, as in many others, and all of these terms—lunatic, insane and asylum—are more or less objectionable and have been entirely discarded, and this magnificent institution, where all modern methods are supplied without regard to expense, shall be known simply as the "McLean Hospital."

Recently, while visiting this institution, the medical officer gave as reasons for such a change—(1) That insanity was becoming more and more looked upon as a disease and largely amenable to treatment, and should be regarded as a diseased condition of the parts of the body. (2) That greater efforts are put forth in determining the pathological changes that take place in the brain and nervous system, as well as other organs, with more advanced methods of treatment and with better results. (3) The odium attached to and following those who are improved and cured is not nearly so great when confined in a hospital as when confined in an asylum or insane hospital, and many of those discharged as cured having to go out and against competition earn a livelihood for themselves and others de-

pendent upon them, the stigma of being a discharged lunatic has militated against their subsequent success very materially.

MEDICAL RELATION TO THE INSANE.

As being germane to this whole question there is none of so great importance, and in no department of the care of the insane has there been so much criticism, as the want of medical and surgical attention. This question has received a new impetus since the presentation of the subject by the eminent neurologist, Doctor Weir Mitchell, of Philadelphia, before the National Association of Asylum Superintendents. I find that there are those among the general profession who seem to have an exaggerated idea in relation to disease, for instance, of the reproductive organs, as being responsible for a large number of the cases of insanity, especially among females. There are those who have the care of the insane who take the position that these diseases do not exist in the patient, but only in the mind of the would-be surgeon. Between these two extremes there is the "golden mean." I believe, as near as can be ascertained, that about 25 per cent of insanity among females is due either directly or indirectly to some disease, either organic or functional, of the abdominal or pelvic organs. Cardiac diseases have also been recognized as a factor in producing mental derangement in the brain by interfering with the circulation. Syphilis has also been found to stand in relation of cause in not a few of the chronic insane, and where it is properly diagnosed and appropriate treatment applied improvement has occurred. Dements and epileptics are frequently found to be syphilitic, and I have no doubt that this loathsome disease, reaching, as it does, and affecting every part of the human organism by its subtle influence, is more frequently the cause than is supposed. A case in point as an illustration of the subtle effect of this disease: The patient, a man seventy years old, was the father of seven children, two of whom were cripples, while the other five gave evidence of congenital syphilis. Four grandchildren were also defective. This man being ill from seemingly trivial trouble did not recover satisfactorily. Counsel was sought and an investigation elicited his admission of suffering from the disease in early life, but he thought a cure had been effected forty years ago. A knowledge of this case satisfied the physicians that the mental and physical defects were due to this cause alone. This disease is now recognized by the intelligent physician in general or special practice, but concealed for reasons which are too well known to all of us. Nevertheless we are reaping the harvest and the victims of this disease are to be found in our

almshouses, insane hospitals, and contribute a larger per cent. to the population of dependent and defective classes than we are willing to admit.

During the last decade or two there have been wonderful developments revealed along the line of medicine and surgery. Diseases which formerly stalked abroad with death following in their trail have to a great extent been robbed of their terrors, and the knowledge we as physicians possess regarding the prevention of disease enables us to become masters of the situation when we meet formidable diseases, while only a few years ago we could only stand powerless before the common enemy. From whence came these results? I point you to the experimental and pathological laboratory. Although we have not yet found the microbe of insanity or the bacillus of lunacy, yet, in the words of the former distinguished Commissioner of Lunacy of New York, "insanity is now recognized in its various phases as a morbid or abnormal condition of the system, and must be studied as a disease acute or chronic in character, and in every stage requiring most skilful medical care and treatment." The fact that there is much obscurity in connection with the normal action of the brain as well as in the pathological condition only emphasizes the necessity for greater research and the most scientific pathological investigation. The very important advances that have been made in the anatomy and histology of the brain and nervous system has enabled the physician and alienist to appreciate more than formerly that insanity is a disease, or rather the result of a pathological condition, and should be studied as such. The interest with which the study of insanity, both in relation of cause and effect, appeals to the medical mind is not less than that of disease in any other part of the human organism, and there is certainly no field in the whole category of human affliction that offers a greater field for study and investigation.

In the report of the Commissioners of Lunacy and Charities for the State of Massachusetts, heredity and intemperance are among the most frequent causes in their hospital. Next to these are classified a large list from the various diseases occurring in every-day practice entirely physical in their nature.

ADMINISTRATIVE DUTIES OF SUPERINTENDENTS.

In our State we have three large asylums with approximately one thousand patients in each, not taking into consideration those cared for at the Wayne County Asylum, the criminal at Ionia, and those scattered in the county houses of the State, as well as those in their homes, and with an annual increase in the State of about two hundred and fifty during two years. The vast amount of work, not medical in character and purely

executive or administrative, in connection with one of these large institutions, renders it quite impossible for the superintendent to give adequate time and his best skill and energy to this side of the question. The important and exacting constant demands of an executive nature are liable to interfere very seriously with the distinctly medical relations existing between superintendent and patient, so much so that I am forced to conclude, from my own observation as well as that of others, that the visits made are not of such a character as redound to the most benefit to the patient as well as scientific clinical results. In the language of the Commissioner of Lunacy of Massachusetts: "The visits, so-called, are made at regular intervals, but may amount to little more than inspection." The vast opportunities for scientific study offered in those large institutions have not produced results most desirable.

During my official visits to our asylums I can not but admire the general management. It is of such a high order, especially in our own State, as to command our highest commendation. The discipline of attendants, the careful and wise classification of patients, the more humane method of non-restraint practised whenever possible, and the attention paid to friends and relatives of patients, both in person and by correspondence, entails a vast amount of labor and intelligent discrimination in reference to the past, present, and future condition of patients that must come through the superintendent. There is the problem of construction of buildings to be in keeping with economy, and yet, to serve efficiently those poor unfortunates placed under State care. While looking over the exhaustive plans and specifications recently with one of our superintendents, he said: "This is what takes our time and our energy in addition to the multitude of exacting duties not strictly medical." No one appreciates the situation better than the superintendents themselves. Notwithstanding all of the above difficulties in the way of the very best medical administration, we have in our State asylums those who possess administrative and medical ability of a very high order, but to expect that a superintendent, or even his assistant can give the required personal attention to every patient in one thousand, some requiring the special skill of the gynecologist, others the ophthalmologist, the surgeon, or perhaps the cardiologist, is to expect an impossibility. The insidiousness of many diseases, with their great obscurity even when not masked by insanity, is the great *bête noire* of the careful educated physician and surgeon, and even the specialist. I need but to refer to the work already accomplished by Drs. Price, of Philadelphia, Rohé, of Baltimore,

and Manton of our own State. Dr. George H. Rohé, superintendent of Spring Grove Hospital for the Insane, Maryland, within a month, has informed me that "30 per cent. of my operated cases, otherwise apparently hopeless, have recovered mentally and physically and have been discharged from the hospital. With the exception of one who died after discharge, the others are at home attending their household duties." Said he: "I am more than ever convinced that careful physical examination of all patients admitted to an insane hospital is necessary to give such patients the benefits of modern medical and surgical skill, and further, we can only attack mental derangement through the physical organism." Our greatest duty, then, is to put our finger upon the portion of the physical organism that is diseased, and remove the disease if practicable, even if the mental derangement is not due to the physical disease discovered. Our duty is none the less plain to give our patients the benefits of such skill as physicians and surgeons possess. Doctor Rohé also alludes to the statement made by Dr. Weir Mitchell and others, that a physician could not be a good superintendent and know anything about his patients. This statement, said he, is not true; you have examples in your own State that prove its falsity.

In general practice the instance in which vast benefit has been derived to the sick from a careful consultation of skilled physicians and surgeons, who have directed their studies along certain branches of medicine, occurs so frequently that not only the physicians recognize its value, but also the general public. The application of the same principles in the care of the State patient would, I have no doubt, be productive of even greater results. The combined knowledge of the alienist, who has made a study of the brain and nervous system with the varied psychological phenomena with the trained special sense of the specialist, I feel sure would not only be a benefit to the helpless patient, but the interchange of ideas of a high scientific order, either as the result of clinical observation or pathological investigation, would naturally advance our knowledge of psychiatry in general. Our progressive asylum superintendents readily concede that there is not as much scientific work done as there should be, and acknowledge the necessity of a trained pathologist with the necessary equipped laboratory, and also the benefits to be derived from a corps of consultants, but truthfully reply that on account of the large amount of expenditure by the State in order to provide for the great and increasing army of insane in our State, in construction of buildings with their necessary furnishings, etc., there has been no provision for the development of a high class of scientific work. While we acknowledge the latter to be a true

status, our State authorities have been generally liberal with the wards of the State, and our institutions, and especially our asylums, compare very favorably with many States. It is our duty to investigate, and, by comparison with work done elsewhere, direct and point out the lines upon which the greatest good may be done to the greatest number at the most reasonable expenditure. I make the statement, and without fear of successful contradiction, that a small biennial appropriation for the purposes above indicated would not only enlighten the whole medical profession, and by a gradual mental filtering process subsequently reach the masses and result in greater interest, but contribute to our knowledge of this obscure disease, and eventually be in the interests of economy.

From the standpoint of a physician who has given some attention to the methods of caring for the insane in this as well as in other States, I would recommend, in addition to the excellent work now being done in our asylums—

(1) A change of title from asylum to that of State Hospital for the Insane.

(2) That a well-equipped pathological laboratory be established, with a pathologist provided, where the changes and results of disease could be studied.

(3) That each State Hospital be supplied with modern therapeutic appliances, suitable for the administration of electricity in its various forms.

(4) The various forms of baths—Russian, Turkish, shower, plunge.

(5) That, in addition to the regular attending medical staff, physicians and surgeons, who are known and recognized as specialists in diseases in other parts of the human body, be recognized in the capacity of consultants.

(6) That in all of our State Hospitals where the female sex constitutes a large class of patients, that at least one female physician form one of the regular staff.—*Physician and Surgeon.*

ON DYSPEPSIA NERVOSA AND GASTRO-INTESTINAL NEURASTHENIA.

It is just ten years since Leube published his paper on "Dyspepsia Nervosa," and defined it as a disorder all the symptoms of which are caused by a functional disturbance of the nervous system, and especially of the nerves of the stomach, while gastric digestion remained normal both as to time and chemical process. Leube found this class of patients to

be generally delicate, thin at the outset or in the progress of the complaint, rarely stout or of healthy appearance. In some cases there was a previous history of anæmia. Intermittent, renal or uterine trouble, sexual excess, or some real disease of the stomach that was cured, but left a state of nervous dyspepsia behind it; all cases were characterized by more or less suffering accompanying the act of digestion, which seemed to originate in the nervous system.

Prominent among the symptoms, as I have observed them, are a feeling of fullness and congestion in the head, headache, vertigo, cardiac palpitation, slight pseudo-angina, dyspnœic oppression, abdominal pulsation. And on the part of the stomach, a sense of pressure and fullness in the epigastrium, while palpation of the stomach generally reveals neither tenderness nor pain. Globus-sensation and pyrosis are rather frequent, and voluminous eructations of gas without odor or taste are very generally complained of. Nausea with occasional vomiting is not rare and the vomiting may sometimes be rather severe and obstinate.

The appetite may be good, or bad, or changeable, and sometimes ceases after the patient has swallowed a few morsels. The bowels are generally constipated, seldom loose, almost always flatulent. In some cases nearly all these symptoms are present, in others again a few of them only. Great as Leube's merits have been in bringing the important subject of gastric neuroses prominently before us, it is nevertheless shown, not only by the labors of Ewald, Boas, Rosenthal, Bouveret and others in this special field, but by the clinical observations of most of us, I believe, that Leube's standpoint is not sufficiently comprehensive, and we have to widen his definition of nervous dyspepsia, because we know that we meet numerous cases with all the symptoms of nervous dyspepsia, but also with disturbances of the secretory and motory functions of the stomach. Cases enough have been described where the secretion of hydrochloric acid is considerably diminished, insufficient for healthy digestion or even temporarily absent, not only for days, but weeks; then normal again or increased, hyperhydrochloric. There is generally a combination with motory weakness where hydrochloric production is diminished or absent, but with abnormal motory activity where there is supernormal secretion of hydrochloric acid. Gastralgia severe enough to stimulate gastric ulcer with Burkhard's points douloureux in the region of the eleventh and twelfth vertebræ and in the episgastrium, I have noted sometimes, but they are variable and fugitive, not permanent as in gastric ulcer, aside of the other pathognomonic symptoms of the latter. From my own observations, therefore, I believe that

for anumber of cases, at least, the designation "nervous dyspepsia" is too narrow, that they can not be considered and treated apart from the other neurasthenic symptoms which are correlated to and associated with it, and that it is gastro-intestinal neurasthenia as a part. Neurasthenia rather than nervous dyspepsia we have to deal with in a large number of cases. From my case-book I could add quite a little number of neurasthenias such as described by Ewald, and Burkhard, and Bouveret, who presented well marked dyspeptic symptoms with the chemism of the gastric organ altered in various ways as marked above. It will be appropriate, therefore, I think, to divide the cases into two classes: 1, dyspepsia nervosa with functional disorder of stomach; 2, neurasthenia gastro-intestinalis in general neurasthenia.

The causes of nervous dyspepsia are many. Aside of those caused by direct or indirect disturbances of the pneumogastric centre through cerebro-spinal disease, or disease of peripheral nerves, there are gastralgias by reflex through affections of the genital organs, gall stones, renal calculus, a floating kidney, and the presence of intestinal parasites, particularly tape-worm. But we are now concerned with those forms which are part of general neurasthenia brought about by physical or mental over-exertion, or both, excessive care and excitement, sexual excess, debauch, masturbation, or by intoxication such as malaria, morphine, nicotine; also those by hysteria and such constitutional anomalies as chlorosis and anæmia.

With regard to age, sex, and the influence of life, vocation, my experience coincides with that of all other observers, I believe—*i. e.*, gastro-intestinal neurasthenia is prevalent among men between twenty and thirty, and is more often seen among brain-workers than among mechanics, though I have quite a little experience with the latter class also in that direction. Women are perhaps less often affected than men, and, for reasons easily understood, at an early period of life. With regard to children I have no personal experience of value, but some observers maintain that the disorder is not as rare among them as is generally supposed.

Now, with regard to the treatment of dyspepsia nervosa I have always been delighted when I got hold of a case where I could remove or control the cause, and feel sure then to cure, or almost cure, my patient. For instance, a tape-worm by giving 10.0 of extr. fil. mar., a displaced uterus by a pessary, a floating kidney by a suitable truss, an irritable urethra by the use of the steel sound and tepid sitz-bath. Or when anæmia or chlorosis was at fault, by iron, quinine, and arsenic, salt-water baths, and change of climate, and by the elimination of malaria and nicotin poison where the attacks were produced by

them. Of nerve drugs, I am not in the habit of prescribing opium or cocaine, except where there is severe gastralgia present; here I often use a cold wet bandage over the abdomen with a coil on top of it through which hot water is allowed to flow for some time—a plan of application suggested and recommended by Winternitz, that will often bring relief without morphine. Extractum cannabis, however, introduced by Germain-Sée in the treatment of nervous dyspepsia where there is much sense of pressure and discomfort felt after eating, I have often prescribed in doses of one-sixth of a grain t.i.d., and been well satisfied with the results obtained. Some praise here the use of aqua chloroformi or atropia. Electricity also does well here, with a very large electrode over the epigastrium, as first proposed by von Ziemssen, especially also where there is a good deal of motory weakness of stomach. In cases accompanied by obstinate vomiting, I have found nothing answer so well as to make the patient fast for two or three days, giving meanwhile nutritive enemata. Last, but not least, a Weir Mitchell rest and feeding cure will be of service in certain female cases too well known to need description, and in those of men who are much reduced and present hysterical symptoms.

I wish that I could say half as much of positive results obtained by me in the management of cases of gastro-intestinal neurasthenia in neurasthenics, leaving out of consideration altogether those caused by organic disease of the central nervous system. So long as I did not understand the causal connection, or rather inseparable relation and interdependence of the general and local condition, I tried for cure and failed in the one as well as in the other state. Now that I know we can not yet cure a case of grave neurasthenia, although they have quite occasionally a queer way of getting better by themselves, I do not try any more to cure them by active treatment, but I do them more good than before. By dealing more with the individual, regulating his life, correcting his bad habits, admonishing him to spare himself and pay close attention to his dietary, physic his bowels from time to time to remove putrid material, and go on short vacations two or three times a year, I believe to succeed pretty well in keeping them in fair order not only, but putting themactually in the way to get as nearly well as they can. Of symptomatic remedies I know none better than those mentioned in the first class of cases, which we may more truly call nervous dyspepsia than the latter.

To be sure, we all know of neurasthenic dyspeptics who went to the high Alps of Switzerland, or to fine places at the sea, or to specially fitted sanataria here and abroad, and were sent home cured. No wonder that they came home better

after doing the very best things for themselves under the best possible conditions of climate, food, care, and rest, and recreation of mind and body; but it is at best a great improvement only, and it is generally not very long before we see them return to us with their old complaints —*N. Y. Med. Record.*

OBSERVATIONS ON THE THERAPEUTICS OF ASTHMA.

Dr. James K. Crook accepts the definition of Biermer, viz.: "Bronchial asthma is a neurosis depending upon tonic spasm of the bronchial muscles, and caused by faulty innervation of the pneumogastric nerve." The causes of the disease may be internal and external. Among the former may be mentioned cases due to the presence of enlarged bronchial glands, disorders of the uterus, stomach, kidneys, or nasal passages, or to bronchitis. Among the external causes enumerated are odor of certain animals—horses, dogs, rats—the pollen of plants, the fumes of sulphur matches, or of certain burning vegetable substances, or the emanations of feathers, etc. The etiological factors must always be considered in the rational treatment of asthma. The therapeutic measures resolve themselves into the alleviation and abridgment of the paroxysms, and the prevention of their recurrence. In recent medical literature upward of seventy different remedies recommended for relief or cure of asthma are found. The following drugs are worthy of consideration: *Stramonium.*—This remedy has been in use since 1802. It acts by producing general muscular relaxation, and its use should be suspended upon the advent of giddiness or confusion of sight. *Tobacco.*—In those unaccustomed to its use, tobacco is a very severe depressing nauseant and emetic. It may be placed in the *index prohibitorum* with stramonium. *Lobelia.*—This is more efficient than the foregoing, but it is required in large doses to be effective. A tablespoonful of the tincture must be taken and repeated at intervals until nausea is produced in most cases. *Belladonna.* —This drug has been justly celebrated in the treatment of asthma. It has not only succeeded in curtailing the paroxysms, but in some cases its effects have seemed to be permanent. During the paroxysm the tincture may be given in 10-drop doses every fifteen minutes, to the point of tolerance if necessary. In some cases a hypodermic injection of $\frac{1}{60}$ to $\frac{1}{80}$ of a grain of *atropine* will arrest the attack in a few minutes. *Nitrate and Nitrite of Potassium.*—These salts have been used in asthma for about fifty years. The former in the form of cigarettes, which owe their efficacy, according to Germain Sée, to the

formation of protoxide of nitrogen and carbonic acid gas, which act as an anæsthetic. *Nitrite of amyl* is declining in use. Observations have also confirmed the futility of *nitroglycerin*. *Chloroform* will arrest any asthmatic paroxysm, but the obvious danger attending its use prohibits its administration except under the physician's own direction. *Ether.*—This remedy is safer than the former. The internal administration of the *compound spirits of ether* (Hoffman's anodyne) is of undoubted efficacy in many cases. It should be given in half-drachm doses during the attack, at quarter-hour intervals, until relief is obtained. The employment of the remedy in this way, conjoined with the liberal use of strong black coffee, constitutes one of the most efficient methods of dealing with asthmatic paroxysms. *Morphine.*—This drug is very efficient by hypodermic administration, but its use should be restricted to urgent cases. *Hyoscyamus* acts in a similar manner to morphine, though with feebler effect. *Chloral Hydrate.*—This drug as a remedy in asthma is diminishing *pari passu* with its decline in therapeutics generally. Some of the newer products, *antipyrin*, *antifebrin* and *phenacetin*, have been recommended, but their value has not been established. *Grindelia.*—The author, notwithstanding the opinion of Bartholow, has not met with a case of asthma in which he could convince himself that grindelia possessed the slightest efficacy. *Quebracho.*—This drug is highly recommended by Penzoldt, who is of the opinion that it acts by increasing the oxygen-carrying power of the blood. *Euphorbia* is said to possess a distinct therapeutic value in asthma. *Pyridin.*—Professor Sée places a drachm of this drug on a plate (which evaporates in 20 minutes) in the room with a patient, allowing him to inhale it as it evaporates. Its effects are sometimes excellent. It should never be used in cases of organic heart disease, nor in conditions of great debility. In some cases where single remedies fail, a combination of several of them will prove successful in aborting the paroxysm. A good formula is as follows:

℞ Syrup. ipecac.
Spirit eth. comp ..... aa ℥ iv
Sodii bromidi ..... ℥ iv
Tinct. belladon ..... ℥ ii
Aq. lauro-ceras ..... *ad* ℥ iv—M

S.—Take two teaspoonfuls at the beginning of the attacks. Repeat twice at 15-minute intervals, if necessary. During the intervals of the asthmatic paroxysms, a most important factor consists in searching for, and, if possible, removing the cause. The nasal passages, tonsils, uterus, etc., should receive due attention. Bronchitis is a frequent and important accompaniment of asthma, and if not directly causing the affection,

it certainly, in many cases, increases the susceptibility to it and augments the severity of the attacks. Iodide of potassium owes its prominence in the treatment of asthma by controlling the coexisting bronchitis, as it seems to have little influence in asthmatic cases unattended by bronchitis. Bromide of potassium is sometimes successful in opposing the asthmatic paroxysm and diathesis. Arsenic and strychnine are extensively used. The latter is supposed to possess a specific action on the structures investing the pulmonary alveoli. A favorite prescription of the author for asthma is the following:

℞ Liq. potass. arsenit ..... m xxxii
Tinct. nucis vomicæ
Tinct. belladonnæ ..... aa ʒ iii
Acid. hydriodic ..... m xxxii
Elix. chinchonæ ..... *ad* ʒ iv—M.

S.—A teaspoonful three times a day, before meals. To be carefully increased by 5-drop daily instalments, if required, until the dose is doubled.—*The Post-Graduate.*

DRUGS TO CURE NIGHT-SWEATS IN PHTHISIS.

In the July number of the Brooklyn *Medical Journal* is published a really practical report on the treatment of night-sweats of pulmonary tuberculosis, by Dr. Henry Conkling, assistant visiting physician at St. Peter's Hospital, Brooklyn, the principal value of which is a competent comparison, based on a series of clinical experiments over a period of five years of various drugs lauded and employed as remedies. We quote the facts and arguments presented by the author, and offer the suggestion that his conclusions deserve consideration and acceptance.

Of all the multitudinous symptoms which pulmonary tuberculosis presents, with all the vagaries that these manifest in the clinical histories of individual cases, there has been no condition which I have found easier to combat with success than the night-sweats. I make this statement without qualification, and without hesitancy, especially at this time, when my cases have grown to a large number.

In the first part of the series the fact was repeatedly noted that in severe cases with marked sweating the symptoms, under treatment, soon diminished, and in a comparatively short time entirely disappeared, so that early in the test the line of observation became twofold. The object was not only to use the most successful drugs, but also to ascertain which of these produced the diminution and the cure of the sweating with the least injurious or unpleasant after-effects. * * *

I have been careful, therefore, not to include in this report any cases where general improvement soon came, and where the sweating might have disappeared without special treatment.

The object has been to test individual drugs. No combinations have been used. Many remedies have been employed; eight only are reported, these having had the largest number of administrations.

Aromatic Sulphuric Acid—This is at times a useful remedy. It possesses some marked disadvantages. It could not be used for any length of time; it frequently produces constipation. * * *

Camphoric Acid.—Camphoric acid was found to be very uncertain in its action. Its successes and failures did not seem to bear any relation to particular cases. It sometimes would succeed where before it had failed. It had no after-effects. The dose given was gr. xxx in water at bedtime. This remedy had a large number of failures. It diminished the sweating in a very few; and was successful in a little over one-third of the administration. But even in some of these the perfect cutaneous dryness of some other remedies was not noted.

Chloralamid.—This was found to be a very important and valuable remedy. Mention of its use as an anhydrotic has appeared in print several times. My own knowledge of its power in this direction was obtained by accident soon after its introduction into the American market. The drug was being used in tubercular patients as a hypnotic. The patients, after giving their answer as to the effect of the "sleeping medicine," would frequently say that the sweating was less or absent. This was repeated so many times that finally the drug was tested. It was found to produce sleep, stop cough and stop sweating. It had no disadvantages, either producing the desired result or being inert.

Choralamid was given in one dose of gr. xxx, or gr. xxxv, at bedtime, either in powder or in the form of Schering's elixir.

The remedy diminished the sweating in less than one-fourth of the administrations, failed in about the same number, and succeeded in over one-half. Even in severe cases the first administration was frequently successful.

Muscarine.—This was the least successful of all the remedies. * * *

Oxide of Zinc.—The experience with this drug showed that there was no particular idiosyncrasy required on the patient's part to produce the good results. It was also interesting to note that the element of time was not needed. It was not necessary to use it in repeated doses to produce the effect

desired. In many cases the first administration would stop the sweating. But if the first few doses were not successful, the latter ones seldom were. Another feature in this drug was that, when other remedies had failed, the first dose of the oxide of zinc would be frequently successful. It had no after-effects.—*Am. Therap.*

PILOCARPIN IN DIPHTHERIA.

At the seventh general meeting of Polish physicians and naturalists at Lvov, Dr. Kowalski read a paper (*Medycyna*) wherein he recommends pilocarpin as the best remedy for diphtheria (which method he applied in 132 cases during the last fourteen years). The following formula is used by the author:

Pilocarpin muriatic	0.09 gram.
Brandy	20 grams.
Aquæ	60 grams.

M. D. S.—A teaspoonful every two hours.

As adjuvants he prescribes: *a*, inhalations of a from 0.1 to 0.15 per mille solution of corrosive sublimate, to repeat every two or three hours; *b*, painting the throat with a 5 per cent. solution of carbolic acid, to repeat as frequently; *c*, wine in largish quantities; *d*, strengthening dietary.

Dr. Kowalski feels inclined to attribute the beneficial effects of pilocarpin to its inducing leucocytosis in diphtherial patients, which hypothesis seems to find some support in the results of the following experiments: He took eight healthy white rabbits (of equal weight) and inoculated them with equal amount (five divisions of a Pravaz syringeful) of pure glycerine broth culture of diphtheria microbes, after which four of the animals received each a hypodermic injection of 0.003 gram of hydrochlorate of pilocarpin, while the other four remained without the injection. It proved that in the former group there developed a distinct leucocytosis (from 12,000 to 20,000 leucocytes to 1 cub. mille of blood), while in the control animals the proportion did not show any deviation from the standard.— *St. Louis Medical and Surgical Journal.*

THYMOL AS AN ANTHELMINTIC.

In the *Hospitals-Tidende*, No. 41, 1894, thymol is spoken highly of in treatment of intestinal parasites, and in doses of one-half to two grams (grs. vijss-xxx). While the male fern will be generally preferred in tapeworms, thymol is the best remedy in pinworms when given in a rectal injection.

INFECTIOUS DISEASES—PERIODS OF INCUBATION, QUARANTINE AND INFECTION, AND SOURCES OF INFECTION.

The following summary is condensed from Dr. L. F. Parkes' recent "Handbook of Infectious Diseases:"

DIPHTHERIA.

Incubation Period—Least, unknown; average, two days; greatest, seven days.

Quarantine Period—Seven days from last exposure to infection.

Infective Period—From the beginning of symptoms, for the whole period of illness.

Sources of Infection—1. From a previous case, acute or convalescent. 2. From a case of apparently simple tonsillitis. 3. From a case of apparently simple nasal ulceration or ozæna. 4. From domestic animals (cats, pigeons or fowls) suffering from a throat affection of a diphtherial nature. 5. From cow's milk, by human affection of the milk in the cow-sheds and dairies, etc. 6. From fomites, that is, infected bedding, clothes, carpets, curtains, books, toys, cups, spoons, forks, etc. 7. From a person who has been in contact with a diphtheria patient, but who has not himself contracted the disease. 8. From defective sanitary conditions; these are probably merely predisposing causes engendering morbid conditions of the tonsils favorable to the growth of diphtheria contagion when implanted thereon.

SCARLET FEVER.

Incubation Period—Less than twenty-four hours; average, one to three days; greatest, seven days.

Quarantine Period—Seven days from last exposure.

Infective Period—From earliest appearance of symptoms till all desquamation has ceased.

Sources of Infection—1. From a previous case of scarlet fever, acute or convalescent. 2. From a case of sore throat without discernible rash, but merely a mild form of the disease. 3. From cow's milk, either by human infection of the milk in cow sheds and dairies, or during the milking, or from a diseased condition of the cows; 4. From fomites. Infection may be carried by persons who are not themselves sufferers, if they have been in contact with patients.

MEASLES.

Incubation Period—From exposure to infection to onset of illness; least, four days; average, nine to ten days; greatest, fourteen days. From exposure to infection to appearance

of rash; least, seven days; average, fourteen days; greatest, eighteen days.

Quarantine Period—Fifteen days from last exposure to infection.

Infective Period—From earliest appearance of symptoms till convalescence is well established. The catarrhal stage preceding the eruption is very infectious.

Sources of Infection—1. From a previous case of measles. 2. From fomites.

MUMPS.

Incubation Period—Least, fourteen days; average, twenty-one days; greatest, twenty-five days.

Quarantine Period—Twenty-five days from last exposure to infection.

Infective Periods—From onset of prodromal stage for two or three weeks subsequent to appearance of parotitis. The chance of infection diminishes progressively from the onset of the disease.

Sources of Infection—1. From a previous case. 2. From fomites.

GERMAN MEASLES.

Incubation Period—Least, five days; average, eighteen days; greatest, twenty.one days.

Quarantine Period—Twenty-one days from last exposure to infection.

Infective Period—From onset of prodromal stage to cessation of desquamation.

Sources of Infection—1. From a previous case. 2. From fomites.

INFLUENZA.

Incubation Period—Less than twenty-four hours; average, three to four days; greatest, five days.

Quarantine Period—Five days from last exposure to infection.

Infective Period—From earliest onset of symptom still convalescence is well established.

Sources of Infection—1. From a previous case of influenza. 2. From fomites.

WHOOPING-COUGH.

Incubation Period—Least, seven days; average, not determined; greatest, twenty-one days.

Quarantine Period—Twenty-one days from last exposure to infection.

Infective Period—The whole period of illness from onset of earliest catarrhal symptoms.

Sources of Infection—1. From a previous case of whooping-cough. 2. From fomites.

SMALL-POX.

Incubation Period—Least, nine day; average, twelve days; greatest, fifteen days.

Quarantine Period:—Fifteen days from last exposure to infection.

Infective Period—From the onset of initial symptoms till all scabs have been removed. The period of greatest infectivity is during the acute stage (vesicular and pustular). During the initial illness and until the appearance of the rash the liability to impart infection is not great.

Sources of Infection—1. From a previous case of small-pox. 2. From fomites. Infection can be carried by a person who has been in contact with a small-pox patient, but who is not himself a sufferer from the disease. 3. Proximity to a small-pox hospital containing numerous cases in the acute stage.

CHICKEN-POX.

Incubation Period—Least, thirteen days; average, fourteen days; greatest, nineteen days.

Quarantine Period—Nineteen days from last exposure to infection.

Infective Period—From appearance of eruption till this has completely disappeared.

Sources of Infection—1. From a previous case. 2. Fomites. The infection may be carried by those who have been in contact with the disease.

TYPHOID FEVER.

Incubation Period—Least, eight days; average, twelve to fourteen days; greatest, twenty-three days.

Quarantine Period—Twenty-three days from last exposure to infection.

Infective Period—The excreta are infectious through the whole course of the disease and until convalescence has been established at least a fortnight.

Sources of Infection—1. Water, food or air contaminated by the specific virus contained in the excretions of a typhoid fever patient. 2. Fomites. Infection may persist for several weeks in infected clothing and bedding shielded from exposure to light and air.

TYPHUS FEVER.

Incubation Period—Seven days.

Quarantine Period—Fourteen days from last exposure to infection.

Infective Period—From beginning of illness till convalescence.

Source of Infection—From a previous case of the disease. Fresh air and free ventilation rapidly destroy the virulence of the contagion. Fomites probably do not propagate the contagion.

ASIATIC CHOLERA.

Incubation Period—Least, a few hours; average, one to two days; greatest, ten days.

Quarantine Period—Ten days from date of last exposure to infection.

Infective Period—From earlest onset of symptoms till complete recovery.

Sources of Infection—1. From water, food and air contaminated with the discharge of a person suffering from cholera. 2. From fomites. 3. There is reason to believe that the virus contained in the excreta at the time of leaving the body of a patient and for a short period afterward is in a less active condition and more easily destroyed by chemical agents than after such excreta have been exposed for a short time to contact with the air.—*Brooklyn Medical Journal.*

SOME OF THE AFTER EFFECTS OF ANTITOXIN

By J. Lindsey Porteous, M. D., F. R. C. S. Ed., Physician to St. Joseph's Hospital, Yonkers, N. Y.

At the present time, when not only the medical profession but the general public are deeply interested in the new treatment of diphtheria, it behooves all of us who have had experience in its use to make known to the profession any unusual symptoms which have occurred in our practic eafter the administration of antitoxin. In looking over some of the reports of observers and experimenters abroad, I notice that urticaria is mentioned as frequently happening during convalescence, a few days after the injection has been made. Sometimes it is ill defined and sometimes well marked. There is little or no fever accompany ing it, although, as is usual in all cases of this nature, there is a slight rise of temperature *before* the appearance of the eruption. This urticaria is undoubtedly caused by the serum; not necessarily from any poisonous effects of it, but probably, in some cases at least, from an idiosyncrasy on the part of the recipient. It is well known that some people can not take shell-fish without suffering from nettle rash; others can not take raspberries in any form without the same result. I am given to understand that the serum of *certain*

horses is apt to cause this in certain individuals; therefore makers of the antitoxin are careful to eliminate from their stock any horses whose serum is supposed to have caused an attack of urticaria.

The old saying, "What is one man's meat is another man's poison," may be true in regard to serum as well as in regard to food. The amount of injection does not seem to influence those after effects, as I shall be able to show in the case I am about to mention. The first case I will bring before the readers of the *Journal* is that of A. B., aged between thirty and forty years.

I was called to see him on the 4th of December. On examination of his throat I found a patch of membrane on each tonsil. A culture was taken from the throat which was found to contain numerous bacilli of diphtheria. For some days previous to the above date he had complained of a sore throat, cough and feverishness. In the afternoon I injected fifteen cubic centimeters of antitoxin procured from the New York Biological Institute. Sixteen hours after the injection the patches had disappeared, but there was still a deep red, almost purple, hue all over the pharynx. A culture was again taken which showed no signs of the bacilli of diphtheria. I injected ten cubic centimeters of the serum. On the following day, the 6th, the throat seemed quite healthy and the patient said he felt quite well. On the 7th his cough was worse and he did not feel so well. On the 8th the condition was much the same. In the afternoon of the 9th he felt decidedly miserable. His temperature was 99.2 deg. During the early morning of the 10th his whole body was covered with the large, well known blotches of urticaria, and round the parts where the antitoxin was injected the surface was of a purplish color. The itching was excessive. During the afternoon the rash suddenly disappeared, but not the redness around punctures. He now became nauseated and had no appetite. I ordered quinine, sulphate of magnesium and infusion of gentian to be taken every three hours. On the 11th the temperature was 98.4 deg. The rash had again appeared and the itching was intolerable. This condition continued all day. Toward evening the redness around the puncture began to disappear. To relieve the itching I ordered a lotion containing menthol, alcohol, and water to be applied, also a sixth of a grain of pilocarpine every two hours till free perspiration took place. At 11:30 P. M. the itching was much relieved, but instead of perspiration there was salivation to a great extent; in fact the quantity of saliva almost choked him. Only one dose of a sixth of a grain of pilocarpine had been given. I stopped this medicine and ordered an alum wash, which arrested the salivation. At 7

A. M. of the 12th, when I saw him, the nausea and itching had entirely left, but he had intense pain in the muscles of his legs, back and shoulders, with tenderness over left side of abdomen. I ordered five grains of phenacetine to be taken every hour for four hours. In the evening he was to a certain extent relieved, but the pain in the left leg and left shoulder was still very bad.

13th, 9:30 A. M.—He had had very little sleep on account of the pain, which had increased up to 3 A. M. I ordered five grains of salicylate of sodium every two hours as a sudorific, as the skin was uncomfortably dry. At 5 P. M. there was still no moisture on the surface of the body and the pain was excruciating, more especially in the left shoulder. I continued the salicylate of sodium and also had turpentine stupes applied to the painful part, and gave twenty grains of sulphonal at 10 P. M.

14th, 10 A. M.—The sulphonal procured only an hour's sleep, but toward morning the pain had much abated and he got more sleep. This, I think, was due to diaphoresis, which had begun at about 5 A. M. In the afternoon he got out of bed, but his limbs would not support him, so he fell to the floor. At 9:30 P. M. was fairly comfortable; gave hypodermic of a fourth of a grain of morphine.

15th, 9 A. M.—Had rested pretty well, but did not sleep. Feels drowsy from morphine. Continued sodium salicylate. At 4 P. M. ordered massage and a drachm of bromidia at bedtime, to be repeated in an hour after if required.

16th—Had a better night up to 1:30 A. M. From this time to 3 A. M. pain became much aggravated in legs and arms. The perspiration now being great. I stopped sodium salicylate.

17th, 11 A. M.—Feels much better, but very weak. At 5 P. M. gave a quarter of a grain of morphine hypodermically, as he was anxious to sleep.

18th, Noon—Pain in shoulders seems bad. Gave a quarter of a grain of morphine. 9:30 P. M., no pain all day after the hypodermic injection. Gave three-eighths of a grain of morphine.

19th, 9:30 A. M.—No pain since last night, and no sleep. Gave tonic.

20th—Shoulder pains a little; otherwise feels well, but weak.

21st—Very little pain; appetite returned.

22d—No pain of any account; able to take a drive.

From this time he is convalescent. The urine contained no albumen.

Case II.—Mrs. A. B. On the 14th examined this lady's throat, and found a patch of membrane on the left tonsil.

There was no rise in temperature and no albumen. Gave fifteen cubic centimeters of antitoxin, same as in last case.

15th—The membrane had partly disappeared. Gave ten cubic centimeters.

16th—Membrane had almost entirely disappeared.

17th—Toward evening a rash, bright red and very small, made its appearance. It much resembled the eruption of scarlatina. It was very itchy.

18th—There was no albumen in urine; no rise of temperature; no nausea.

19th—The irritation had almost gone, as also the rash.

20th—Neither itching nor rash. Patient feels quite well.

Dr. Benedict has kindly favored me with the following notes of a case of his: The patient was a nurse girl, aged 16 years. As there was diphtheria in the family, he gave her antitoxin (as a preventive), as also several other inmates of the house. None of those inoculated took diphtheria, but the girl, on the fourth day after inoculation, was attacked with a small red rash which produced much irritation. This continued a few days, but disappeared gradually. The amount injected was only four cubic centimeters.

From the above mentioned cases cited I would venture to draw the following conclusions:

1. That it is impossible to prove that the serum from a particular horse is the cause of the rash because it contains some ingredient of a poisonous nature, as in Dr. Benedict's case only one person out of four or five inoculated with serum out of the same vial showed these symptoms.

2. That the amount used does not account for the after effects mentioned, as in the cases I have referred to twenty-five cubic centimeters of serum were used, and in Dr. Benedict's only four cubic centimeters were used.

3. That it is most probably an idiosyncrasy of the recipient and that the percentage of those having that idiosyncrasy must be large.

My own opinion, formed from a larger experience of the use of this antitoxin, is that a smaller dose should be given at a time, but given oftener, thus keeping up the antitoxin action continuously, and certainly reducing the pain of injecting a large quantity at once.—*N. Y. Medical Journal.*

ETIOLOGY OF SO-CALLED CONTINUOUS FEVER.

D. Chassiotis, in *Fortschritte d. Med.*, No. 22, 1894: The two sources of infection which have been found to cause the phenomena of so-called continued fever—viz., typhoid

and the plasmodia of malaria, have not been found in some cases. Numerous observers have sought to explain the origin, in the absence of these, on various hypotheses, none of which are satisfactory. C. had the opportunity of examining and following many cases, clinically, and subsequently pathologically upon the autopsy table. Peyer's patches and the mesenteric glands were carefully examined for typhoid bacilli without success; likewise resulted the search for malaria plasmodia. Certain features of these cases were found to exist in common with those found in malaria, typhoid, scarlet fever, diphtheria and other miasmatic affections. 1. In various organs, especially the spleen, liver and kidneys, were found many embryonal or round cells. 2. A dilatation of the blood vessels. Then many granules of pigment as in malaria, and due to destruction of red blood cells. As regards the round cells three varieties were observed. 1. Large cells with an abundance of nuclear chromatin. 2. Smaller cells with an abundance of nuclear chromatin. 3. Smaller cells with scanty nuclear chromatin. The examination of the blood revealed the most interesting feature of C.'s observations. He discovered numerous diplococci, of oval or rounded form and varying in size. In the beginning of the attack they are very small, but increase in size as the affection progresses, attaining a length of 0.16μ to 2μ. The forms are most perfect during the exacerbations of the fever; they show evidences of degeneration during the remissions of apyrexia. One of the most characteristic evidences of degeneration is the failure of the diplococci to stain well or uniformly. They are possessed of a slow motility in the blood plasma, when placed in a moist chamber. As they approach the edge of a red blood cell, they show a tremulous motion. Within the white blood cells one or more diplococci may be visible. They may lie at the periphery of the cells or completely fill them. If the temperature be very high and there is coincident weakness and emaciation preceding death, there will be marked poikilocytosis and diminution in the numbers of red blood cells. In this condition each half of the diplococcus is semi-lunar in shape, with a distinct space between the two, and an appearance as though the whole were surrounded by a clear gelatinous capsule.—*Pacific Medical Journal.*

PERCHLORIDE OF MERCURY IN WHOOPING COUGH.

Raubitscher, knowing the want of success attending the usual treatment of whooping cough, determined in the case of his own three children to resort to a novel procedure. He

thoroughly saturated a cotton–wool tampon with a 0.1 per cent. solution of perchloride of mercury, introduced it into the mouth, pressed it against the base of the tongue, thus allowing the fluid to trickle downward over the epiglottis, and finally withdrew it; at the same time swabbing the tonsils, uvula, and soft palate. This procedure was carried out daily, or every other day, according to the severity of the case, and was attended with the best results, not only in the three cases referred to, but also in fourteen other children similarly treated. An improvement was noticeable on the second or third day, and all the patients were either cured or relieved within eight or fourteen days. One case appeared to be arrested during development by five applications of the solution. The author considers any poisonous effects to be impossible. —*British Medical Journal.*

THE PRESERVATION OF ORGANIZED URINARY SEDIMENTS, PARTICULARLY TUBE CASTS.

Bohland (*Centralblatt für innere Medicin*, 1894, No. 20, p. 449) details a method for the preservation of organized urinary sediments. The morphotic elements are collected by sedimentation or centrifugation, the excess of fluid removed, the sediment washed with a physiologic salt-solution and then treated with Muller's fluid. The last is renewed three or four times during a period of two weeks. After removal of the Muller's fluid the sediment is hardened by means of absolute alcohol, which is renewed until it takes up no more color. The sediment can thus be kept, or if the supernatant alcohol is permitted to evaporate the sediment may be preserved in the dry state, Sediments thus prepared may be used for purposes of demonstration or instruction, or they may be additionally stained.

With the same end in view, Smith (*Southern Medical Review* Vol. I, No. 1, p. 4) separates the sediment by permitting the urine to stand in a conical glass, or by the use of the centrifuge, the supernatant fluid being cautiously removed. To this sediment is added sufficient of a solution of 10 or 15 grains of chloral to the ounce of water to restore the fluid to its original volume. After the lapse of twelve hours the supernatant chloral is poured off and a similar amount of fresh solution added. This procedure is repeated twice or thrice, the final amount of fluid, however, not being more than half or third of the original. If the chloral solution be renewed every three or

four months, such a preparation may remain in good condition for a number of years. Microscopic preparations made with comparatively fresh solutions of chloral, mounted on perfectly clean slides, overlaid with clean covers and well sealed, will remain in good condition for months.—*Medical News.*

AN EARLY GRAVE COMPLICATION OF PHARYNGEAL DIPHTHERIA.

Aufrecht (*Therapeutische Monatshefte*) calls attention to a particular form of diphtheria of the pharynx, which, despite its limited local extension, rapidly kills the patient in two or three days. It has been held that these almost fulminating cases were to be attributed to a grave infectious myocarditis. Recently, however, the author has observed three cases of this kind where the autopsy showed no trace of myocarditis, but a sub-acute nephritis. The author, therefore, insists upon the importance of systematic examination of the urine from the beginning of diphtheria, even when no symptom points to a renal lesion. The symptoms observed in these cases have been very great frequency of pulse, a semi-comatose condition, delirium, high fever, and marked albuminuria. Guided by these cases the author has been able in a fourth case to combat this nephritis in the beginning by the administration of large quantities of alkaline and saline water (Wildungen) for the purpose of increasing diuresis and relieving the choked-up kidneys.—*Canada Lancet.*

LEPROSY IN THE HAWAIIAN ISLANDS.

By L. F. Alvarez, M. D., Waialua, Oahu, H. I.

This republic has the reputation of possessing a higher percentage of lepers than any other country in the world. This disease appeared here for the first time in 1844 among the Chinese; for this reason the Hawaiians call it *mai pake*, meaning Chinese disease. The first recorded case of leprosy among the native Hawaiians is that of a man named Naea; he was a messenger of the high chiefs and died in 1852. This case was reported to the Minister of the Interior by the Rev. D. D. Baldwin, M. D., of Lahaina, Island of Maui.

In order to check the rapid spread of the disease throughout the group and to prevent the extinction of the indigenous race, a law of segregation was enacted in 1865, through the influence of the foreigners and against the wishes of the

natives, who have always been opposed to this salutary measure. Nor can we censure a gentle, trustful people for opposing a law which separates them forever from those they love best on earth, with not even the mournful consolation of personally ministering to the wants of their afflicted dear ones, unless, indeed, they themselves should be similarly stricken and in turn be conveyed to that home of despair—Molokai. What wonder, then, that every effort is made by the relatives of lepers to conceal them from the officers of the law, hiding them in dark hovels or lonely grass huts in the mountains.

Persons suspected of being lepers are detained at the Kalihi receiving station until they are examined by a board of examiners comprised of five physicians, whose unanimous opinion is necessary to send a leper to the settlement. If any member of the board of examiners entertains doubts as to the diagnosis of any case, the leper is kept at the receiving station for further examination.

The leper settlement is located on the north side of the island of Molokai, on a grassy plain projecting toward the sea and completely isolated from the rest of the island by rugged precipices about 1500 feet high, which extend nearly the whole length of the island. Here the Hawaiian government, with a generosity worthy of imitation by the governments of other civilized nations, supplies the unfortunate lepers with all the necessaries of life and with many comforts unknown to the majority of the native Hawaiians in their own homes.

The total number of lepers living at the settlement on March 31, 1894, was 1152, and their nationalities were as follows: Native Hawaiians and half-castes, males, 636; females, 466; total, 1102. Chinese, males, 24; females, 2; total 26. Americans, males, 5. English, males, 5. Germans, males, 4; Portuguese, males, 4; females, 1; total 5. Spanish colonies, males, 2; Russian, males, 1, and one negro and a South Sea Islander, making a total of 683 males and 469 females.

The total number of lepers sent to the settlement since its establishment in 1866 to March 31, 1884, is 4404. Of this number 3491 have died, and 248 have been discharged or have disappeared. The total mortality of lepers outside of the settlement can not be ascertained, but may be estimated at 1509, which, added to the 3491 who died in the settlement, would give 5000 as the total mortality of this disease for 28 years. During this period the native population, including half-castes, has steadily decreased from 58,765, in 1866, to 38,512, in 1894. As the total mortality of leprosy represents only one-fourth of the diminution of the native population, this disease alone is not responsible for the rapid extinction of the native race.

Other important factors contributing largely to the same end are the Kahunas, or medicine men, syphilis, intemperance and the opium habit.

IS SEGREGATION A FAILURE.

The hopes and predictions of the advocates of segregation that leprosy would disappear under its practice have not thus far been realized, owing to the defective manner in which the law has been carried out in the past. It is my humble opinion that thorough and complete segregation is the only means that we possess to check this dreadful disease.

IS LEPROSY CONTAGIOUS?

Although a vast amount of literature has appeared on this subject, this question is still unsettled. Among the medical profession here the opinion is almost unanimous that the disease is contagious, as heredity alone could not account for the rapid spread of the disease among the native Hawaiians and foreigners who live in close relations with them. There are five American men in the leper settlement out of a total population of 1298 American men in the whole Hawaiian group. The number of American lepers outside of the settlement is unknown, but even if we ignore those not segregated, heredity alone could not explain the existence of four lepers per 1000 of American born men residing in these islands. The same remarks apply with greater force to the English colony residing here, for the percentage of lepers among them is still higher, as they have five lepers at the settlement out of a total population of 982 men. If we deny contagion in these cases, we are forced to the absurd conclusion that Englishmen and Americans who remain at home develop the disease in the same ratio as their countrymen living in these islands.

Seven years ago I examined a leper woman who had been at the settlement, but during one of those periods when segregation was not enforced she had been allowed to return to her family. I found this unfortunate woman in a dark, low basement. She was paralyzed, blind, without fingers or toes, and had open ulcers on her arms and legs. Her friends fed her by conveying *poi*—a native dish not unlike bill-posters' paste—to her mouth with their fingers, and gave her water by taking a mouthful of it, fitting their lips to the leper's and transferring the water to her mouth. This disgusting manner of giving water to the sick still prevails in many Hawaiian homes where spoons are unknown. This leper woman was returned to the hospital at the leper settlement, where she received the best care from the Franciscan Sisters of Charity. Since then

nineteen persons of her family and friends have developed leprosy, many of whom had been nursing this woman.

While the natives frequently acquire this disease by nursing their leper friends, the Franciscan Sisters at Molokai have not furnished a single case of leprosy. But it is not difficult to find the explanation of this difference. The natives attend to the wants of their friends in the most primitive manner, while the Franciscan Sisters do their nursing according to the best scientific methods. All the departments under their care are models of neatness and order, for which they can not be too highly praised. They have their food prepared and their clothes washed by non-leprous servants provided for them by the Board of Health.

Before dismissing this subject, I will quote the opinion of a high authority on leprosy, Dr. A. Lutz: "The infection from one person to the other furnishes probably the largest number of patients; heredity, if it really exists at all, is quite secondary, being, perhaps, only simulated by family infection."

DIAGNOSIS OF LEPROSY.

In a recent number of *La Semaine Medicale* has appeared an article on this subject by Dr. Zambaco Pacha, which has created a sensation in Portugal and Brazil, where leprosy is not an uncommon disease. This eminent physician affirms that Morvan's disease, syringo-myelia, scleroderm, ainhum, the trophoneuroses, morphea, and the gangrene symétrique of the extremities, are all varieties of leprosy. In discussing this subject before the Sociedade das Sciencias Medicas of Lisbon, Dr. Falcao expressed the opinion that Morvan's disease and syringo-melia are in reality anæsthetic leprosy, but he believes that the other affections can not be classed with this disease. Dr. Falcao was consulted by a patient from Para who presented the following symptoms: Atrophy of the thenar and hypo-thenar eminences, interossei, and some muscles of the forearm, anæsthesia, bent fingers and thickening of the ulnar nerve. Dr. Falcao made the diagnosis of lepra anæsthetica, which was justified not only by the symptoms present, but by the fact that the patient came from a country where leprosy is a common disease. Subsequently this patient went to Paris to consult Prof. Charcot, and received from that eminent specialist a written statement to the effect that the disease in question was syringo-myelia.

The *Gazeta Medica da Bahia* relates the celebrated case of a Frenchman named Marés, who for more than seven years appeared in the hospitals of Paris as a case of Morvan's disease. Prof. Hayem gave this name to the disease; Monod confirmed this diagnosis and amputated several fingers of Marés, and pub-

lished in the *Archives de Medecine et de Chirurgie* his observations of this case, which he regarded as a typical one of Morvan's disease. Later on, Broca confirmed the previous diagnosis and amputated two fingers of this patient. Again Hayem took charge of him and amputated another finger. Several months later Marés was admitted to Salpétrière, where Prof. Charcot had him photographed, and for eleven months exhibited him to physicians and students as a case of Morvan's disease. Later on, Charcot diagnosed Marés' case as syringo-myelia, type Morvan. Finally this patient was admitted to the hospital de Bicetre, where Dejerine, a recognized authority on syringomyelia and Morvan's disease, did not agree with Charcot as to the identity of these two affections, and stated that Marés had simply Morvan's disease. Gombault, who had made several histological examinations of the amputated fingers of Marés, admitted the diagnosis of Dejerine, Morvan's disease. Dr. Zambaco procured the address of Marés, and, after examining him at his residence, he was convinced that he had before him a case of leprosy. But to remove all possibility of doubt, the physicians of the hospital St. Louis, who have better opportunities to observe cases of leprosy, were invited to meet Zambaco, who promised to bring before them an interesting case. At this meeting many of the authorities in dermatology were present, namely Vidal, Besnier, Fournier, Hallopeau, Quinquand, Du Castel and Tenneson. These gentlemen were unanimous in the opinion that Marés was suffering from leprosy.

Several cases diagnosed syringo-myelia by Pitres, Chauffart, Débove, Raymond, Quinquand, Besnier and Du Castel have proved to be cases of leprosy.

In doubtful cases the bacillus of Hansen, if found, would render the diagnosis certain. This bacillus is present in great numbers in tubercular leprosy, but it is often absent in lepra anæsthetica.

TREATMENT OF LEPROSY.

About ten years ago Dr. E. Arning, of Hamburg, came to these islands by invitation of the Board of Health, and began a scientific study of the disease and its treatment, but, before any positive results could be obtained from his researches, he found that his opinions in regard to leprosy were repugnant to the political party then in power, consequently he returned to Germany.

Some time after the departure of Dr. Arning, the Board of Health secured the services of Goto Sho-choku, whose father keeps a hospital for lepers in Tokio, Japan. In a report to the Legislature Dr. Emerson states the results of Goto's treatment

as follows: "While not feeling called upon to deny that the empirical efforts of the Japanese practised by Dr. Goto and and others may have proved of benefit in some cases, still the proof is lacking that cure has been obtained in any case."

Many of the patients reported by Dr. Goto as almost cured have since died of leprosy. Early in 1893 Dr. Goto arrived from Japan under a second engagement with the Board of Health to resume the treatment of leprosy, which had been discontinued when he left these islands in 1887. Goto's treatment consists of bathing three times daily in hot water, in which are placed bags containing hichiyou bark, taifuushi, sulphur and yoku yaku. Internally he gives one teaspoonful of seiketsuren pills, three times daily. Also tincture of chloride of iron, quinine, strychnine, iodide of potassium, gentian, columbo, carbonates of sodium and potassium, and Epsom salts two or three times a week.

Last April I was honored with an invitation from the Board of Health to accompany a number of physicians to the leper settlement, who were to examine several patients of Dr. Goto, reported by him as cured. Accordingly we left Honolulu at 6 P. M. in the steamer Lehua, and arrived at the settlement on the following morning at 7 A. M. Every person in the settlement who could walk or ride was at the landing waiting for the arrival of the steamer. The leper brass band, with their new instruments and fine new uniforms, donated by the Honolulu merchants, greeted us with the "Star Spangled Banner," followed by many Hawaiian airs so well played that they excited a great deal of admiration among our party. This band was organized by several lepers who were formerly members of the Royal Hawaiian Band, and consequently are well-trained musicians.

The lepers had their horses saddled for us to ride to the other end of the settlement, a distance of two and a half miles, where we examined the patients of Dr. Goto, reported by him as cured. When this treatment was inaugurated a year ago, these lepers were examined by Drs. Mouritz and Oliver, and their condition recorded for future reference. That these lepers were not cured we could see at a glance, and by a comparison between their present and former conditions we arrived at the conclusion that slight improvement had occurred in one, in many there was no change and a few were worse.

After continuing the treatment a few months more, Dr. Goto claimed to have cured nine of his patients. They were brought to Honolulu, and, after a careful examination by the Board of Examiners, were declared lepers and returned to Molokai.

In a letter from Dr. Oliver, the resident physician at the

leper settlement, written to me a few days ago, I find the following: "Many of Goto's patients have improved to a certain point, some are worse than when you saw them, and several have died. The effect of the frequent bathing is at first to clear up the skin, and the leper looks better. In time, sooner or later, he becomes anæmic, and finally takes on a blue, leaden color. When this stage is reached dropsy is not uncommon, and death is sometimes sudden."

Several years ago the natives were very confident that the Goto cure would prove a success, hence some lepers went to Japan to be treated by the father of Dr. Goto, at his hospital in Tokio. Several years of treatment in that institution, in some cases without even amelioration, convinced these Hawaiians that it would be useless to prolong their residence in Japan, hence they have returned home and were sent to the leper settlement.

In 1889 the Board of Health obtained the services of the eminent specialist in skin diseases, Dr. A. Lutz, of Sas Paulo, Brazil. He inaugurated his treatment at the Kalihi receiving station, near Honolulu, where twenty-six patients were under his care. He used salol, salicylate of soda, creosote, chaulmoogra oil, and Merk's gynocardic acid internally. For external use he prescribed chrysarobin, iodine and ichthyol. Great improvement occurred in many of his patients, and hopes were entertained that, by prolonging the treatment, permanent cures would be accomplished. But in September, 1890, after nine months of treatment, Dr. Lutz, owing to a misunderstanding with the Board of Health, sent in his resignation, and thus ended one of the most promising efforts ever attempted in these islands for the purpose of finding a permanent cure for leprosy.—*Pacific Medical Journal.*

SURGERY.

THE RADICAL CURE OF URETHRAL STRICTURE BY THE RESTORATION OF THE MUCOUS MEMBRANE TO A HEALTHY CONDITION.

By J. P. Bryson, M. D., Professor of Genito-Urinary Surgery, St. Louis Medical College, Washington University.

Recent advances in our knowledge of pathogenesis and mechanism of stricture-formation require us to recast, so to speak, our conception of the condition, and at the same time render obselete or inadequate the definition of certain terms as well as certain classifications once appropriate and suffi-

cient. It is this state of transition that obliges me to ask the indulgence of the association while I briefly define the meanings which I, at least, attach to certain terms in common use; otherwise I can not hope to make myself clear. And, first of all, is the definition of the condition we know under the name of stricture. It is plain that we must abandon the mechanical definition which made one of its symptoms, viz.: obstruction, to stand for the disease itself. It is equally plain that a precise definition can only be reached by approaching the problem from a pathologic standpoint.

In a paper reviewing this subject, read by me at the Newport meeting (1889) of this association, the reasons were given for defining stricture of the urethra to be a chronic contracting peri-urethritis. I have seen as yet no objection raised to this as a pathologic definition. So far as the pathogeneis is concerned, it seems not too much to say that the theory of the leakage of urine or some of the constituents of this complex excretion, through a damaged or absent mucous membrane, for which we are indebted to Mr. Reginald Harrison, is now accepted as the correct interpretation of the process. Such a conception of the nature and etiology of stricture as a surgical disease, placing, as it does, the point of pathologic departure in the urethral mucous membrane, and regarding the subsequent development of the stricture-tissue at the expense both of urethral dilatability and the integrity or even the existence of the normal circum-urethral tissue as dependent altogether upon the lesion of the mucous membrane, both for its inception and its evolution, must of necessity profoundly influence those procedures that aim at its radical cure. Moreover, besides giving new prominence and value to other hitherto little studied features, it enables us to accept a more definite and better classification, and none seems to me more available for our purposes than that of Voillemier, which divides them into inflammatory and cicatricial; the first still being lined with mucous membrane, damaged though it be, the last by none at all, the mucosa having been replaced by cicatricial tissue. Under one or other of these headings any number of subvarieties may be placed, if thought necessary for descriptive purposes.

It is plain, then, that any therapeutic procedure which aims at radical cure of stricture must aim primarily in the one case at a restoration to the normal state of a damaged urethral mucous membrane, and in the other to the replacing of a destroyed portion. Now, whether it be merely coincidence or consequence of this newer conception of the causation and nature of stricture, certain it is that this is just what surgeons

of to-day are doing, and in many cases with most flattering success. Warrant for this assertion is found by a reference to the successful cases, observed for a sufficient length of time, of exsection of the strictured areas, followed by suturing of the divided ends, reported by Koenig, of Gottingen, and by Heusner; of exsection of strictured areas, with transplantation of normal mucous membrane, by Wolffler, etc., and the good results attending the immediate and accurate suturing of the divided ends of urethræ severed by traumata, reported by various surgeons. Many such cases are being reported, and there is no question of the soundness of the practice. With what object is this done, unless to obtain a continuous normal, or, as Mr. Harrison would call it, a urine-tight mucous membrane? But it is of inflammatory and not of cicatricial stricture I wish here to speak.

The researches of Oberlander and Neelson have taught us that the inflammatory form of stricture may be expected to follow only upon such a mucous lesion as involves the glands of Littré. Moreover, these authorities have, with others, demonstrated the curability of these lesions by proper topical treatment, especially in the earlier stages, a point long before insisted upon by Otis. Influenced by the results obtained by these observers, and by the teaching of Harrison as to the essential cause, and having for a long time been struck with the rapid and satisfactory disappearance of those hard, fibrous walls surrounding old urinary fistulæ (tissue in every way resembling stricture-tissue), after the urine has ceased to flow over them, I had, as announced in a paper read before the Missouri State Medical Association in April, 1883, been combining topical applications with dilatation, with the view of getting a radical cure if possible in at least some suitable cases.

At that time, however, I had not observed any case long enough to be sure of permanence of result, but I have continued the effort, and it is the net outcome of this clinical work that I desire to communicate to-day. Let me say again, that the entire treatment was based upon the theory that if the mucosa could be restored to a normal state while the stricture band was undergoing softening and inflammatory involution, we might hope to obtain a radical cure, which would be manifested by failure to recontract after leaving off the use of dilating instruments. Now it is evident that observation for a number of years is necessary in such cases to justify one in drawing conclusions, and it is equally plain that few patients are so situated as to afford one such opportunities. Thus of fourteen patients upon whom I attempted to practise this method since December, 1887, five only remained under observation after the first year, a time entirely inadequate for the purpose. Of these

five, three had linear strictures, and of these three two remained cured after two-years' and one-third year's observation respectively. The third has, though remaining under observation up to the present time, had two fresh gonorrhœal infections in sixteen months.

Wishing here to deal only with the question of the influence of local applications made with the intention of restoring to its integrity the damaged mucous membrane lining inflammatory strictures, a proper regard for sources of error would compel us to throw out of this consideration cases of linear stricture, for it is evident that in this sub-variety only a narrow zone of mucous membrane is in a pathologic state, so narrow that as a matter of fact only diaphragm-like membranes are lifted up, and it is more than probable that carefully practised, simple dilatation will cure this form of stricture without other aid from topical applications. The anatomo-pathologic condition here seems to be a rapid development of the contracting stricture-tissue in and immediately underneath the mucous membrane. Such strictures, though often difficult of penetration with instruments, on account of the eccentricity of their openings, do not often require section, for the reason that only to an inconsiderable extent are the circum-urethral tissues infiltrated with the fibrous, contracting elements. The beneficial influence of pressure upon this narrow zone of damaged urethral membrane is often in itself sufficient to restore it to the normal condition. In this way I think are to be explained many reported cases of cure by all methods of treatment, which methods are found to be entirely inadequate in cases of annular stricture. It is interesting to note in this connection that some of the older surgeons recognized the difference in the curability of these two forms of stricture.

There remain, then, two cases only for present consideration. Of one (No. 6 on my list) but little need be said, as it was apparent from the beginning that the mucous membrane was too extensively damaged to leave any hope of restoration, and the patient only submitted to the treatment in the belief, not encouraged by me, that in some way his wretched condition might be improved. This was a case of extensive inflammatory stricture of almost the entire penile urethra. When the man came under my observation, ten years ago, there were extensive deposits of stricture-tissue around that portion of the urethra extending from the posterior border of the *fossa navicularis* well back into the bulbous sinus. The largest instrument that would pass through all of the strictures was No. 8 F. This condition had followed numerous attacks of gonorrhœa, and the stricture had existed for such a length of time that in many portions the fibrous, nodular condition had been reached.

Continuous dilatation, interrupted by frequent attacks of urinary fever, brought the duct up to No. 14 F., when under ether internal urethrotomy enabled me to pass a No. 26 F. conical instrument. So indurated were the urethral walls that the duct seemed never to empty itself of urine, and the damaged lining was constantly bathed in this fluid. This caliber was only maintained by repeated introductions of the sounds, supplemented by more or less extensive internal urethrotomies, practised during a period of several years. When I first surveyed the urethra with the endoscope I looked upon a mucous membrane which seemed to be pale, atrophied in some places, perfect smooth, and apparently adherent to the fibrous tissue underneath; in others lined with granulations or wart-like excrescences. On the roof, where I had cut, the tissues seemed to be tucked in, so that a view of the bottom could not be obtained. I was struck with the pale appearance, the apparently bloodless condition of the urethral walls. In a few spots where the stricture-tissue was thickest the mucous membrane seemed to be smoothest and palest. The granulations and warty-covered sections were scraped with cotton on the end of a probe, and to the entire stricture area a 2 per cent. solution of silver nitrate was applied through the tube, after cleansing. The patient still maintains that these applications have done him good by way of relieving pain on instrumentation, which he performs for himself, and in lessening the tendency to contraction. My own belief is that what of benefit has been derived is to be attributed not to the local applications, but to the long-continued use of the steel sound. The man is now forty-three, has married since he has been under my care, lives a very regular life, and takes excellent care of himself.

In the following case we have an excellent example of the adequacy of this method in a limited number of instances, even excluding linear stricture:

William S., thirty-four years old, married, was first seen February 14, 1885, when the following note was made of his examination: The meatus is narrow (19 F.); there is an annular stricture at the depth of three inches which admits a No. 12 F., and measures one-fifth inch broad; larger bulbs detect the conical shape of the anterior stricture face. A second stricture in the bulbo-membranous part admits only a filiform bougie. The patient has never received any injury to the parts, but attributes his trouble to a gonorrhœa which he had sixteen years previously. The examination produced very slight bleeding.

On March 2, 1885, I cut the anterior and divulsed the posterior stricture to 30 F. On March 3, 1885, I visited the

patient on account of a slight urethral chill, which came on five hours after the operation. On March 8, 1885, I passed a 30 F. and caused slight bleeding. On March 9, 1885, the patient announced his intention of going South to accept employment. On April 12, 1887, he returned, with both strictures recontracted to their original size; he had neglected the introduction of the sound; had dissipated a good deal; had retention on the previous evening, which had been relieved by Dr. Mayger, who gave a hot bath and opium. I aspirated above the pubis and withdrew fifteen ounces of slightly cloudy undecomposed urine, and tied in a filiform bougie for continuous dilatation.

For six weeks, viz., from April 12 to May 24, 1887, inflammatory dilatation, at first continuous and afterward intermittent, brought the urethral caliber up to 31 F. The patient then again ceased to attend. On December 12, 1887, he returned, when an examination showed that the anterior annular stricture had recontracted to 18 F., while the posterior stricture was not discoverable with the bulb admitted by the anterior. Endoscopic examination showed a zone of urethral wall at the site of the anterior stricture, estimated at a little more than a quarter of an inch in breadth, paler than that immediately behindor in front of it; lustreless, with here and there small darker spots, looking like submucous hæmorrhages. The mucous membrane fell away from the end of the tube in irregular, transverse, shallow folds. Some minute blood-clots came away on the cotton introduced to wipe off the surface. On the whole, the membrane looked paler and thinner than normal. Reintroduction of the instrument to the site of the posterior stricture revealed only a narrow zone, looking redder and more dusky than normal, and slightly velvety. The folds here appeared to be longitudinal. The pallor, so striking within the anterior stricture, was distinctly wanting here. From this time on, intermittent dilatation was practised at intervals of four and six days. Following the withdrawal of the steel sound, applications of 1 and 2 per cent. silver nitrate solutions were made to the stricture-areas.

Within four weeks all visible pathologic appearances at the site of the posterior stricture had disappeared, and the mucous membrane lining the anterior stricture had become redder, smoother, and apparently more supple. At the end of nine weeks the patient discontinued attendance. At this time, though the urethral mucous membrane looked normal, a No. 31 bulb still encountered slight obstruction at the site of the anterior stricture, which was not felt by a No. 30 bulb.

I did not again see this patient until June 13, 1889. Examination on that date showed the urine to be normal, with a

slight excess of mucus in that voided in the first over that in the second glass, but containing no pus and no blood. The meatus admitted a No. 33 F. with a little force. A No. 30 F. passed through the hole in the triangular ligament without meeting any obstruction whatever. Endoscopic examination discovered nothing abnormal. No instrument had been passed in the meantime, and the patient observed nothing unnatural. On February 12, 1891, the patient came again to my office, at my request, for examination. Neither the bulb, the blunt steel sound, nor the endoscopic tube disclosed anything abnormal. The patient declared that no instrument had been passed by himself or any person since June 13, 1889.

A brief *résumé* of this case shows that in two years, after thorough cutting and divulsion, an annular and a linear stricture, being neglected and without other treatment, recontracted to their original size, and, on exposure, brought on acute retention, requiring hot baths and opium for its relief. First continuous and then intermittent inflammatory dilatation brought both strictures up to No. 31 F. in six weeks. Neglect of all treatment for six and a half months resulted now in a recontraction of the annular stricture from No. 31 F. to No. 18 F. (13 numbers), with apparently no recontraction of the linear stricture. Intermittent dilatation, combined with topical treatment directed to the restoration of the lining mucous membrane, practised for nine weeks, resulted in a radical cure of the stricture, demonstrated by failure to recontract in the absence of all treatment, and without the introduction of instruments to maintain the caliber, this being proved by observation extending over a space of nearly four years.

The case is an exceptional one for many obvious reasons, chief among which may be mentioned the twice-demonstrated ability for recontraction to take place in the absence of all treatment that would prevent it. The existence of a linear stricture posterior to an annular one is, I think, also exceptional, and there is a possibility that the indications of its existence were deceptive. Certain it is that the posterior stricture seemed to get well on simple dilatation, and promptly. This, however, I believe is not exceptional in cases of linear stricture, for the reasons already set forth. Of the existence of an annular stricture, at least one-fifth of an inch in breadth, the evidence does not permit me to doubt.

That we will obtain such good results in many cases of inflammatory stricture of the annular variety, I do not in the least believe. The whole question of radical cure undoubtedly depends upon our ability to restore to its normal condition the mucous membrane lining such a stricture.

That a certain proportion of such strictures can be cured by combining topical treatment with that intended to do away with the purely mechanical manifestations of stricture-disease, I think this case clearly demonstrates. This method of treatment will not, I fear, become very common until patients exhibit more persistence and surgeons less of the prevailing itch for cutting. Less hopeful even than cutting, divulsion, or stretching, would, I think, be electrolysis, which, applied after the manner of the modern schools to a case like this, would be more likely to destroy than to rehabilitate the precious remainder of lining mucous membrane. To this conclusion I think we are irresistibly pushed, knowing as we do that the electrolytic action is chiefly spent upon the surface to which the electrode is directly applied, and we certainly have no evidence whatever of the power of surface electrolysis to restore damaged mucous membranes in other parts of the body. Why should it be exhibited any more on the surface of the urethral mucous membrane than upon that of any other?

NOTE.—This paper was read before, and discussed, by the American Association of Genito-Urinary Surgeons during the Congress of American Physicians and Surgeons, held at Washington, D. C., in 1891. In April, 1893, the patient, William S., again presented himself at my office, and was examined by Dr. H. McC. Johnson and myself. A No. 29 F. blunt steel sound passed without obstruction into the bladder. The urethrometer of Otis, drawn forward after being distended to No. 34 F. in the bulb, had to be gradually reduced to No. 31 F., until it approached to three and one-fifth inches of the meatus, when it could be again distended to No. 33 F. without causing distress. At this distention and position it could be rotated with the application of a little force, but had to be turned down to No. 31 F. before passing forward. In the *fossa navicularis* it could again be distended to No. 33 F. and rotated.

If the evidence of the urethrometer is to be relied upon, it would appear that at the point where the stricture originally was there is now an abnormal dilatation. It is well known that the growth and condensation of the stricture-tissue cause pressure-atrophy of the normal circum-urethral elements, and the inference seems justified that complete atrophy of the stricture-band was not, in this case, followed by their redevelopment. It was a surprise to me to find the urethra so distensible at this point, and yet this is what should have been expected, and it is an addtitional proof of the permanent cure of the disease. The patient promised to return for an endoscopic examination, but left the city without doing so.—*Medical News.*

PARALYSIS FOLLOWING THE USE OF ESMARCH'S BANDAGE.

Several months ago the writer had an opportunity of witnessing one of the ill results that occasionally follow the application of elastic constriction to an extremity. The patient presented a large ulcer on the upper, anterior part of the leg, due to a burn, for which skin grafting by the method of Thiersch was resorted to. After the operation a rubber tube was tightly applied for about an hour above the site of the ulcer, for the purpose of producing a certain amount of stasis and thereby promoting the reparative process. The transplantation was a brilliant success, the grafts rapidly united; but when the patient was permitted to leave the bed, he was found to have a well marked paralysis of some groups of muscles of the leg, especially on the anterior surface. He was unable to flex the foot or to rotate it inward or outward, and complained of numbness and formication in the anterior surface of the limb. Under the employment of galvanism the paralysis is gradually subsiding, but considerable time must elapse before the functions of the limb are completely restored, and this unfortunate occurrence has greatly detracted from the otherwise satisfactory results of the operation. Although cases of this character are not common, they are more frequent than a study of the literature would lead one to believe. In the *Wiener Klinische Wochenschrift*, Dr. R. V. Frey, who is an assistant at the clinic of Prof. Woelfler, has recently made an interesting contribution to this subject. He calls attention to the observations of Volkman and Leser, who have shown that the paralyses following the too tight application of bandages as well as elastic constriction to an extremity are, in large part, of ischæmic character; that is, they are due to changes in the muscle in consequence of arrested circulation. In the three cases reported by Frey, however, the paralysis was of neurogenic nature and caused by an injury of the nerves through the direct pressure of the constricting band. According to Leser the symptoms of the ischæmic form of paralysis are very characteristic. Soon after the application of a bandage to the limb, the arm for example, severe pains increasing in violence are experienced, together with swelling of the hand and fingers. Unless the dressings are now removed contracture of the hand and fingers in a position of flexion takes place, which gradually becomes more marked. If the removal of the constricting bandage is delayed to twenty-four or more hours, however, the muscles of the arm are found to be as hard as a board, and any attempt to move the limb provokes the most intense suffering. An inflammatory reaction now sets in, with swelling of the muscles of the constricted part, which reaches its height in about

twenty-four hours and then gradually subsides. According to the degree of injury the muscles are left in a condition of cicatricial atrophy or in connection with contracture there is an inability to move the hand and fingers.

The typical element of ischæmic paralysis is the absence of electrical irritability of the muscles; they fail to react to the direct stimulation of the faradic current, even when intense, while the galvanic current evokes weak but distinct muscular contractions. That the nerve conduction is uninterrupted is shown by the constant presence of normal sensibility, and usually it is possible by stimulation of the nerve trunks to excite feeble contractions of the muscles. So much for ischæmic paralysis, which is more often due to tight bandaging than to constriction by an elastic band. In neurogenic paralysis, which is well illustrated by Frey's cases, there is no inflammatory swelling of the limb, the paralyzed muscles are relaxed, and no evidences of contracture exists. The muscles exhibit normal direct electrical irritability; sensation is more or less impaired, while the irritability of the nerve trunk is diminished. In the three cases reported the paralysis which affected the upper extremity was due to the tight application of an elastic band or tube to the arm for a period not exceeding three-quarters of an hour. While in one case the paralysis was rapidly developed, in the others it did not appear until the lapse of a number of hours. It may be questioned whether the paralysis was the result of direct mechanical pressure, or anæmia of the nerve trunks produced by the compression of the artery, but experiments made on animals by the author demonstrate that the nerves preserve their vitality even when the blood supply is cut off for a number of hours. As in the case mentioned at the commencement of this article, Frey's patients also progressed very slowly toward recovery, and the prognosis will, of course, depend upon the extent of the paralysis and the existence or non-existence of degeneration reactions. The practical lesson to be derived from Frey's experience and that of others is to avoid the use of the elastic tube for purpose of constriction, and to employ in its place a broad elastic bandage which will distribute the pressure. Prof. Senn advises that the pressure be made at a place where the nerve trunk is well covered with muscle, and if this can not be done that a compress of gauze be interposed between the band and the limb. But it should be remembered that even the employment of a broad bandage does not afford positive protection against this accident, and, therefore, in practising constriction with the elastic band, strict attention should be paid to the development of the muscular and adipose tissues of the affected limb.—*Int. Journal of Surgery.*

PERSISTENT URETHRAL DISCHARGES DEPENDENT ON SUBACUTE OR CHRONIC SEMINAL VESICULITIS.

Eugene Fuller, M. D. (*Journal of Cutaneous and Genito-Urinary Diseases*), gives us an extension of this method of treating subacute or chronic seminal vesiculitis from those cases in which it was undertaken for symptoms indicating a disturbance of the sexual functions (see *Jour. Cutan. and Gen.-Urin. Dis.*, September, 1893) to cases in which he finds urethral discharge persisting in spite of treatment by all the ordinary methods known to specialists in this line, and apparently dependent on a subacute or chronic seminal vesiculitis; namely, stripping the seminal vesicles (emptying them of their contents) by means of the forefinger introduced into the rectum. In these cases he pays but little attention at the time to the discharge, directing treatment mainly to the vesicles themselves by this method. Most of these cases, probably all, have had gonorrhœa, though they do not always ascribe their trouble to that source.

The patients are seen once in every five or seven days; treatment lasts from a month to six weeks in the more favorable cases, to eight or nine months or a year in the most severe, and he advises examinations at intervals of a month for four or six months afterward to make certain that a relapse does not take place. He finds thickening of the vesicular walls and flabby condition of the vesicles themselves.

He presents twenty-two cases, fifteen of which were gonorrheal and were improved or cured by this method, and seven were tubercular, and treatment was not continued, and draws the following conclusions:

1. Seminal vesiculitis is the cause of chronic urethral discharges in a certain percentage of cases.

2. In about one-third of these cases the inflammation is tubercular.

3. It is important to differentiate between simple and tubercular seminal vesiculitis because of difference in prognosis and treatment.

4. In the simple cases, prognosis is good unless the subject is of advanced age, the duration of the treatment depending largely on the chronicity of the case.

5. The treatment employed in the simple cases consists of stripping the vesicles, squeezing out into the urethra their inflammatory contents by means of the forefinger introduced into the rectum. This treatment should be employed once in five or seven days; a longer interval should elapse between treatments should acute trouble appear as a result of this.

6. The duration of treatment may be all the way from a month or six weeks to several months or even a year, according to chronicity.

7. At the commencement of treatment the parts are usually tender, indurated and distended, which disappears gradually as resolution takes place. The discharge usually disappears before a cure in the vesicles is attained.

8. In tubercular cases the tenderness in connection with the vesicles is not liable to be so great as, and the induration more than, in simple inflammations, and he advises against this method in these cases.

9. Many of these cases of tubercular origin become quiescent under internal medication and hygienic measures.—*Am. Med. Surg. Bull.-Med. Review.*

PERINEAL SECTION (EXTERNAL) WITHOUT A GUIDE.

By B. F. Herndon, M. D.

In assuming the duties and responsibilities of preparing a paper for the consideration of such a learned body of doctors as compose the Kentucky State Medical Society, one especially not accustomed to journalizing must of necessity feel considerable embarrassment upon such an occasion, to say the least of it.

The object of this paper will be twofold: firstly, to consume as little of your time as possible, and, secondly, to give as briefly as I can the details of an external perineal section without a guide.

The patient is a farmer, fifty-three years of age, general health has heretofore been good, with the exception of an attack of articular rheumatism some three or four years prior to the present trouble. Whether he has ever had gonorrhœa or not I am unable to ascertain. On October 18, 1893, while at work in the lumber business, he was engaged in sawing off a stock from the trunk of a very large tree, and, being on the lower side of the log, in his effort to get out of way of the log he slipped and fell, the log passing across his abdomen and lower extremities.

I was called to see him hurriedly on the same day of the accident, but was professionally unable to go, and it was only on the morning of the fifth day after the accident that I was enabled to see him. I give you this brief history of the accident for the reason that will appear further on.

I found the patient in great pain; the penis, scrotum, and perineum were extravasated with urine and swollen

to an enormous extent; the bowels and stomach were considerably distended with gas, and he had had no evacuation from the bowels or bladder since the day of the accident. The extravasated condition of the parts heretofore mentioned was relieved by the use of the Truax surgical pump and a small aspirating needle, and the bowels were relieved by an enema. On thorough examination of the urethra I found he had a stricture posterior to the bulbo-membranous junction impermeable to the smallest filiform bougie.

The temperature was found to be 104 deg., pulse 120. The patient was placed in the lithotomy position, the parts cleansed and shaven.

The operation I performed was extermal perineal urethrotomy, sometimes called perineal section.

The instruments for this operation consisted of the ordinary scalpel-beaked bistoury, whalebone guide, grooved and tunneled catheter, some ordinary sounds, a gum catheter, small probe, grooved director, spatula, tenacula, two strong ligatures armed with curved needles, and the ordinary instruments for controlling hæmorrhage.

The patient was anæsthetized; the urethra was filled with olive oil. After having failed to introduce the guide into the bladder the tunneled catheter staff was passed over a whalebone guide along the urethra to the front face of the stricture; an incision about 2½ inches in length was then made in the median line down to and through the urethra into the groove at the end of the staff; the urethra was then sufficiently incised to permit the introduction of a large sound; the stricture in the anterior portion of the urethra was divided by the urethrotome. The urethra was now enlarged throughout to a uniform size; a rubber catheter, size 35, was then passed through the perineal wound into the bladder and the parts thoroughly irrigated. The anterior opening was found to be directly in the median line. The major portion of the perineal wound was closed by antiseptic sutures carried deeply, leaving sufficient room for the introduction of a large flexible catheter through the neck of the bladder. The wound was dressed antiseptically; the catheter was removed on the fourth day. Different sized sounds were then passed every two or three days for two weeks. After the second week the urine was passed by the natural channel; the patient was put on tonic treatment and supporting diet; the wound healed nicely and rapidly; in six weeks the patient made an excellent recovery, and is at present at work and in good health.

In closing this paper I desire to call your attention to the fact that the patient informed me that he was treated for stricture some three or four years prior to the present trouble, while

he was at the Hot Springs, Arkansas, where he had gone for the benefit of his health while suffering with rheumatism, and had had no trouble in voiding his urine since then up to the time of the accident, but after the accident a country physician was called to see him and attempted to relieve the bladder by the use of a female silver catheter. Now the question arises, was the extravasated condition of the parts heretofore mentioned due to traumatic causes (so to speak), that is to say, from the injury received from the log, the attempt at passing the female catheter, or from the natural consequence of the previous stricture? These questions I ask for information.—*American Practitioner and News.*

INDICATIONS AND LIMITS OF TOPICAL TREATMENT IN LARYNGEAL PHTHISIS.

Concerning local treatment in this condition, the author says:

"With regard to the question of the best form of local treatment, I have nothing very new to say, except to protest against a too common idea that curettement is an absolute *sine qua non*. Whether in the acute or chronic form, I believe menthol, or menthol with iodol, in the form of a spray, gives the best results in the pre-ulcerative stage by promoting resolution in the case of a local hyperæmia, and by stimulating the capillary circulation in that of anæmia. It is in the anæmic form that deposit in the inter-arytenoid region is most common, leading to more or less sessile new growth in that situation, and atomized inhalations of the nature described are useful in preventing this development. When there is excessive pain I employ in a spray an ethereal solution of aristol, but morphia insufflations I have never advocated, except in hopeless cases, believing this drug to have an equally pernicious constitutional effect as if administered internally on general principles; but codeia I prescribe largely. Nor do I advise the use of cocaine, except as a preliminary to intra-laryngeal curetting or friction with lactic acid; the drug to be discontinued on the first evidence of improvement under this more active treatment. I have also employed it in advanced cases for the temporary relief of dysphagia.

"I have never been an advocate of intra-laryngeal insufflations of powders, and I can not but think that all remedies are better administered in the form of solutions, and for the most part as sprays under high pressure.

"The only exception I make to this method of treatment

by sprays is in the application of an anodyne I have long employed composed of compound tincture of benzoin, compound tincture of camphor, and tincture of belladonna, with which the yolk of an egg is mixed, for the relief of acute dysphagia, the mixture to be employed as a paint immediately before taking food; and in the use of lactic acid, in the application of which all are agreed that considerable force in rubbing the part is required; previous to ulceration, however, this method of application, as well as the drug itself, is productive of harm rather than good.

"As a rule, curetting, whether of hyperplastic outgrowths or of ulcerations, is necessary before the lactic acid application is ever really effective, but it is by no means indispensable to perform a scraping on every occasion when this agent is used, one in every four or six being in my judgment sufficiently frequent.

"Curetting is indicated in my practice for two purposes:

"Firstly: For the removal of hyperplasia; and I may say that it is very rarely that I employ any other method, even when these excrescences simulate a pedunculated neoplasm.

"Secondly: To clear away necrotic matter when the ulcers are large, and for uniting the numerous ulcerative points into one surface when they are, as is generally the case, multiple."—*American Medico-Surgical Bulletin.*

GYNECOLOGY AND OBSTETRICS.

THE PROPHYLAXIS OF ABORTION.

By James L. Kortright, M. D.

Of recent years, we have heard a great deal about the proper management of cases of abortion, and many new instruments have been invented and ingenious schemes have been devised to empty completely the uterus of its products of conception. But the study of the causes that lead to abortion and their correction and cure has not received as much attention as its importance requires. For instance, a recent admirable work on therapeutics devotes two pages to the treatment of inevitable abortion, five lines to the treatment of threatened abortion, and says nothing whatever upon our subject. This lack of attention is consequent upon the loose views regarding the gravity of abortion that prevail among the laity and to a certain extent among the profession, as the following incident will show. Recently there came to me a

young married woman suffering from dysmenorrhœa. Examination revealed retroversion and catarrhal endometritis. When I told her that she would probably conceive easily, and abort still more easily, she immediately exclaimed "Isn't that nice," and declined further treatment. A recent writer in a medical journal has openly advocated the practice of breaking up pregnancy for comparatively slight causes, taking the ground that all physicians are, in secret, abortionists, and that it is now high time to be frank with our patients as well as accommodating to them. I deny that all or even many of us are guilty of the charge that he brings; but his attitude substantiates my position that to some extent physicians do not look at the subject of abortion in its proper light.

An abortion is not a simple solution of the Malthusian problem, as some would have us believe; but rather a thing to be deplored and to prevent which we should strive with all our might. By it a potential life is lost and the State is deprived of the services and productiveness of that life.

The dictates of political economy and humanitarianism prompt alike the education of children, the preservation of the lives of infants, and the punishment and prevention of antenatal murder. Nothing conserves the family so much as the rearing of children, and to preserve the family is to protect the state. Those nations are strongest in which abortion is rare and criminal abortion is unknown. Again, children form the strongest ties that bind husband and wife; and their production and care are the best means of development of the characters of parents. Hence childless marriages are to be deplored, and when in consequence of choice are to be condemned. It rests with the medical faculty to teach the public right feeling in this respect. Wives should be taught the dangers of miscarriage and the importance of pelvic health. Husbands should be made to understand how much their future happiness may depend upon the begetting of healthy and vigorous children.

Out of one hundred women that miscarry (and this does not mean out of one hundred miscarriages) twenty-two will remain sterile; and of these, fourteen will have painful and incurable pelvic disease, and eight will not suffer, but will be barren. These are the figures of Napier of London. Eighteen and six-tenths per cent. of the women who miscarry are habitual aborters. These women often display marvelous fecundity. As many as thirty-three miscarriages have occurred in the same patient. Repeated abortions occur commonly either at the beginning or at the end of the child-bearing period. When occurring soon after marriage they indicate lack of development of the sexual organs. When

occurring late in life, they indicate exhaustion of the power of reproduction. Single abortions occur either soon after marriage or during the course of child-bearing. They indicate rather disease of the reproductive organs.

So numerous and so present are the causes of abortion that almost all fruitful women have miscarried at least once. Miscarriages are due to the errors in the father, in the child or in the mother.

When the cause is of paternal origin, it is in most cases either syphilis or too much sexual indulgence.

Very little is known regarding the diseases of the fœtus and its membranes that lead to its death and premature escape from the uterus. Dropsy of the chorion; hypertrophy and villous degeneration of the chorion; fibro-lipomatous degeneration of placenta; hæmorrhage into the placenta, from large branches of the umbilical vein; stenosis of the umbilical vessels; calcareous and syphilitic degeneration of the placenta; hydrocephalus; these complete the list of causes acting from the fœtal side. I would respectfully urge the members of this society to save all the products of abortion for microscopical examination. In this way, our society may add to the stock of our knowledge of this very obscure subject.

When abortion is due to the mother, it is either traumatic or pathological. Women are often most cruel to themselves in their endeavors to get rid of a fertilized ovum. They will dare anything and undergo any torture to obtain relief from their condition. A colleague recently made an autopsy upon the body of a woman dead of peritonitis who had introduced some foreign implement into her womb. She had not even been pregnant, but had killed herself on suspicion. This experience can not be of very infrequent occurrence, for I have too seen in consultation within the past month a case exactly similar to the one related.

Just at present the soft bougie seems to be the favorite instrument, and they are on sale, presumably for this purpose, in at least one of our large dry goods stores for 20 cents each.

A few words as to the mechanism of abortion may not be out of place here. The deepest layer of the decidua is composed of interlacing fibres with blood vessels and the blind extremities of the utricular glands. This is the spongy layer of the decidúa, or, as Berry Hart calls it, the postage stamp layer. Here it is that separation takes place when abortion occurs. If the membranes be ruptured and the fœtal sac collapse, the decreased internal pressure permits a hæmorrhage into this layer. Or from increased blood pressure, or from weakness of its wall, a vessel in this layer may burst and a corresponding hæmorrhage occur.

The effused blood, in either case, separates the ovum from the mother; and the uterus now containing a foreign body, expels its contents. This mechanism, although simply expressed, is sufficiently accurate for this occasion.

It is a truism that a healthy uterus will not cast off the product of conception, but will nourish it until it is ripe for birth. A woman with a healthy endometrium and a stable nervous system will pass through the severest accident and still preserve her uterine contents intact. But if the endometrium be unhealthy—if the blood vessels have thin walls characteristic of proliferating tissue—or if they present obliterating endarteritis, as in tissue undergoing atrophy, then an apparently trifling accident may so disturb the balance of circulation that blood will be effused into the reticulated layer and miscarriage will ensue. Hence anything that causes disease of the endometrium may serve as a cause of abortion. The uterine mucous membrane may be inflamed in consequence of a septic infection at a previous labor, from a displaced uterus, from an everted cervical tear. The uterine mucous membrane may be badly nourished in consequence of the dyscrasiæ, cancer, syphilis, malaria, albuminuria, lead poisoning, leucocythæmia, anæmia. It may be engorged by heart disease, hepatic cirrhosis, too frequent cohabitation, lactation.

It matters not what the cause may be, the mechanism and the effect are the same. Nevertheless, our success in treating the condition depends upon an exact appreciation of the cause of the endometritis. I understand the great underlying principle of the treatment of endometritis to be thorough drainage. The mere continuous removal of the diseased secretion as fast as formed is a long step toward the cure. It is chiefly for this purpose that we make application to the uterine cavity, or dilate it or curette it and pack it with gauze. If a moderate salpingitis be associated with the endometritis, the treatment would be the same. Such local treatment, of course, should antedate impregnation.

Displacements should be corrected. Coe, of New York, has had success by the use of the pessary. In general, it may be said that flexions of the uterus produce sterility, and retroversion predisposes to miscarriage. When the uterus fills the pelvic cavity and is about to rise into the abdomen is the time of greatest danger. At this period the patient should remain in bed for at least four weeks and place herself in the knee-chest position repeatedly during the day.

The febrile state is especially inimical to the life of the fœtus. For example, women suffering from acute pneumonia nearly always abort. Fruitnight has noted a special tendency

to miscarriage in influenza. In fever there is a combination of disordered blood tension, increase of excrementitious and toxic principles in the blood current, and decrease of nutrient pabulum for the fœtus. In addition, many of the medicinal antipyretics are distinctly oxytocic in their action. Hence we must quickly reduce the temperature of our pregnant patients and by a non-medicinal means—*i. e.*, by baths and sponging.

The constitutional prophylactic treatment should not be neglected and in some respects is of more importance than the local treatment; especially since when pregnancy has once begun the latter must be interdicted. Even in cases not known to be syphilitic, a course of mercurials is usually of value. In cases of albuminuria, a long course of iron as the tincture of its chloride has been of great service. Sir James Y. Simpson has praised very highly the daily administration of a drachm of chlorate of potash. I have recently tried it in a proper case with an apparently good result. While giving the drug, however, its effect upon the kidney should be carefully watched. The bowels should be moved daily.

It is of greatest importance properly to regulate this function, as an overloaded rectum or sigmoid flexure causes uterine congestion and predisposes to abortion. But drastic purges should be avoided as well as those drugs that tetanize unstriped muscular fibre. Violent exercise should be forbidden, especially such as would cause sudden jarring of the uterus, or determine blood to the pelvis. There is a great deal of truth in the common idea that a pregnant woman should not reach over her head. Sexual congress may be allowed in moderation unless the woman is hyperæsthetic. At the time of the menstrual period the patient should remain in bed for at least six days until after the fifth month. The bed should not be too warm or too soft. If the woman is nursing, the child, of course, should be taken from the breast. In short, the whole subject of the constitutional prophylaxis resolves itself into a rigid regard for the hygiene of pregnancy.

Upon the subject of symptomatic treatment, it may be said that unless there is great pruritis of the vulva, vaginal douches would be best forbidden. If bleeding occur from cervical granulation, a few applications of iodized phenol will cause it to cease. If hæmorrhage appear from within the uterus, the two drugs of greatest utility are morphine and viburnum prunifolium. Vaginal tamponade is often useful in this condition, and ergot is often successfully used without causing miscarriage.

There is a class of cases in which from progressive fatty degeneration of the placenta the child dies of inanition toward the close of pregnancy and after it has been viable. Such patients require the induction of premature labor before the

death of the fœtus and yet as late in the pregnancy as possible.

By pursuing the treatment that has been described and adapting it to the exigencies of each particular case, we will be enabled to prevent many miscarriages. Naphey has cured 77 per cent. of women who had even habitually aborted so that they afterward bore children. To prevent miscarriages is to gain the lasting respect and confidence of our patients, even if our success should be a source of temporary disappointment to them. We will furthermore have the consciousness of having saved human lives as truly as if we had achieved wonders in surgery or performed miracles in therapeutics. Finally, to recapitulate, I have endeavored in this paper to show the serious aspect of abortion and especially of the aborting habit, to classify the apparently dissimilar causes of abortion, to explain simply its complicated pathological process, and to bring afresh to your memories well recognized and successful lines of treatment.—*Brooklyn Medical Journal.*

CARE OF THE NAVEL IN THE NEW-BORN.

Schrader discusses this subject in a paper read before the Obstetrical Society at Hamburg (*Centralblatt f. Gynskologie*). He says the question as to the best treatment of the stump of the navel cord probably seems to many unimportant, because the frequency and danger of infection through the navel wound are not appreciated. Unfortunately we do not yet possess sufficient statistics on the subject. Recently, however, Ehrendorfer has published a large and very valuable collection of cases bearing upon this point, from the obstetric clinic at Innspruck. Of 1764 children born there, 95 died; and on 81 of these an autopsy was made. Infection of the navel was demonstrated in 16—therefore in 16.84 per cent of all that died, or in about 1 per cent of all the children under observation. Probably even this percentage is too small, if all the facts were known. Ehrendorfer rightly brings out that, without an exact autopsy, the cause of death in the new-born is frequently overlooked, especially since the illness due to infection very often is complicated by pneumonia, icterus, gastro-intestinal catarrh, etc., and these sequelæ, unless an autopsy is made, are assigned as the cause of death. It is probable, therefore, that a much higher percentage of the new-born die of infection through the navel than is now believed. To prevent this Ehrendorfer recommends a strict asepsis at the time of severing the cord and afterward, and that the effect be made to secure rapid and complete mummification of the stump. This

latter is to be attained first by thorough protection of the stump from moisture, and second by its exposure, so far as possible, to the air. To avoid moisture, Schrader advises that bathing of the infant, except for the cleansing immediately after birth, be entirely dispensed with until the stump has fallen off and the navel has healed. It is not so easy to permit free access of air, but to attain this, as far as possible, the stump should be wrapped in a piece of linen mull, dry, not oiled. Eröss found in his observations and experiments on 1000 infants in the clinic at Budapest, that a dry linen cloth is better for the stump than one oiled.—(*Archiv. f. Gynakologie.*) This first dry dressing is usually not changed, The band is not to be too firmly applied, and should be frequently raised to allow access of dry air. If the stump does not do well in this simple way, as is apt to happen with a large amount of Wharton's jelly, Schräder powders it well with dermatol; and after falling off of the cord the naval wound is kept powdered with dermatol for several days.

In the discussion that followed this paper Windmuller said he dresses the naval cord with dry charpie, using powdered boracic acid if there is a bad odor, but only the charpie again after the odor disappears.

Aly had had good results by dressing with a powder of alum and boracic acid; equally useful in powdered sugar.

Lomer also employed powdered sugar, and had never seen a bad result in 500 cases.

Hotte was opposed to omitting the daily bath, because it was in every way beneficial to the new-born.

In reply Schrader did not consider the bath so necessary that it could not be omitted for the first eight or ten days without disadvantage. Infants, he found, got along as well without it and, in fact, less often developed snuffles.—*Occidental Medical Times.*

Book Reviews and Notices.

A System of Genito-Urinary Diseases, Syphilology, and Dermatology. By various authors. Edited by Prince A. Morrow, A. M., M. D., etc. With illustrations. In three volumes. Vol. III, Dermatology.

Following the lines adopted in Vol. II of this series, this section of the system is composed of special articles from the pens of the leading dermatologists in this country. No pains

have been spared to make the work complete, as the numerous colored plates, half-tone plates and wood cuts go to prove. Ample space is allotted to each subject, and the diseases most commonly met find proportionately more consideration. We must comment, at the start, upon the work of our *confrère*, Dr. Rudolph Matas, of New Orleans, in his contributions on "Verruga" and "Endemic Boils." The completeness and finish of both articles, exhaustive, in fact, evidence the care with which their preparation has been accomplished. Verruga has been so little known in this country, and text-books in English contain such meagre accounts and descriptions, that the article above considered is particularly welcome. It contains the meat of a full foreign bibliography, and, as with the article on "Endemic Boils," is judiciously illustrated. The article on "Mycosis Fungoides" is from the pen of Dr. H. W. Blanc, formerly of New Orleans.

Among much that is new in the work, the attention bestowed upon the classification deserves mention. The pathology, as is natural, has largely determined the changes made from former arrangements of diseases of the skin. Hebra's and Bulkley's class of "Hyperæmias" has been transferred to the "Inflammations." Urticaria has been placed with the Neuroses, and inflammatory conditions of the glands have been classed with "Diseases of the Appendages of the Skin." Numerous additions have been made to the growing list of skin diseases, and even the more recent differentiations find place and description. Dermatitis repens, parakeratosis variegata, colloid degeneration of the skin, hidradenitis suppurativa, trichiasis, distichiasis, actinomycosis of the skin, are some of the more recently reported and described conditions which have found mention here. Altogether Dr. Morrow's treatment of the classification is a move toward the more liberal grouping of skin affections. Dr. J. E. Graham, of Toronto, writes on the "Exanthemata." While his article on "Variola" is a good clinical study, it lacks the discussion of differential diagnosis, and the methods of treatment are far from modern.

Especially noteworthy is Dr. Louis Heitzmann's treatment of the pages allotted to the "Anatomy" and "Physiology" of the skin. If is not enough to say that this is comprehensive, for the detail is exact and carefully arranged to meet the every requisite of the student. Dr. Fox' contribution on Licen ruber and its varieties, and Dr. Elliot's several papers, but particularly that on "Dermatitis Seborrhoica," need to be especially mentioned. The text throughout is well arranged, the bibliographies acceptable and the typographical work is commendable.

ISADORE DYER.

State News and Medical Items.

Dr. J. T. Abshire, who has been practising at Abbeville, La., has moved to Red Hill, ten miles from his old home. His former partner, Dr. LeBlanc, will retain the old office.

Dr. Pierre A. Lambert, who died last month in this city, began his practice in 1834, and up to the time of his retirement from active work, about ten years ago, was one of the most successful practitioners. He was 86 years old at the time of his death.

Changes in the Memphis Medical College.—In consequence of the death of Prof. Sim, the following changes have been made in the faculty organization of the Memphis Medical College: Prof. W. B. Rogers, M. D., becomes Dean, and Prof. B. G. Henning takes the chair of Principles and Practice of Medicine, while Prof. H. D. Wilford succeeds Dr. Henning in the chair of Materia Medica and Therapeutics. Prof. A. G. Sinclair, M. D., succeeds Prof. Sim as editor of the *Memphis Medical Monthly*. The school and the journal have both lost their strongest pillar in the death of Dr. Sim.

Albert Napper, the originator of cottage-hospitals, died on November 16, at the age of seventy-nine years. He established the first cottage-hospital in 1850.

Dr. Burton, of Valdosta, Ga., was in the city last month. The doctor has a large practice in Southern Georgia.

Dr. Emile Doumbing, of this city, died January 18, at his late residence, 115 Dumaine street.

Dr. T. B. Bringier, of Donaldsonville, La., who has been at Hotel Dieu for treatment, has returned to his home.

Dr. A. C. Scott, of Temple, Texas, is probably the youngest chief surgeon in the United States. He is at the head of the surgical department of the Gulf, Colorado & Santa Fe Railroad, and is president of the Texas Railway Surgeons' Association.

Dr. W. L. Grace, of Plaquemine, La., was in the city recently on business.

Dr. A. R. Trahan, of Lafourche parish, who enjoys a good practice, was in the city lately.

Chicago has established a Summer School of Medicine which will commence instruction March, 1895.

Dr. C. P. Whitehead, formerly of Lake Providence, La., has located at Lacompte, La. He takes the place of Dr. Owen, who died a short time since.

Dr. B. W. Palmer, for some years editor of the *Medical Age*, of Detroit, died last month. Dr. Palmer also occupied a very prominent position in the publishing house of George S. Davis in Detroit.

Miss Carrie Liebig, who has just been appointed a division surgeon of the Northern Pacific Railroad, at Hope, Idaho, is the first woman physician to be appointed in the railway service.

Dr. G. Surghnor, of Monroe, La., is in the city at the Eye, Ear, Nose and Throat Hospital.

Dr. W. L. Dickson, who practises at Rush Point, La., was in the city last month, on business.

Muscatine, Iowa, charges a license of $25 a day for transient physicians who practise there.

Dr. John W. Bradfield, who died in Birmingham, Ala., recently, had practised medicine for forty years at Unionville, that State, and was one of the best known physicians.

Dr. Isaac Siess has removed from Alexandria to Levia, La., where he will practise.

So far as the number of students is concerned, Philadelphia is the medical centre of the United States. There are 2400 students, of which 875 are in the University of Pennsylvania, 700 in Jefferson, 325 in Hahnemann, 300 Medico-Chirurgical; 200 women.

For constipation of infants, perform massage of the bowels two or three times daily.

Following are the oldest medical publications in the United States in order named. The Boston *Medical and Surgical Journal*, the *American Journal of the Medical Sciences*. The Cincinnati *Lancet-Clinic*, and the *St. Louis Medical and*

Surgical Journal, and the *New Orleans Medical and Surgical Journal.*

Dr. R. O. Simmons has located in Alexandria for the practice of his profession. He was formerly at Neil, La.

Dr. G. B. May, of Black River, La., was in the city recently.

After a long and painful illness, Dr. A. Semmes, an old and esteemed physician of Canton, Miss., died at his home, in that city, at 9 o'clock, January 9.

Georgia's new law providing for a State Board of Medical Examiners went into effect on January 1. There are actually three boards: regular, homœopathic and eclectic.

Dr. L. C. Anderson, of Lake Charles, La., was in the city last month.

Dr. P. R. Melancon, of Lockport, La., was accidentally shot by a guard of a convict camp, on the 6th of last month. The doctor's many friends will be glad to learn it was not fatal.

Patient—"Doctor, my memory has recently become shockingly bad." Doctor—"Indeed? In these cases, sir, it is my invariable rule to ask for my fee in advance."

Doctor—"Did you give the children the physic I sent last night?" Fond Mother—"Yes, sir." Doctor—"And how are they to-day?" Fond Mother—"Well, the little un's very bad, to be sure. But it don't seem to 'ave done the t'other un' no 'arm as yet!"

Dr. T. B. Rider, of Darrowville, La., passed through the city from a pleasant trip through Alabama.

The Journal extends its sympathy to Dr. M. G. Olivier, of Burwick, La., for the loss of his estimable wife, which occurred last month.

Dr. G. E. Butchee, of Elmer, La., has removed to Milburn, where he will continue the practice of his profession.

The medical students of the Alabama Brice Insane Hospital have organized a training school for nurses. While the course of instruction is arranged with special reference to the care of

the insane, there will be provided lectures upon physiology, chemistry, the germ theory of disease and other diseases, under the wise administration of Dr. James T. Searcy, superintendent, and his assistants, Drs. Bondurant, Wright and Vaughan.

Dr. H. L. McLaurins, of Dallas, Tex., is in the city attending a special course of lectures.

A case is on record where a young married woman lost blood almost to collapse from the rupture of the hymen in the first coition.

Dr. Oliver Wendall Holmes, according to a letter in the *Record*, was the one who suggested the terms anæsthetic and anæsthesia now so commonly used.

Dr. E. B. Price, of Alexandria, La., died January 30, at his home, age 72 years. The doctor was a graduate of the Baltimore Medical College, and came to Alexandria in 1891. He leaves a wife and two small children. As a physician he was at the head of his profession, and in his death the community loses one of its best citizens.

Dr. O. B. Quinn has been re-elected mayor of McComb City, Miss.

Dr. C. W. Bufkin has moved from Vossburg to Hattiesburg, Miss.

Assistant Surgeon Charles B. Ewing has been detailed by Surgeon General Sternberg, U. S. A., to establish a diphtheria antitoxin "plant" at Jefferson Barracks, Mo., and Dr. Ewing has already procured a number of horses which, after being subjected to the mallein and tuberculin tests and otherwise proved healthy, will be utilized for this purpose.

Dr. James Leake, of Bayou Sara, is in Philadelphia taking a post-graduate course at the Medico-Chirurgical College.

The Mississippi State Medical Association will meet in Jackson on the 10th of April. Those who intend to take part will please communicate with Dr. H. H. Haralson, Forest, Miss. Rates will be made by the different railroads.

MORTUARY REPORT OF NEW ORLEANS.

For January, 1895.

CAUSE.	*White.....*	*Colored...*	*Male.....*	*Female....*	*Adults ....*	*Children.*	*Total .....*
Fever, Yellow							
" Malarial (unclassified)	3	6	2	7	8	1	9
" Intermittent							
" Remittent	3		2	1	3		3
" Congestive	2	1	3		3		3
" Typho	3	5	2	6	7	1	8
" Typhoid or Enteric	15	5	16	4	16	4	20
" Puerperal	1			1	1		1
Influenza	1	1		2	2		2
Scarlatina		1		1		1	1
Measles	10	1	4	7	2	9	11
Diphtheria	10	1	7	4		11	11
Whooping Cough	2		1	1		2	2
Meningitis	5	2	3	4	3	4	7
Pneumonia	38	26	40	24	42	22	64
Bronchitis	27	11	17	21	10	28	38
Consumption	42	42	47	37	82	2	84
Cancer	11	5	5	11	16		16
Congestion of Brain	9	1	8	2	6	4	10
Bright's Disease (Nephritis)	21	11	20	12	31	1	32
Diarrhœa (Enteritis)	26	13	24	15	29	10	39
Cholera Infantum	4	3	2	5		7	7
Dysentery	3	4	5	2		7	7
Debility, General	2	2		4	4		4
" Senile	27	16	18	25	43		43
" Infantile	6	3	6	3		9	9
All other causes	203	119	166	156	207	115	322
TOTAL	474	279	398	355	515	238	753

Still-born Children—White, 37; colored, 18; total, 55.

Population of City—White, 195,000; colored, 80,000; total, 275,000.

Death Rate per 1000 per annum for month—White, 29.16; colored, 41.85; total, 32.85.

L. F. FINNEY, M. D.,
Chief Sanitary Inspector.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XXII. MARCH, 1895. No. 9.

Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

NEURECTOMY OF THE SECOND DIVISION OF THE FIFTH NERVE WITH REMOVAL OF MECKEL'S GANGLION.

BY DR. JOHN E. DAVIS, COLUMBUS, MISS.

During August of the past summer I was consulted by C. S. H., colored, male, age 30 years, for relief from one of the most harassing ills that flesh is heir to—namely, inveterate tic-douloureux.

His first attack dated back seven years ago, when he had the most of his upper teeth extracted, they being considered at that time the cause of his suffering, but without relief. In all my experience I had seldom witnessed such excruciating agony as he suffered.

The paroxysms came on with regularity and precision about every five minutes, at which time the affected (left) side of his face would undergo fearful contractions, his lips opening and closing with a smacking noise which could be heard some distance.

During the paroxysm he would bury the affected side of his face in his hands and like a maniac walk the floor vainly seeking relief.

Night and day, for over a year, these painful paroxysms

had come upon him with clock-like regularity about every five minutes.

He had consulted numerous physicians, and, as he expressed it, his home was like a drug store, but he had never been able to obtain the least relief. It was impossible to clearly localize the pain at any one point, but I suggested a removal of the second branch of the fifth pair as affording the best hope of relief. He declined an operation, and for some time I lost sight of him; but he afterward returned and desired trying surgical interference.

On October 1, 1894, assisted by Drs. Curry, Sykes and Wafford, of this place, I operated.

A V-shaped incision was made on the front of the cheek, so that the centre of the V was opposite the site of the infra-orbital foramen. The incision extended down to the bone. The triangular flap, including the integument and muscles, was lifted up, and the nerve exposed as it emerged from the foramen.

The nerve was now divided near the point of emergence from the foramen, and the stump tied with a piece of silk thread, the object of the thread being merely to serve as a guide.

With a small chisel and mallet, the foraminal opening was enlarged to about one-half inch in diameter, and a similar opening, of about one-half the diameter of the former, was made in the corresponding portion of the posterior wall of the antrum. Then the thin bony floor of the infra-orbital canal was broken throughout the length of the maxilla. Traction now being made upon the silk thread, the nerve was put upon the stretch and removed near the foramen rotundum, and along with it, Meckel's ganglion.

The paroxysms came on with their accustomed regularity, even while under the influence of chloroform, not failing to return till the excision of the nerve was made.

Hæmorrhage during the operation was controlled by repeated packings with strips of iodoform gauze. After removal of the nerve and ganglion, the cavity was packed with iodoform gauze and allowed to remain for twenty-four hours. At

the expiration of that time, the edges of the wound were accurately adjusted and sutured with silk.

There was no rise of temperature, the wound healed kindly, and in every respect the patient made a beautiful recovery. The deformity, while noticeable, is not disfiguring. Two weeks after the operation he had gained 15 pounds.

It has now been three months since the operation, and he assures me that he has not felt the slightest symptom of a return of the paroxysms.

The treatment of obstinate cases of tic-douloureux is essentially surgical. Where the second division of the fifth pair is involved, as in this case, simple excision of the nerve at the infra-orbital foramen is not sufficient, and such an operation has very properly been abandoned.

Nothing short of removal of Meckel's ganglion along with the nerve gives satisfactory results.

But even this operation is sometimes disappointing, as there are certain cases which will yield to nothing short of removal of the Gasserian ganglion. This applies more especially to those extremely obstinate cases where all the divisions of the fifth pair are involved.

It is an operation that in the past has yielded a high mortality rate, and hence is only used as a last resort.

It will, however, effect a permanent cure despite the reported cases to the contrary, as they were undoubtedly cases in which the surgeon allowed himself to be deceived. He either did not reach the Gasserian ganglion, or else he did not remove the ganglion in its entirety.

INTESTINAL RESECTION IN THREE CASES OF INTESTINAL GANGRENE DUE TO STRANGULATED HERNIA.

By BENJ. D. WATKINS, House Surgeon. Natchez Hospital, Natchez, Miss.

In this out-of-the-way section of the country, so far removed from centres where the major surgical work is usually done, it is rather peculiar that within a comparatively short space of time I have met with three cases which demanded resection of the intestine. The cases varied in age, but the

causation of the gangrene which necessitated the operation was identical in all, they all being cases of strangulated hernia.

The cases as they occurred are presented in detail—the results as you see were gratifying in the extreme. The only point I would especially make in the operations is that all were done without the aid of rings or other appliances which are alleged to facilitate the approximation of the divided gut; that this approximation is accomplished in the way described in the citation of the following cases with a facility surprising to one who has not seen the operation, and so perfectly is it done by a little care in the suturing that even a possible leak is practically impossible. At any rate, the results speak for themselves, and the practical working of a method is worth far more than a theoretical conclusion, be it however ingenious, so long as it is not backed up by its working statistics.

The leaving of a fecal fistula is a result which is not desired; in fact, the alternative of fecal fistula or resection and approximation would certainly result in a choosing of the latter, could the patient be asked to decide. Then, too, there is no doubt but that in some cases of strangulated hernia the gut is returned to the cavity when a considerable element of doubt exists as to its integrity. The two good results speak for themselves, and I see no good reason why just as good may not be obtained in all such cases in which a similar procedure is indicated.

All resections were of small intestine.

Case No. 1.—Will Johnson, a colored boy of eighteen years, was brought to the hospital on the evening of March 17, 1893. He had been ruptured several years, and six days previous to his admission the strangulation took place. He was weak and exhausted, features pinched, pulse 120 and temperature 102 deg. The operation was performed under ether and lasted an hour. The sac on being opened presented a mass of gangrenous gut with numerous perforations. The technique pursued in this operation was as follows: Resection of four inches and the double row of sutures, after which the attempt at radical cure of the rupture was made. The reaction from the anæsthetic and operation was much better than was anticipated,

but a few hours later he commenced to weaken rapidly and death came at midnight, eight hours after the operation. The autopsy next morning showed that intestinal approximation was in good condition. Death was attributed to exhaustion.

CASE No. 2.—Sam Gilmore Young, a robust negro drayman, aged 26, noon November 13, 1893, in consultation, taxis failing to relieve his strangulated hernia, advised operation at hospital, as his environment was not such as to permit an operation at his residence. Through his fear of the hospital he did not present himself for admission until evening of 14th. The hernia was of moderate size and not very painful; no impulse on coughing. Strangulation came on on the night of the 10th. The general condition of the patient was good. Temperature 99 deg., pulse 90.

The ordinary operation was done, the primary incision being made sufficiently long and high to expose without difficulty the neck of the sac when it was opened. Upon opening the sac a small quantity of bloody serum came away, and beneath a mass of congested omentum was found a knuckle of intestine; this was yellowish red in color and presented at various points circumscribed leathery areas indicative of necrosis. When the ring which constricted the gut was divided there were to be found at the points of stricture several perforations. The resection and subsequent details of the operation were as follows: The mesentery was ligated with three silk ligatures, each overlapping the other, so as to perfectly control hæmorrhage; the intestine having been pulled down, scissors were used and a section of five inches was removed, care of course being taken to get back to a healthy point. The two ends of the divided bowel were then approximated by ten silk sutures passing through the peritoneum and mucous membrane and making the junction as near a perfect end-to-end connection as possible, and following this were put in fourteen Lembert sutures, these also being of silk; this appeared to perfectly close the intestinal wound, and after a perfect cleansing of the bowel and a deligation of the omental mass which still remained in the sac, the bowel was returned to the abdominal cavity. After a denudation of the sac's neck it was closed by silk sutures, the last being made to

transfix the sac itself, and when it was tied it proved a firm pad for additional support. The integumental wound was sutured with silk-worm gut. Chloroform was the anæsthetic, the time of the operation being one hour and twenty minutes. This patient's recovery was uninterrupted, the temperature never exceeded 99 deg., and the pulse never going above 90.

A small collection of pus developed in sac on fourth day and caused local pain. It was let out by the removal of a suture.

The bowels moved spontaneously on second day after operation and continued to move once or twice during his stay in the hospital. Though he expressed himself as feeling very well, he was kept in bed until November 28, and was kept under supervision in the ward until December 8, when he was discharged. A week later he had resumed his accustomed work, and I see him almost daily; the hernia has been radically cured and he at this writing feels no ill consequences of the operation.

Case No. 3.—George Redick, white laborer, age 58 years; has been ruptured several years; the left hernia has always been reducible; the right was reducible until a few years ago, when a boggy mass came down which he has never since been able to get back. During the past three years he has had several attacks resembling strangulation, but taxis always relieved the symptoms, though it was never possible to say positively that the incarcerated gut was returned to the abdomen owing to the omental mass which still remained in hernial sac. On March 2, 1894, the symptoms of strangulation again came on and he suffered much pain and had considerable nausea and vomiting. I saw him with his attendant physician at noon the following day and from his condition and the condition of the hernia considered that the intestinal portion of the sac's contents had been reduced; advised operation for radical cure for the reason that there was never a certainty that the intestine was really reduced, and thus exposed to recurrent attacks his life was constantly jeopardized. He was taken to the Natchez Hospital on the morning of March 4. His condition was not good, his pulse being 120, and it was with some trepidation that the operation was commenced.

The incision made was in the axis of the tumor and extended high enough to expose thoroughly the ring. On opening the sac it was found filled with a large mass of thickened and adherent omentum, and protruding through the ring beneath this mass was a knuckle of dark brown-looking gut, on the surface of which were the light-colored patches indicative of sphacelation. After a division of the fibres of the ring to an extent which allowed healthy gut to be brought down, the resection was made and the end-to-end approximation with silk sutures done, after which the Lembert sutures were put in, the wound cleansed, omentm deligated and intestine returned to abdominal cavity. The ring was treated for radical cure, and while the cutaneous wound was being sutured the left hernia was operated upon; beyond a minor amount of omental adhesion to the sac no complications were met with in this operation; the neck of the sac was treated as was that on the right cutaneous wound sutured with silkworm gut. Ether was the anæsthetic; time of operation one hour and fifteen minutes. Patient's condition at end of operation fair. Pulse 100. Respiration good. Put to bed and surrounded with bottles of hot water; came out from under anæsthetic a half hour after being put to bed; was a little nauseated and vomited once.

At 6 o'clock P. M., pulse 120, and temperature 99 deg. Temperature got down to normal on third day; pulse 84. Urine passed without difficulty at all times. Bowels moved by enema, evening of 8th.

Nourishment for first seventy-two hours was entirely by enema, and consisted of an ounce of liquid peptonoids and four ounces of tepid water. He suffered much with thirst, but was only allowed to rinse his mouth out with cold water frequently. After seventy-two hours the enemas were discontinued, and milk and lime water by mouth substituted, gradually increasing the quantity. On sixth day a rise in the temperature to 99½ deg. took place, due to development of a deep abscess in right wound. On the eighth day an ounce of castor oil was given, several operations had, and patient felt much more comfortable.

Discharged from hospital March 17, 1894, cured.

A CASE OF VISCERAL TRANSPOSITION.

By BENJ. D. WATKINS, House Surgeon, Natchez Hospital.

This case is presented merely from its being a curiosity. Martha Thomas, a negro Indian, native of Louisiana, aged 56, came to the Natchez Hospital, November 22, 1892; diagnosis, pulmonary tuberculosis. The student in charge, Mr. (now Dr.) Swayze, in making an examination of the patient, found a curious condition of affairs which led him to think that he had found that rare anomaly, visceral transposition. The apex-beat of the heart was heard more distinctly on the right of the sternum, and a marked dullness developed by percussion in the left hypochondriac region, and a resonance on the right.

This patient dying five days after admission, an autopsy was held, which showed what was suspected existed in reality. The heart was situated vertically, the aorta curved directly back, the vessels being given off as usual.

The right lung showed three distinct lobes, the left but two. The liver was situated on the left side, the spleen on the right. The stomach curved to the left. The cæcum was situated in left iliac region, the colon passing around from left to right.

TREATMENT OF TYPHOID FEVER AND DYSENTERY; AND COLD WATER IRRIGATION OF THE COLON AS AN ANTIPYRETIC.

By DR. T. E. SCHUMPERT, Charity Hospital, Shreveport, La.

There is no disease so prevalent as dysentery that I regard more seriously. I have tried ipecac, mercury, opium, bismuth, lead, copper, gallic acid, and the various vegetable astringents, with only a moderate per cent. of victories. So there is no wonder that I have been induced to either give up subdued, or search for other remedial agents. Although some of the main points in the treatment which I am about to detail are in every-day use, there are other points of merit, which, if used at all by others, has been done without the knowledge of the writer, and it is only with a feeling of assurance that in it we possess a thera-

peutic agent which exceeds the power of any known drug in bringing about changes which are so important; and while it is not intended to supersede appropriate medical treatment, its proper and skilful application will be found to be a most powerful adjunct in restoring to its normal functional activity that organ which is of most vital importance, the alimentary canal.

Since typhoid fever and dysentery are both enteric diseases it seemed to me, and has since proven a fact, that what is good for the one is the salient indication in the other. Dysentery might be designated the chancroid of the syphilitic typhoid, or in other words the former is a local disease with not very marked peripheral manifestations, whereas the latter is often alarming; the former is usually of short duration, the latter longer.

Dysentery is an inflammatory suppurating disease of the lower bowel, involving first mainly the solitary glands and later those of Leiberkuhn, of which the mucous membrane is in its greater part composed. Inflammation here runs exactly the same course as inflammation in other parts of the body that go to suppuration, and should, I think, be treated in a similar manner—*i. e.*, by first cleansing the part, thereby relieving it of all irritating properties, then by topical antiseptic lotions, then rest. More than a century ago O'Beirne demonstrated that a flexible tube could be introduced into the sigmoid flexure and the colon washed out, his sole object being to rid this bowel of its fecal contents. It has also been recommended by others that topical remedies such as hot water be applied copiously, for its antiphlogistic effects. But I do not think the indications here are altogether met. The cause of dysentery I believe to be mainly malarial, as it is a disease peculiar to all climates and bears a decided ratio both as to gravity and frequence to the malaria of the different climates as well as the seasons of the year. It is the rarest thing to see a case of dysentery during the winter months. There is no age which is exempt from it and it seems to attack the sthenic rather than the asthenic. No author whose text-book it has been my pleasure to read regards this disease as *grave*-ly as I do, for unfortunately my library on this subject is composed by Northern writers, who do not meet with the disease in its

severer forms. With all due respect to these varied authors I have had my faith in the medical science shaken quite a number of times while carrying out their treatment *verbatim*, only to see a stout, robust patient succumb in the end.

In dealing with this inflamed organ, the focus of this disease, my object being first to cleanse the part, I begin this process with a purgative, my preference being calomel, hoping by this means to rid especially the upper bowel of its contents; after this has acted I introduce a long flexible tube, three or four feet, if possible, into the bowel, then with a funnel to direct the fluid, I insert a quart of Thiersch's solution and instruct the patient to retain it as long as possible, and those who will try it will be surprised at the ease with which this is done, how soothing it is to the patient and the readiness in which he goes into a tranquil slumber, as well as the promptness with which the fever temperature falls—*i. e.*, if it be phlogistic in character; the temperature is lowered in these cases on the same principle that it is in pyæmia when vent is given to the pent-up pus. I prefer Thiersch's solution because it is an astringent as well as a harmless antiseptic, thereby meeting more indications than one; it also when voided acts as a lavage for the lower bowel. The enemas I order from one to three times a day according to the distress of tormina and tenesmus, the presence of which is always an indication for an enema, which acts as a perfect anodyne. If there be marked periodicity, accompanying high fever, symptoms which would lead me to suspect malaria, and not the natural consequence of the inflammation, I would then administer quinia as an adjuvant. I prefer the tube to the Davidson syringe, because with the former the remote parts of the disease can be reached and the pressure so much more easily be regulated, thereby completely annihilating all danger of rupturing the already weakened coats of the bowel, which may be in same location reduced to a serous, which itself is weakened by contiguity.

I do not promote rest by applying a splint to the inflamed organ in the form of an opiate, but by an absolute abstinence from food for from six to eight days, or longer, according to the strength of my patient and duration of the disease; during which time he gets absolutely nothing in the way of

nourishment except sterilized hot water ℥ii and brandy ℥ss every two hours. This will please the patient better than any form of diet that can be given him, since in all these cases is complete anorexia. Internally, in addition to the quinine, which is only administered in a certain class of cases, I give turpentine in 20 to 30 minim doses every four hours. It relieves tympanites, is a splendid antiseptic, and exerts a favorable influence upon the process of inflammation and ulceration of the intestinal mucous membrane. I think I can not better illustrate my method of treating dysentery, and the good results derived from same, than to cite one or two cases:

L. M., aged 10, white, a servant, was brought to the hospital on May 3, with what her mother termed bloody diarrhœa; was having 18 or 20 mucous actions a day, mingled with blood and pus, with griping abdominal pains and a constant disposition to strain in an ineffectual effort to empty the bowels. The patient was very much emaciated and weak; temperature 101¾ deg., pulse 108. This case I diagnosed acute catarrhal dysentery, and ordered for her ℞ hydrarg. chlo. mit. gr. vi sac. alba, gr. x. M. ft. chart. no. vi. Sig., one every two hours. As soon as this had acted, which I was able to judge by the odor and color of actions, she was placed on ℞ turpentine 20 ♏, every four hours; ℞ hot water ℥ii, spr. frumenti ℥ss every two hours; at the same time the rectal tube, and five pints of Thiersch's sol. were introduced into the colon. The patient immediately went off into a slumber and retained the enema more than three hours. This was the most peaceful rest since the date of invasion, and the effort at stool was almost free from tenesmus. This enema was given at 8 A. M., and it was not deemed necessary to repeat until 6 that evening, and during this interval the patient had had but three actions, which seemed greatly improved. The second enema was easily retained, and during that night the patient had only two actions, one of which came with the enema. The next morning at 8 o'clock, a third and last enema was given, for after this the stools were well nigh natural, with no tormina or tenesmus. The turpentine was kept up some days, however, and now liquid dieting was begun. Was discharged May 10, cured.

Case No. 2.—I. W., age 36, negro, day laborer, had been ill three days, when received June 2 at the hospital, with great tormina and tenesmus and a constant desire to go to stool, with a very unsatisfactory result; he was using the bed pan every few minutes, having thirty-five or forty actions a day, that were sero-sanguinolent with shreds of membrane, pain in left iliac fossa. Pulse very rapid, but temperature not excessively high, tongue dry, red and glazed, thirst very great, but urine scant. This patient's treatment was begun with the injection of Thiersch's solution, which he said gave him more comfort than anything else he had had during his illness. With this exception the treatment was about the same as in preceding case, save the fact that the enemas were given oftener, the first day four times, and it was interesting to note the gradual colic tolerance for this fluid at each successive application as well as the gradual prolonged interval between acts of defecating the second day; had two enemas and eight actions third day, the same on the fourth day; the actions looked a little greenish and somewhat fecal. Fifth day decidedly fecal with no tormina and slight tenesmus. He was now getting two enemas a day and having three or four actions, and ordered to have liquid diet. This patient was discharged cured June 14.

The importance of the convalescing stage should not be forgotten, but carefully guarded. For instance I will cite a case of a friend as related to me: Was called to see a child, 5 years old, a stout, robust little fellow, with an evening exacerbation, temperature 102½ deg., pulse 117. He had a constant desire to go to stool, with great straining and griping, with small shreddy stools and tenderness in the lower abdomen. I called the next day and the next to find my patient greatly improved, and dismissed the case on the sixth day, although he evinced slight pain on pressure in the region of the descending colon. Four days later, which was the tenth day subsequent to my first visit, I chanced to be passing by and observed the little fellow enjoying sport with the other children, and great was my surprise when I learned that he died that night. Evidently the sloughing Peyer's patches had healed, save perhaps one which was not sufficient to produce any general symptoms un-

til through its process of sloughing, the peritoneal coat burst and set up a fatal peritonitis.

My remarks thus far have been directed mainly to dysentery, but refer somewhat to typhoid fever as well. I do not wish to be understood to mean that the pathology of the disease is similar, but, on the contrary, is as different as the night is from the day, but at the same time they are both enteric diseases, and I speak of them in the same connection in order to bring out my points of treatment common to both diseases. The antiseptic injection, which I use in typhoid, is not intended for its antiphlogistic effects, since the lesions here, very unlike those of dysentery, are above the ileo-cæcal valve, and therefore out of the solutions reach, but as a germicide. It is now a pretty well established fact that the habitat of the bacilli of typhoid fever is mainly in the intestine—that the feces is loaded and the intestinal glands absorb and transmit them to the general circulation. The gravity of the symptoms of this disease being dependent upon the amount of fungi absorbed, is it not perfectly reasonable that if the intestine, the main abode of this little pest, be vigorously attacked with an antiseptic solution directly applied, that we will be aiming at the ground rock of the disease, and more especially since it has been satisfactorily demonstrated that the lease of life of the bacilli of typhoid fever is not near so great when placed in contact with some of the antiseptic solutions as many other of the microbe families? Of course we are aware that this solution does not cover the entire field, yet when it is constantly applied to the colon we are doing much to quench the fire of the locomotive that propels the train. I do not use coal tar antipyretics in hyperpyrexia through preference—not that I am afraid of them, because I believe a great deal of the speculating concerning their danger is more imaginary than real, but because I have found in a cold water irrigation of the colon a more prompt and lasting, and, to give the patient the benefit of the doubt as well as the authors of the danger theory of these drugs, we will say a safer, remedy. It is done after placing the patient on the right side by inserting a long rubber tube into the colon, one end of which is attached to a reservoir a few feet above the level of patient's bed, filled with a quart of water

at 70 deg. As soon as this is about half exhausted it is replaced with another quart at 60 deg., and so on until a temperature for the water of 37 deg. is arrived at. The time required for this should be about thirty minutes, during the first fifteen of which the patient's temperature will have fallen 2 deg., the pulse about 6 beats, but during the next fifteen minutes the temperature will fall from 1 deg. to 3 deg. more, and the pulse in the same ratio—I have succeeded in bringing down the temperature by this method when acetanilid failed. Introduction of this tube is greatly facilitated by starting the current as soon as the eye of the tube passes the external sphincter, the gut thereby is immediately inflated and its folds lend no barrier to the onward progress of the tube. After the colon is well inflated throughout, or for an adult two or three quarts have been introduced, by the side of this tube I insert another that will give exit to a current equal to that received. The regurgitant tube is only inserted till one end is beyond the internal sphincter while the other rests in a vessel to receive the utilized water. By this method irrigation can go on with the patient in bed without a drop of water being wasted on the linen. This method of reducing the temperature is at all times applicable, since the applier is so easily portable.

It, together with Thiersch's solution, reduces to a minimum the danger of hæmorrhage. In fact, of the seven cases of typhoid which I have treated by this method none have had hæmorrhage. I am aware that these limited statistics are not sufficient to prove anything, but this number is quite sufficient, when compared with other recorded cases, to convince me that it shortens the duration of the disease to a marked degree. As a rule, on the eighth day there is a decided defervescence. Liquid dieting should be given in this disease from the sixth to the eighth day, as I deem it not safe to trust the waning strength of the patient longer. The cold water irrigation should be used as often as the temperature reaches 103½ in typhoid or any of the long-continued fevers as well as those of shorter duration. Cold by this means is applied to the thickest of the heat. The colon, which takes its origin in the right iliac fossa, passes up that side to the under surface of the liver, then across the middle of the abdomen and down the left; thus we are re-

minded that were it possible to open the abdomen and apply a rubber tube it could not be better adjusted for the purpose than nature has this, though not rubber, an even better vehicle for transmitting and radiating this antipyretic. The colon first acts mechanically; later the cold is imparted through it to the mesenteric vessels to be distributed speedily to the circulation throughout, which means that the temperature must come down. I have used for irrigating water at 35 deg. without any but good results.

Since these diseases are infectious, it should always be remembered to cleanse thoroughly the tube by first washing in hot water, then placing in 3 per cent. solution acidi carbolici to remain until necessity demands its use again.

OULOSPASIS (FROM THE GREEK, TO SUCK OR DRAW BLOOD FROM THE GUMS), AND THE ILL EFFECTS RESULTING FROM THIS APPARENTLY INOFFENSIVE HABIT.*

BY C. C. DELHOMMER, D. D. S.

GENTLEMEN—Ever since I began practising dentistry I noticed that the irritation existing in the mouths of many persons seemed to be confined mostly to certain sections or localities of the mucous membrane at the gingival border, and this irritation was always to be found in the places where it originated, although the immediate surroundings, coupled with the patient's general appearance, oftentimes denoted the most perfect health in differing as much from the diseased sections by being healthy as a fine, ripe and succulent peach differs from a green or decomposed one.

This fact impressed itself upon me sufficiently to invite research and to try to trace up this trouble to its very source; to comprehend intelligently its origin was henceforth my greatest endeavor.

I believed—nay, I was soon convinced—that some local cause or causes existed which occasioned this irritation; for I reasoned thus: "Was this irritation of a general or constitu-

* Read before the Louisiana State Dental Society at New Orleans, La., February 7, 1894

tional character? If so, its effects certainly would not be so circumscribed."

Gentlemen, I do not desire to be understood as ignoring, forgetting, or purposely leaving aside other well-known causes of gum irritation. I have undertaken to speak of one special kind of irritation of the gums, and of its effects upon the immediate surroundings of the teeth, and I do not desire to be understood as endeavoring in the least to cast aside any or all other sources of irritation of the parts mentioned. The fact that a rock exists in some part of the Mediterranean Sea does not infer in the least that it is the only one which possesses the power to sink a ship when struck, nor that our swift, palatial Mississippi river packets will never strike a snag in the future because a large one has just been blown up with dynamite at Natchez.

After examining carefully a patient's mouth some time last year, I noticed a peculiar state of things existing, which, according to my diagnosis, had no cause to be; hence I felt a great anxiety to follow up this case, and I accordingly did so. After a few days' treatment, and also after questioning the patient, I was not more advanced, until one day when I was the least expecting it. I noticed this party to suck his gums, "Oulospasis," and, wheeling around, spat apparently pure blood. My first impulse was to exclaim, "Eureka;" but after all, said I, "If I have found it, I had better study this case well, as I might find in it a clue which would be a guide to me for such troubles in the future;" and accordingly I cautioned this patient to abstain from such a bad habit. This he readily promised me to do, and I dismissed him with the request to call again before many days, which he did. My suspicions were great, and, to my satisfaction, proved to have been well founded, for the improved condition of this patient's mouth, upon his next visit, was so exquisitely fine that I rejoiced. Said he, "Doctor, I suck my gums only very seldom now, and it is mostly during my sleep that the old habit returns. But" added he, "I'll soon master it altogether." From this date I was so encouraged by what I had seen that I kept a most vigilant watch upon any trouble which even resembled this one, and this paper is simply the compilation of such data as I obtained

of experiences achieved and natural deductions resulting. Let me add that the pathological conditions of the mouth above referred to at once changed to its former healthy state, and is such this day.

Doctors, I desire to be well understood as not endeavoring, in the least, to say that all diseases of the gums, etc., originate from this agency, and that "oulospasis" being once checked, or abolished altogether, all other troubles affecting the oral structures would cease instanter. Not at all! What I say and mean is, that to keep up a constant irritation at the gingival border is, at least, unhealthful, no matter from what cause, for it invites disease, and, once kindled, it feeds it. This continued hæmorrhagic tendency, I claim, has the effect to set up, nay, to originate, a new order of things altogether, by causing a periodical or continued flow of blood, suppuration naturally following around the teeth; the ever-faithful pumping of the patient being kept up adds constantly new fuel to the fire, which, sooner or later, develops into a real conflagration.

I ask, under such conditions, "can healthy gums be found?" Would it be at all surprising to hear that a vagrant microbe, after having passed through all the troubles and vicissitudes of its worrisome and tramping life, should decide to plant there its tent upon such fertile fields; and, after having selected the softest and tenderest spot upon the spongy gums to form into it its permanent domicile, and through the chances offered it in the course of time to begin the rearing of a diligent and wide-awake colony of its fellow-citizens and co-workers. In these, our hospitable United States, settlers are prone not to refuse a home, and the microbe, unlike the good and honest settler, has no use whatever for a clean home, where the air is fresh and pure, and where the scent of sweet perfume from the adjoining parterre invites all visitors; but rather, similar to the objectionable, the debased, the depraved and dishonest intruder, this pest will not only accept a home if freely given it, but will, if possible, take possession of any corner accessible, until cast out of doors by the vigilant landlord, the sufferer, or by the police officer, the dentist.

We are all aware of the comforts, the benefits resulting from a clean and healthy mouth, which oftentimes means

healthy teeth also. We all recommend to our patients the use of a quill toothpick, or of floss-silk, which is decidedly preferable to anything we are acquainted with. These agents are the best and about the only ones to be used to detach whatever particles of food are held fast between the teeth. We are nevertheless aware of the sad fact that many, nay nine-tenths, of the people use no quills, nor floss-silk thread, but oftentimes instead use the blade of their pocket knives, or trust solely to their tongues and the power it possesses of generating a vacuum, by which means the quill or floss-silk is dispensed with altogether, or at least is thought to be. The latter mode is certainly the universal one, even if it has been the last one noticed.

Gentlemen, here is where the trouble comes, and here is where the danger lies. The simple fact of sucking any section of one's gums, especially at the gingival border, will undoubtedly cause blood to ooze out in a more or less copious flow, and form pockets or sacks where sound gums, well attached to the teeth, ought to be found. This hæmorrhage in its incipiency is trifling, of course; it is unnoticed for a long time, but it is trifling and remains so only as long and until it is not kept going at a lively rate. Similar to all such habits, for instance, the opium and morphine eating habits, when its adepts' first experiments and doses are simply refreshing and prophesy no ill ending, nor any immediate catastrophe. But alas! How sad such indulgence soon becomes when every day, at every hour, these death-dispensing drugs are taken. Can their nefarious work be calculated? Can their infamous and degrading depravity be computed even by the horse-power scale formula?

Although I do not desire to draw a comparison between the ill effects and results of the opium and morphine eating habits with my subject, which ranks near it as a mere trifle, still I desire and will use my best endeavors to show, in its full ugliness, the sad and revolting results which "oulospasis" is certain to engender, and I hope to have at least sounded a note of warning, if nothing else.

"Oulospasis," or sucking one's teeth, as some say, but rather sucking one's gums, as I style it, is a habit which den-

tal surgery will soon be called upon to combat, for it is simply a fact and an irrefutable one, too.

Permit me to form a comparison: Let us suppose, for instance, that one of the fingers of a person suffering from this affliction would be placed into his mouth, and that he could suck it equally as much as he does his gums. The first symptoms, no doubt, would show that this finger would be greatly softened; later, it would be found to be softer and softer still. It would soon be found to be a soft, spongy and jelly-like finger, which after a few days, a few weeks, the very shape of that organ would be changed altogether. The relation which the capillaries previously occupied as to their position toward the outer surface would be altered; closer and closer the blood corpuscles would make excursions, visiting new and unexplored domains, until finally the ever-decreasing distance would be no more, and the pure, arterial and life-giving fluid would freely flow from an apparently soreless and uninjured finger.

I do not believe in the least to have overdrawn the picture, nor do I believe that any one here present denies the accuracy of the opinions advanced; and I ask if such is the case, and if such a rough part of the human body as a man's finger can be made to become so tender and to yield blood through its pores by the simple act of sucking it gently—what then, I ask, is possible, and what can and ought to be expected of the amount of injury done to these delicate and tender tissues, this soft, velvety, rosy and blood-supplied mucous membrane at the gingival borders, which are oftentimes rather naturally inclined to shed tears of blood, unassisted and even without the apparently trifling aid, but in reality the powerful pumping force, of the tongue.

I believe in thoroughly studying any suspected disease; for, was it not the means which were employed to classify and combat each and every one, and later to find a specific remedy, or one which could relieve the suffering inherent to it, or to diminish, at least, its worst and most virulent symptoms?

In this instance, I have endeavored to the best of my ability to submit to you my thoughts in the simplest style at my command. We are all aware that many of the worst cases of different diseases are often fed through differ-

ent channels, and that invariably the first step to be taken for the eradication of any disease is to understand thoroughly first the nature of the trouble and from whence it originated. Knowing this, we are forearmed, and the healing becomes comparatively easy.

I do not infer, nor will I affirm, for instance, that pyorrhea alveolaris and other diseases of the gums and alveolus are generated through oulospasis; but I do put the question frankly: "Might it not be possible that the indulgence in this bad habit might be instrumental and conducive, if not to generate, at least to warm into existence, germs otherwise inert?"

Might it not be possible, and even probable, that germs which are kept and nursed in the putrescent blood saliva, and acidulated food mixture, as found in the pockets surrounding the teeth, in such cases, sooner or later, show the microbes' work, if not the microbes' heads?

I will further add: Is it impossible, and will any one rise and answer emphatically in the negative, that in these pockets, formed by oulospasis, germs of infection are never generated? Pasteur's great discoveries in the life and propagation of microorganism date only from yesterday; every day, apparently sound theories are exploded and trampled under foot; old barriers demolished, limits removed; whilst the expectancy of the progressive and scientific world is so great that at every minute we are expecting to be astounded by the news of still grander surprises, which are now flashing and succeeding each other with such rapidity before our bewildered gaze that we come to a full stop and ask: "What is upon Science's programme to come next?"

Can any one deny or doubt the injury wrought to the festoons of the gums and the gingival border, in and around the interdental spaces, and the sequences to the necks of the teeth when oulospasis is practised to any extent?

Doctors of the Louisiana State Dental Society, if this subject has ever been treated previous to this day, or even mentioned, I am entirely unaware of it, and so are several distintinguished dentists in these United States from whom I have heard.

I cheerfully submit to your worthy and kind consideration

and discussion the contents of this paper, hoping that the more this subject is discussed the better off all interested will be; and if oulospasis, the new-born name of an old but until now unnoticed affliction to many otherwise healthy mouths, can only be the spark which will kindle the flame of a lively discussion of the question at issue, and which can redound to the benefit of suffering humanity, I shall have been fully repaid and amply rewarded.

TREATMENT OF SIMPLE LONG-CONTINUED FEVER.

BY A. B. FLINT, M. D., DALBY SPRINGS, TEXAS.

Having had some experience in the fevers and conditions known throughout the country as typho-malarial fever and hematuria or black jaundice, I conclude that the names of both are out of place, wrong and calculated to lead to many errors, especially in treatment. I allude more particularly to the former. It presents more of the features or symptoms of typhoid fever proper, except, perhaps, in its continuance; in a word, it produces none of the pathological effects found in typhoid fever and does not systematically call for the same treatment. It might, from the previous condition of the patient or complications arising during its course, assume, like other diseases, some of the typhoid conditions. It assimilates more the features of remittent malarial fever in the character of the fever, but, in the main, that is all. There is not that white or yellow coating of the tongue, engorged liver and spleen and yellowness of skin and eyes, or the sick stomach and vomiting of bilious matter that is so constantly found in the recognized malarial fevers, neither is the administration of mercury followed by the free discharge of bilious matter as is the case in regular malarial or bilious fevers. Then again it is not confined to the seasons of the year or localities when and where malarial fevers are most prevalent. Often after the second week the tongue is found and continues of an unusually healthy appearance, fair appetite and digestion with regular normal action of bowels, and but little or no thirst for water, yet the fever continues on without the least regard for the unusually large amount of quinine and other anti-

malarial remedies usually resorted to in its treatment. This has been our experience in this fever that brings us to conclude that but little is really known as to its true cause or its pathological effect, if any, on the system generally or any of the special organs.

The reason why quinine more especially, and perhaps other remedies, do not give more satisfactory results is that the secretion of the stomach under the influence of this fever, as well as in hematuria or black jaundice, is abnormally alkaline; and, as it is a well established fact that many remedies are rendered more active in the presence of an acid (*e. g.*, mercury, pepsine), if the quinine was administered in acid solution it would give better results. So it is with mercury, if not combined with soda. We think the combination of mercury with soda is wrong, for the above reasons. As nervousness and a disturbed condition of the nervous system are prominent symptoms in this fever, the quinine should be administered in large sedative doses at intervals of from four to six hours. If there is no intermission or sufficient remission, they should be forced and held by the administration of the antipyretics in just such doses as will not cause a too sudden fall of temperature or a subnormal temperature. The quinine in 8 to 12 grain doses to an adult, thoroughly dissolved in aromat. sulph. acid or the dilute hydrochloric acid, and then further diluted with cordial, simp. syrup or dilute wine sufficient to protect the mouth and stomach and to make it more palatable, is sufficient. It should be given at the first evidence of the fall or decline of the fever, and repeated in four or six hours.

We do not claim this idea as anything new at all, but merely suggest it; and I have found it the surest treatment to cut short and break them up. In my opinion the point is to get the quinine absorbed into the system. Non-absorption, we think, has been the cause of failure to control the fever in so many cases which have often been left to run their course to self-cure or death. We have been able, by strictly carrying out these ideas, of late to put a stop to the fever at various stages. The quinine acts in two ways administered in large doses, viz.: as an anti-malarial and as a sedative.

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Editorial Articles.

STAPEDECTOMY.

When Dr. Jack, of Boston, gave to the world the results of his early stapedectomies, we entertained a hope that at last the bane of otology had been successfully taken away. Chronic dry catarrh, or sclerosing inflammation of the lining membrane of the middle ear, is responsible for the deafness of the large majority of afflicted people. When the disease has been taken in time, good results can be obtained by the ordinary measures of treatment; but when cirrhosis has once begun its work it goes on progressively, uninfluenced by the tame procedures at the command of the aural surgeon. When some bolder man went out of the beaten path and wandered into new fields, hopes were raised in every one who had felt his helplessness in the face of a sclerosing otitis media. First, mobilization of the ossicles was tried. When experience had shown that this feeble advance rarely did any permanent good, the ossicles were attacked. True, necrosing ossicles had been removed to cure a chronic suppuration of the middle ear; that was merely good surgery applied to the ear. Later, when the stiffened or anchylosed ossicles had been charged with the responsibility of in-

terfering with the transmission of sound (when the nerve was not affected) they were removed, with a part of the drum, in order to allow the sound waves to impinge directly upon the membranous covering of the fenestra ovalis.

The removal of the whole chain involved considerable traumatism in the middle ear, which is always a serious matter. Sometimes the stapes was not removed at all, or else the crura broke and the foot-plate remained fastened to the fenestra; then, of course, there could be no improvement in the hearing or tinnitus. The stapes is the most important of the ossicles on account of its intimate connection with the labyrinth. When it is removed (after excision of a goodly piece of the drum) the resistance to the transmission of sound is diminished. Dr. Jack conceived that by removing the stiffened stapes he could make a break in the chain that would cause the least traumatism while giving the air free access to the fenestra. Acting on this idea he performed a number of stapedectomies with remarkably good results in some cases, slight improvement in others, and in very few was there no improvement at all. The JOURNAL commented on his first paper, and congratulated the aural world on the valuable addition that Jack had made to its means of combating an obstinate foe. Lately Dr. Jack has thrown a little cold water on our enthusiasm by publishing the results of a second series of cases, which do not inspire the same degree of hope as the first. Jack says that some cases are exceptional and that his exceptional cases (*i. e.*, the good cases) happened along first. No matter, the fact that his operation has done good in cases that were otherwise without prospect of relief should spur aural surgeons to determine the precise cases in which his operation holds out the greatest chance of success, and then resort to it in only those selected cases. Stapedectomy has gone the way of everything new that had some good in it: first extolled, then dropped, and finally, we suppose, it will be labeled, "Good in such and such cases," and put away on a shelf until needed.

It has seemed strange to the writer that electricity should not have been compelled to do more service in aural affections than it has done. In a case of dry catarrh of the middle ear of twenty years' standing, a mild galvanic current

caused almost complete cessation of a maddening tinnitus, and improved the hearing power of the aged patient. She had gone the rounds, and consulted a number of specialists, but the deafness went on all the time, the tinnitus grew worse, and, after an attack of grippe, the noises made her life a burden. Inflation of the ears had long been practised and vibratory massage was tried, with improvement in the tinnitus, but not in the hearing. During an acute cold she took a large amount of quinine, which so aggravated the tinnitus that she dreaded to be alone and always sought a place where people were talking or using a sewing machine, or making some sort of a noise. Sleep was much disturbed. The vibrometer was again tried, but without effect. The galvanic current was suggested; and as the patient and physician were both tired, it was tried as a last resort. A positive current of two milliampères was applied with an ear-electrode wrapped in cotton and moistened with cotton, the negative electrode being held in the hand. The sittings lasted about ten minutes, and were given two or three times a week. In about four weeks the tinnitus had become very faint, and on one occasion she could hear a friend speaking in an ordinary tone at a distance of five feet, whereas persons usually had to go close to her ear in order to make her hear. One swallow does not make a summer; neither does one such case prove anything definite. Still a fact is a fact, and always endures, and if the results as outlined above can be secured in one case it is not improbable that they may be secured in others.

Abstracts, Extracts and Annotations.

MEDICINE.

DIABETES INSIPIDUS.

By Robert Saundby, M. D., F. R. C. P., Professor of Medicine, Mason College, Birmingham; Physician to the General Hospital, etc.

The case to which I wish to draw your attention this morning is that of a young man, W., aged 26, a sieve-maker, who

was admitted into hospital on September 12, 1894, complaining of intense thirst, frequent micturition, and the passage of a large quantity of urine. This was the third occasion on which he had been an inmate of our wards for practically the same symptoms. He had suffered from thirst all his life, but he believed he had gradually got worse. For the last ten years he had been subject to attacks of pain in the abdomen, and when in hospital for the first time, four years ago, there was some tenderness on palpation in the right lumbar region. On the second occasion, tenderness in the abdomen was noted "over both kidneys, but no marked enlargement of of either;" this was in 1891. He contracted gonorrhœa about four years before his final admission, probably before he came to the hospital at all, and he has since suffered from a persistent gleet. His family history reveals no instance of a similar condition nor any evidence of diathetic disease, except in the person of an uncle who suffered from gout. The patient was a slenderly developed, badly nourished man looking younger than his age; he weighed 8st., and as in 1890 he weighed 8st. 3lb., and in 1891 7st. 11lb., we may take that he has been about the same weight for some years, although he stated on admission that he had recently been losing flesh. His skin was very dry, and his face flushed; T. 97.5 deg., P. 78, R. 16. His appetite was very poor, but his thirst was constant, disturbing his sleep. His tongue was furred and furrowed. He vomited nearly every morning, the vomited matter consisting of watery mucus for the most part. He had lived in a beer shop and had all his life been accustomed to drink large quantities of beer to relieve his thirst. His abdomen was tender, especially over the left kidney; liver and spleen not enlarged; bowels confined. He suffered from pain at the præcordia with frequent attacks of dyspnœa, but the heart sounds, though weak, were pure, and this organ was not obviously altered in size; lungs normal. He stammered in his speech, and had some complaint of numbness in his fingers and toes; but in other respects his nervous system presented no anomaly. The urine on each occasion of his stay in hospital measured between five and six pints; but he told us that when he was going about it was more, and his thirst was greater: its sp. gr. was about 1.010, and its reaction was generally alkaline, This time it contained a very little albumen due to pus; there was no sugar; the urea was diminished, being little over 200 grains in twenty-four hours; no casts were ever found, but some pus corpuscles were constantly deposited.

He was treated, mainly for his stomach symptoms, by light diet, chiefly milk, bismuth, and alkalies, and saline aperients.

At first he improved, but in a few days he began to complain very bitterly of pains, neuralgic in character, in his legs; these were not relieved by salicylate of soda. On the 26th he was given a hypodermic injection of three minims of the Pharmacopœial hypodermic solution of morphia. After this he slept heavily all through the 27th and 28th, dying on the 29th of September. During this time he could be roused and answered sensibly, but when left alone he fell asleep again. He passed very little urine during this semi-comatose period. The post-mortem examination was made on the 29th. The only noteworthy changes were some œdema of the lungs, slight hypertrophy of the left ventricle of the heart, a certain amount of enlargement and fatty change in the liver, but the kidneys require detailed description. Both these organs were in a state of hydronephrosis, and I show you them in this jar, in which they have been mounted for permanent preservation.

The *right* kidney presented a large cyst which bulged forward under the peritoneum. On removing the organ, this cyst was found to be the greatly dilated renal pelvis. From the cortex to the hilum it measured three inches, and its length was the same. On section, the pyramids and cortex were much atrophied; the capsule was partially adherent; the ureter, which was much dilated, opened from the most depending part of the pelvis, and was not obstructed. The *left* kidney was small and its pelvis was dilated, though not to the same extent; it contained a concretion about the size of a hemp seed. The ureter was also somewhat dilated, but not obstructed. The cortex was atrophied, and the capsule adherent. The weight of the two kidneys taken together was twelve ounces.

The bladder was enlarged and its walls thickened, but the orifices of the ureters and their lumina were quite patent. There was no prostatic disease or urethral stricture. I may add that the brain looked anæmic, but otherwise appeared normal, and that the medulla oblongata, examined microscopically, showed no morbid change.

This is an example of diabetes insipidus occurring early in life, lasting for twenty or more years, and terminating by uræmia caused by progressive sacculation of the kidneys with atrophy of their secreting tissue.

Such cases are not unknown, but are sufficiently uncommon to make this case worthy of your special notice. Diabetes insipidus is a disease which is characterized clinically by the presence of two symptoms—polyuria and excessive thirst. Its pathology is very obscure, for although we possess much definite knowledge as to its relation to heredity, injuries to the head,

pregnancy, etc., we are not able to determine the actual anatomical cause of the symptoms, and we are therefore obliged to fall back upon certain experimental results showing that these symptoms may be induced by puncture of the floor of the fourth ventricle (C. Bernard), or electrical stimulation of the cervical sympathetic (Peyreni), from which we infer that some obscure disturbance of the nervous system, not recognizable by our present means of investigation, may be the actual cause of the disorder.

It is generally regarded as a much less serious disease than diabetes mellitus, for the subjects of it have in many instances lived to a good old age, and have been able to perform all the active duties of life; but we must not allow ourselves to overlook the danger which this case illustrates, that the disease may set up changes in themselves capable of bringing about a fatal result.

Before I go farther, perhaps I ought to give you the reasons that induce me to regard these changes as the consequences of the polyuria. It may be suggested (1) that they are accidental coincidences; (2) that they indicate primary renal disease, with polyuria as a symptom.

If we turn to the recorded cases, we find a series of illustrations of consequential renal changes, beginning with those of Neuffer and Beale, in which the renal tubules were dilated, some being stripped of their epithelium, others stuffed with fatty *débris*, while the perivascular connective tissue was increased. We go on to Eade's cases. In the first, both kidneys were abnormally "dense and pale, evidently undergoing a gradual process of absorption," while the infundibula and pelvis were greatly dilated. In the second, the ureters and pelvis were dilated, the cortical portions very thin, and the cones "converted into fibrous tissue containing many cystiform spaces." Finally, we have Strange's case, in which "both kidneys were reduced to mere sacs and from twice to thrice the size of the healthy kidney." Such a series can not be explained by coincidence.

In answer to the second suggestion, we note that there were none of the ordinary causes of hydronephrosis present—no obstruction in the urethra or ureters; so that we should be quite at a loss to explain the condition except as a consequence of the polyuria. Finally, hydronephrosis is accompanied by polyuria, when it occurs in relation to its ordinary causes.

We must, therefore, accept these changes as the result of the gradual over-distention of the urinary passages by the enormous quantity of urine secreted; and we may perhaps find in the youth of some of these patients a factor which favors

this occurrence. In the extreme case recorded by Dr. Strange the patient was only eighteen. Moreover, it is a process which requires many years for its development, and this, I suppose, is why we do not meet with it in diabetes mellitus, which, especially in young people, does not last so long.

It is of the utmost importance to diagnose these cases correctly, and I believe this may be done. I do not attribute much importance to the presence of albuminuria in my case, because I believe that was rightly ascribed to the presence of pus from the urethra, nor can it be relied upon as a constant symptom in such renal complications, for in Strange's case there was none; yet albuminuria, unless so explained, would always be a suspicous circumstance. The pain and tenderness in the kidney regions were suggestive but not ambiguous in their meaning. The point to which I would direct your attention is the amount of urea excreted. It is well known that in this disease the excretion of urea is generally greater than normal, and may be enormously in excess. But in the case we are considering, the amount of urea excreted daily was very little over 200 grains—a figure which, even on milk diet, is dangerously below the normal for an adult person. When he was in hospital in 1891 he excreted 480 grains of urea, so at that time he evidently possessed an adequate amount of healthy kidney substance.

Let me, therefore, recommend you to watch the urea excretion in all cases of diabetes insipidus, and to be on your guard against a fatal uræmic termination whenever this becomes persistently reduced below the physiological proportion, although you will remember that this varies at different ages. Dr. Ralfe gives the following table:

At 5 years	180	grains
12 "	310	"
21 "	535	"
40 "	555	"

But I am accustomed to teach that these figures are too high for a patient in bed on milk diet. I believe the case is safe so long as the daily amount exceeds 300 grains.

MURIAPUAMA AS AN APHRODISIAC.

Muirapuama is a combination of two aboriginal words signifying straight or rigid tree; it describes a shrub that is wellnigh leafless, and which only attains to the height of one or two yards, found in clay districts of the southern and southwestern parts of the State of Para, as well as upon the slopes

of Columbia and Rio Negro. In Brazil it is considered a direct tonic to the nervous system, and a most energetic aphrodisiac. First mentioned in the writings of Spanish and Portuguese priests, in 1704, it would have played an important part in the Brazilian Pharmacopœia, had it not been very difficult to procure; yet all the native practitioners sell it, but at a very high price. The tree is not easily found, being at best rather scarce, and growing amid the tangled vegetation of virgin forests, where only the natives are able to recognize it.

The scientific study of Muirapuama, until recently, has never been thoroughly made. Led by popular belief, those who first wrote simply indicated its therapeutic virtues, more or less from hearsay; they affirmed that it was not poisonous and really possessed aphrodisiac properties. Some have sought to classify it botanically, and have held it to be a *Liriosma* of the family of OLEACEÆ. Kleesattel, of Stuttgart, has written a thesis on this subject, and Doctors Husemann, of Gottingen, Pekott, of Rio de Janeiro, and Rees, of Erlangen, share this opinion. On the other hand, Mr. Glazion, of Rio, a distinguished botanist, and Dr. Clemente Malcher, of Para, place Muirapuama among the Aeanthaceæ.

Several scientists have investigated the therapeutical properties of this substance, among them Hartwig, Holfert, Heger, Keszler, Goll, Pfaff and Kleesattel, all consider it an energetic tonic and stimulant to the nervous system, and employed it in paralysis, rheumatism, dyspepsia, and especially in impotence. Kleesattel states he cured nine cases of impotence in which damiana entirely failed. The Brazilian physicians unanimously praise its virtues; among them must be cited A. M. Baena, J. de Almeida Pinto and Mello Maraes.

During the course of a scientific mission undertaken at the instance of the Brazilian Government, I had an opportunity of bringing back with me a large quantity of the roots, and making chemical analysis, following the methods indicated by Dragendorff. The roots, thoroughly dried, were finely pulverized and treated in succession with petroleum-ether, sulphuric ether, absolute alcohol, distilled water, 10 per cent. alkaline water, 10 per cent. acidulated water. Thus was revealed a glucoside, described for the first time, and organic matters composed of tannins, feculent substances, essential oil, phlobaphenes, and pectic matters. The proportions established by analysis are:

Water	260
Glucoside and fixed salts	2,010
Essential oil and organic substances	2,730
Total	5,000

The glucoside was isolated, decolorized, and obtained in the form of a white powder, and physiological experiments proved it the active principle of the drug.

An interesting point is the very slight toxicity of this substance. In animals who showed very active response, it was necessary to employ one gramme of extract or one centigramme of glucoside per kilogramme in order to cause death by intravenous injection. Autopsies of animals killed by Muirapuama always revealed the intestine filled with blood from the pyloric end to the anus; the gastric mucous membrane of a general brownish-red color; the heart with a few ecchymoses at the level of the auriculo-ventricular valves, but no other lesion; the aorta colored in red, like the valves; the genital organs in the male, and the uterus in the female, slightly congested; the nerve centres, cord and coverings slightly colored. The kidneys, bladder and spleen showed no pathological changes whatever.

In cold-blooded animals the injection of a cubic centimeter preserved for several hours the movements of the lungs and heart, after the latter had been laid bare and the reflex action continued for a long time after death.

It would hence appear that the use of this drug is decidedly indicated in neurasthenia in general, and particularly in the neurasthenic condition of digestion and circulation, and the asthenia of uterus and genital organs, with impotency.*—*Doctor C. Rebourgeon in Therapeutic Review.—Medical Age.*

CLINICAL VALUE OF RENAL CASTS.

Many clinicians can recognize casts under the microscope, but fail to interpret their significance. Dr. A. E. Austin, in the *International Medical Magazine*, separates them into definite groups and draws inferences accordingly. The hyaline and blood casts merely indicate irritation and hyperæmia. Closely associated with hyaline casts is amyloid change of the kidney, due usually to suppuration and with a good prognosis if the suppuration be removed. Epithelial, granular and fibrinous casts indicate acute inflammation of the renal tubules, the epithelial cast pointing to the mild stage; that is, one of mere desquamation with urine slightly under normal in amount, specific gravity 1030, high color, albumen a trace, numerous hyaline casts, free blood and renal epithelium. This may go on to brown or pale granular casts with diminution of the solids of the urine. The fatty and waxy casts, when numerous and

* Muirapuama was introduced to America by Parke, Davis & Co.

persistent, indicate long continued chronic inflammation of the kidney, with bad prognosis. Blood and epithelial cells are absent. In this case the urine is diminished in amount with increased specific gravity. The pale, granular and small hyaline casts point to fibroid kidney. Aside from the microscopical appearance, the general condition of the patient, age, sex and previous history must be taken into consideration. It should be remembered that the diagnosis of casts alone may mean little, but the kind of casts in abundance is the important point.—*Medical and Surgical Reporter.*

THE ANTIPYRETIC ACTION OF GUIACOL IN A CASE OF TYPHOID FEVER.

By J. W. Yeatman, M. R. C. S., of Auburn, South Australia.

It is now nearly a year since Dr. Da Costa reported some cases of the treatment of high temperature in typhoid fever by means of guiacol (*Medical News*, January 27, 1894). The results therein noted were so remarkable as apparently to leave guiacol without a rival amongst antipyretic drugs. A drop of nearly seven degrees in three and a half, "with no increased debility, no delirium, no depression or sign of collapse, nor indeed any manifest disturbance of nerve function," opens a new vista of possibilities in dealing with pyrexia. The fever in this particular case did not rise again for three hours, and the treatment was repeated as required (sixteen times in all) through the following week. The only drawback seems to have been three slight chills on different occasions, described by the patient as "dumb chills," and by Da Costa as amounting to no more than a "chilly sensation."

In another case the temperature fell from 103.6 deg. to 97 deg. rapidly, safely, and agreeably as before, and without even the discomfort of a "chilly sensation."

It is somewhat remarkable that, to judge from the scanty number of cases reported, so little interest should have been aroused, and it is in the hope of eliciting the records of the experience of others that I send the notes of the one case in which I have employed the drug:

N. K., aged 20, farmer's son, previously healthy; had felt ill for a fortnight before November 10, 1894, when rigors occurred, followed by continued pyrexia, with inguinal tenderness, rose spots, splenic dullness, and slight scattered râles at posterior bases.

November 19.—At 3:45 P. M., temperature was 104 deg., pulse 96, respiration 22. I poured 30 drops of guiacol over

the right inguinal region and rubbed in gently for five minutes, then covered the part with a piece of oiled silk. This procedure was not unpleasant, and felt cooling. At 5 P. M. the temperature had fallen to 101 deg., at 6 P. M. to 100 deg. The patient had now begun to perspire profusely. He complained of feeling very cold and uneasy, and shivered enough to shake the bed. This lasted nearly an hour, when the temperature began to rise, and at 7 P. M. it was 104 deg., at 8:30 104.4 deg., at 10:30 104.8 deg., at 12:30 104 deg., at 2:30 103.4 deg., at which point it remained.

November 20, 11 A. M.—Temperature 103.4 deg., pulse 92, respiration 22. Complained of feeling restless and more uneasy than at any time up to the present. This feeling passed away within the next twenty-four hours, and left the patient very much in *statu quo*. As far as I could observe, the rapid fall in temperature through four degrees, with the chills, sweats and shivering, had been neither accompanied or followed by nervous shock, exhaustion, or any alteration in pulse or breathing. But, though it had done no harm, I could not see that it had done any good. The fever, four hours after using the drug, was as high as ever, the patient feeling disturbed and uneasy, and the friends seriously alarmed, so that I did not feel justified in repeating the treatment.

On the other hand, its marked effect in reducing body-heat makes one feel that in cases of hyperprexia, when we seem to have exhausted our resources, and especially when in general practice we have been unable to use the cold bath, guiacol might prove a sheet-anchor and enable us to stem the tide of advancing fever.

I doubt, however, whether it will prove useful as a routine treatment of ordinary pyrexia, though this must be left to time and further experience to decide.—*Australasian Medical Gazette.*

A NEW DIPHTHERIA REMEDY.

Professor Loeffler, of Griefswald, who is the foster parent of the so-called diphtheria bacillus, has introduced the following, to be applied with cotton upon a probe after removing the mucus as far as possible:

℞ Menthol ..... 10 grammes.
Toluene, q. s. to make ..... 36 grammes.
Absolute alcohol ..... 60 grammes.
Iron-chloride solution ..... 4 grammes.

The applications are to be continued every three hours for four or five days. It is stated that of ninety-seven cases treated by this mixture there has been but one death.

SURGERY.

THYROIDECTOMY IN THE TREATMENT OF GOITRE.

JOHN B. ROBERTS, M. D., Philadelphia.

My object in bringing this topic before you is to call attention to the ease with which the enlarged thyroid gland can be enucleated and the mechanical symptoms caused by its pressure removed. After medicinal treatment has been employed sufficiently long to make it evident that no important change in size is to be expected, it seems to me that thyroidectomy need not be delayed.

Perhaps two months is as long as one need wait if during that time the approved remedies have been employed in full doses. It must be remembered that goitres not infrequently vary in bulk without relation to medicinal treatment; hence a diminution is not necessarily the result of the local or internal medication. If dyspnœa due to pressure on the trachea is marked, or if hoarseness from compression of the recurrent laryngeal nerves is present, one month's unsuccessful treatment by medicines would probably induce me to operate.

Parenchymatous injections of alcohol, tincture of iodine or other irritants do not seem sufficiently successful or free from danger to be adopted as a routine, though cases may still come under my care in which I shall be willing to try them. Tapping or incision and packing of cystic goitre are available; but after the former the cyst is liable to refill, and the latter operation makes almost as much scar as, and is not much less serious than, thyroidectomy. Electrolysis does not seem to have given sufficiently certain results to make it attractive. Tracheotomy may be demanded when tracheal compression is marked, though in some cases subcutaneous or open division of the deep cervical fascia to allow the bronchocele to bulge forward will avert the threatened suffocation.

Division of the thyroid isthmus to lessen pressure, or ligation of the thyroid arteries to cause atrophy or prevent increased growth, are operations almost, if not quite, as serious as removal of a portion of the diseased gland.

I now speak only of thyroidectomy, or removal of a portion of the thyroid gland. Total extirpation is unwarranted, because the occurrence of myxœdema as a result of the entire loss of the thyroid gland is pretty well established, experimentally and clinically. The most disfiguring and most compressing part of the goitre may be removed, and a portion of one lobe left

to carry on the function of the gland. I would do this even if the part left was apparently not healthy to the naked eye. It seems pretty well established that a small portion of the gland, or small accessory gland, if such be present, is sufficient to avert the occurrence of myxœdema in patients subjected to removal of goitrous masses.

Thyroid feeding, the administration of thyroid extract, or the implantation of the thyroid gland of one of the lower animals, in the connective tissue or the peritoneal cavity of patients previously subjected to extirpation of the gland, may overcome the tendency to myxœdema; but until this is really proved the surgeon should do only a thyroidectomy, and leave a portion of the gland in position.

I shall not go over the steps of the operation in detail, as they are sufficiently clear to any operator who is prepared to deal with sharp hæmorrhage and who is careful enough to avoid injuring the recurrent laryngeal nerves. A vertical incision is made in the median line of the neck or above the most prominent part of the tumor, and the necessary portion of the fibroid, cystic or hypertrophic gland enucleated. Perfect asepsis or antisepsis is essential.

The enlarged thyroid in exophthalmic goitre has been subject to operation, but the general character of this affection would deter me from operating upon the bronchocele, which is only one symptom of the disease; unless further statistics show its value in an unmistakable manner.

I add the reports of two cases to illustrate the subject. Neither goitre was of great size, but both were annoying to the patients. They were radically cured by operations. The enormus fibroid goitres seen especially in Europe would of course be more difficult to deal with, especially in regard to the control of bleeding.

Case I.—Single woman, aged 21, with a family history of phthisis; first noticed enlargement of the thyroid gland when she began to menstruate, at the age of 13. The enlargement rapidly increased for three years, when it began to press upon the trachea to such an extent that respiration was interfered with, and she was obliged to give up going to school because of the dyspnœa that occurred while walking. After the lapse of a year the bronchocele began to diminish in size, but for the past three or four years had not changed much in bulk.

The patient had been under medical treatment for some time for the thyroid enlargement, without a diminution in the growth; and I therefore determined, in April, 1891, to excise the most prominent portion of the gland. A four-inch incision

was accordingly made in the median line of the neck over the most prominent portion of the enlargement. The middle lobe or isthmus of the gland was first enucleated, and I subsequently removed the entire right lobe. In the removal the sheath of the common carotid artery, with the descending branch of the ninth nerve upon it, was clearly exposed to view. A portion of the left lobe of the gland was then enucleated, making the size of the mass removed about that of a closed fist. The arteries requiring ligation were quite large and numerous. Sublimate gauze dressing was applied with considerable pressure in order to avoid oozing.

About half an hour after the operation the patient became so cyanotic from the pressure that the dressing, which had become saturated with blood, was removed. Her pulse became rapid and weak, but the removal of the dressing, the application of hot water, the administration of digitalis and other restoratives were followed by cessation of bleeding and quick reaction. A clean dressing was immediately applied. The next day the patient was in good condition with normal temperature. The wound healed promptly without suppuration or marked swelling. The patient was sent to the seashore about three weeks after operation with the wound healed, though her voice was quite husky. This was probably due to interference at the time of operation with the recurrent laryngeal nerve.

The woman has been seen repeatedly since operation, the last time being nearly three years from the date of the thyroidectomy. Her health has continued good; her voice has recovered its normal quality, and there is no evidence whatever of myxœdema. It was because of the fear that myxœdema might occur that I allowed a portion of the left lobe of the enlarged gland to remain. The goitre seemed to be of the ordinary hypertrophic variety, though no microscopic examination was made. The contour of the neck is now almost perfect, except for the unimportant scar; and there has been no further growth in the portion of the gland allowed to remain.

Case II.—A young man, seventeen years of age, had noticed two years previously a small swelling in the front of his throat, about an inch and a half to the right and some distance below the Adam's apple. The tumor was not painful, but steadily increased in size until at the time he came under my observation there was some interference with respiration. He came to Philadelphia for the purpose of having the growth removed a year ago, but the surgeon who examined him advised against operative interference. When I first saw him, in November, 1892, the patient was the subject of a well-marked goitre. The girth of his neck over the most prominent part of the tu-

mor was 15½ inches. The enlargement involved both lobes of the thyroid gland, but the right was larger than the left. Stridulous respiration was marked, even when he was perfectly quiet and not taking any exercise. Breathing became easier as soon as the growth on the right side was pushed away from the trachea. This phenomenon I repeatedly tested, and it was very marked. Above the main mass on each side was a small nodule, somewhat separated from the rest of the tumor, but evidently being the upper portion of the lobe on the corresponding side. There was a well marked groove between the two lobes, showing little involvement of the isthmus, and a furrow between the upper nodule and the main mass on each side. There was no exophthalmus, but there existed a doubtful systolic murmur. I treated the patient for some weeks with digitalis and quinine, with ointment of the red odide of mercury and lanoline externally, and subsequently with fluid extract of ergot.

After a month's treatment I determined to remove the prominent portion of the gland, which was making pressure upon the trachea. The patient took ether rather badly, as was to be expected from the interference with the respiration due to the growth. The right lobe of the tumor was exposed and was found to be cystic. The cyst was opened, and about an ounce and a half of dark brown fluid was evacuated. The small nodule above and the right lobe containing the cyst were dissected from the underlying structures. The sheath of the carotid artery was exposed, and the lower portion of the mass extended close to the sheath of the subclavian artery.

Stridor was apparent after the operation, and some dyspnœa remained, which was, however, relieved to a considerable extent by loosening the bandage. Four days later the dressing was removed. Union by first intention seemed to have taken place. A dressing of gauze and collodion was applied, and on the sixth day after operation the patient was allowed to get up.

Four days later a slight hæmorrhage occurred through the gauze and collodion dressing as the result of a fit of coughing. Slight oozing took place for a couple of weeks through the opening made by the giving way of the union at this time. The blood-clot contained in the cavity left by the excision of the right lobe of the gland did not break down into pus, but gradually became organized. The patient's temperature was normal during nearly the whole of the convalescence, though at one time shortly after the operation it rose to 101 deg. The patient was discharged about five weeks after the operation. His breathing had become normal and the appearance of his neck was greatly improved, though there was still,

of course, enlargement of the left lobe. There was no hoarseness remaining as the result of the operation, as in the former case.

A year later the patient wrote to me that he had had no trouble in breathing, that his vioce was normal, and that there was no change in the appearance of his neck. The operation, therefore, was in every way satisfactory.—*Med. and Surg. Rep.*

PHYSIOLOGICAL REST IN THE TREATMENT OF PROLAPSE OF THE RECTUM.

In certain cases where there is extensive prolapse, and operative interference has proved unavailing, Dr. J. D. Bryant advises turning aside the fecal current as a palliative means. In a case cited he gave this advice and states his reasons as follows: (1) The sphincter ani was intact and retained the bowel within the pelvis, except during defecation, and then it prolapsed in spite of every effort. (2) An artificial anus, with all its objectionable features, was immeasurably preferable to the continuance of the suffering. (3) The rectal rest incident to the establishment of an artificial anus might, in time, cure the prolapse, or at all events, render life less burdensome with it. (4) I regarded it as a wise preliminary step for the comfort of the patient, if further radical measures were attempted. After operating on a case of rectal prolapse, and considering the conditions and results, he submits the following propositions: (1) That the proper performance of the physiological functions of the rectum contribute greatly to the advancement of rectal disease, and to the sufferings of the afflicted; (2) that the complete vicarious discharge of the fœces through an artificial anus located in the sigmoid flexure reduces the physiological demands on each structure of the rectum to the minimum; (3) that the lessening of the physiological requirements is commonly in direct proportion to its diminution of the fecal flow through the rectum; (4) that the cessation or lessening of the fecal discharge *per rectum* exercises a palliative and curative influence on diseases of the rectum; (5) that in certain cases of obstinate rectal prolapse, the formation of a vicarious channel for fecal discharge is justifiable, both as a palliative and as a curative measure; (6) that the preliminary establishment of such a channel for the purpose of cleanliness and the prevention of infection is justifiable in many grave operations for prolapse of the rectum; (7) that the dangers attendant on the formation of an inguinal anus are much less than those invited

by the contact of fecal discharges with large operative surfaces of the rectum; (8) that the case just presented has been, without special risk, greatly benefited, and may be finally cured through the agency of an artificial anus; (9) that when cure takes place, great care must be exercised thereafter, otherwise the prolapse will return.—*Mathews' Medical Quarterly.*

THE JANET METHOD IN URETHRITIS.

The pathogenesis of the gonococcus has been fully established, but as yet all specific remedies recommended for gonorrhœa have proved futile. The best treatment now, as before, is the prophylactic. Ricord's observation, "*Une chaude pisse commence, Dieu le sait, quand elle finira,*" is equally applicable at the present day, notwithstanding the progress made in the pathology of gonorrhœa. At the genito-urinary clinic of Posner a routine treatment for gonorrhœa is the Janet method, which consists of irrigating the anterior urethra (in anterior urethritis) with many litres of a solution of permanganate of potash (1:100). The strength of the solution is gradually increased until a strength of 1 to 1000 is reached. The solution is preferably warmed before being introduced. A simple contrivance enables the solution to escape continually after it has fully passed through the course of the anterior urethra. In the beginning it is advisable to irrigate twice daily, and as the strength of the solution is increased, once daily is considered sufficient. Janet's has yielded the better results at this clinic than all other methods of treatment. In urethritis posterior a catheter is carried beyond the compressor urethræ, so that the solution may reach the posterior urethra.—*Occidental Medical Times.*

TREATMENT OF PHLEGMONOUS INFLAMMATIONS WITH AN ALCOHOL DRESSING.

Dr. Salzwedel (*Centralblatt f. Chirurgie*, No. 45, 1894) is an enthusiastic advocate of a permanent alcohol dressing in phlegmonous and similar inflammatory conditions, claiming to have obtained with it ideal results. The inflamed region is washed with ether and a thick layer of cotton soaked in alcohol is applied. This is covered with an impermeable dressing material in which holes have been made to assist slight evaporations, otherwise the alcohol would act too caustically. A

cambric bandage is then applied over the whole. The dressing is renewed every twelve to twenty-four hours according to the severity of the case; later, after subsidence of the swelling, every two or three days will suffice. Any open wounds may be covered with mull and over this the alcohol-soaked dressing be laid. A 60-90 per cent. alcohol is employed. The swelling and fever rapidly fall and abscesses form rapidly. These should be at once incised and the alcohol dressing be continued until healthy granulation or complete healing follows. Furuncles rapidly disappear or come to a head under this treatment; acute and non-tuberculous glandular inflammations also are favorably influenced. Suppurating buboes should not be tamponed with alcoholized cotton, as it is too caustic. In erysipelas it has given good results. Freshly infected wounds may be washed out with alcohol, for it penetrates into the depths and prevents the formation of abscesses.—*Med. and Surg. Rep.*

THE TREATMENT OF TUBERCULOUS PERITONITIS BY INSUFFLATION OF AIR INTO THE PERITONEAL CAVITY.

In many instances, as is well known, great improvement has taken place in cases of tuberculous peritonitis in which simple laparotomy has been performed, but no satisfactory explanation has been suggested of the exact connection between the operative interference and the improvement which results. Various theories upon the subject have been advanced, and one which has been put to a practical test is that the admission of air to the peritoneal cavity arrests the evolution of the tubercle bacillus. Dr. Folet, of Lille, has recorded a case in which he gave effect to this theory. A patient suffering from symptoms of tuberculous peritonitis refused to have a laparotomy performed. The abdomen was accordingly tapped and six litres of ascitic fluid were withdrawn, after which three litres of air were injected into the peritoneal cavity. The result was satisfactory. The ascites did not recur, the general condition of the patient improved, and the improvement was still maintained at the end of eight months. An analogous case to this was recorded by Mosetig Moorhof, of Vienna, in 1872. The patient was a child four years of age, with symptoms of tuberculous peritonitis; 1700 grammes of ascitic fluid were withdrawn, and, subsequently, insufflation with air of the peritoneal cavity was practised. A cure is said to have resulted. At the end of five months the child was reported to be in good health.—*Med. Press and Circular.*

ICE INTRARECTALLY.

Dr. Pasterunatzky has used ("Amer. Medico-Surg-Bull.") intrarectal introduction of ice in the treatment of excessive hæmorrhoidal bleeding, in rectitis, weakening of the anal sphincter from persistent diarrhœa (sometimes followed by rectal prolapse), ulceration and cancer of the rectum, and, finally, collapse due to poisoning by opium, morphine, chloroform, alcohol and analogous substances.

The pieces of ice should have a conical shape, and a length of 20-30 cm. (.12 in.). They melt in the intestine within four to five minutes. From two to ten, and even more, may be introduced daily. These intrarectal applications of ice for a moment produce a rather disagreeable sensation, accompanied with sphincter contraction, but, on the whole, they are usually well tolerated. They exert upon the intestine a hæmostatic, antiphlogistic and sedative influence, and constitute a very prompt palliative remedy against false labor pains, pain in the rectum, and other annoying sensations often felt in that region (such as burning, prickling, intense pruritis, throbbing, heaviness, etc.). With febrile patients, they bring about an abatement of the fever and ameliorate their subjective condition. By reflex action, finally, they stimulate the heart and respiration, and also increase blood pressure, which explains their beneficent action in collapse.—*Med. Standard.*

IODOFORM OIL IN TUBERCULOSIS JOINTS.

De Vos (*Centblt. f. Chirurg.; Am. Med. Bull.*) recommends, after repeated experiments on the cadaver, the following as the points of election for injecting the various joints:

1. Shoulder.—The arm is adducted, the forearm being bent at the right angle across the abdomen, and the needle is introduced one centimeter behind and below the tip of the acromion process.

2. Elbow.—A point on the outer side of the olecranon, the needle going in between this process, the radial head and the capitellum humeri.

3. Wrist.—On the radical side of the dorsal edge of the styloid process; on the ulnar side at upper edge of the pisiform bone.

4. Hip.—A line is drawn from a point the breadth of the patient's thumb external to half way the distance from the anterior superior spine of the ilium to the pubic spine. From

this point another is drawn to the outer edge of the trochanter major. At the junction of the outer and second fourths of this line the needle is introduced, provided the limb is extended, the foot vertical and the trochanter in its normal relation to Nelaton's test line.

5. Knee.—On the angle between the upper edge of the tibia and the ligamentum patellæ.

6. Ankle.—Immediately in front of the tip of the external malleolus, the needle being pushed between the astragalus and the malleolus.

Injections are to be made very slowly, not more than 10 cm. in five minutes. As to the dose, one gramme of iodoform (10 per cent. to 20. per cent. emulsion) is sufficient for adults to begin with. This is repeated in a week if no reaction follows, and then every fourteen to twenty-one days, the iodine in the urine and persisting tender points being the guide.

In the after-treatment massage and passive motion are to be avoided, but moderate active movements are allowable. Several cases of intoxication were observed. Iodoform oil is considered far preferable to combinations of the drug with ether or glycerine. The duration of treatment varied from 9 to 325 days, the injections from one to twenty, and, as a result, 72 per cent. were cured, the ultimate results being better than those following erasion or resection.—*Gaillard's Medical Journal.*

ANTIPYRIN AS A VESICAL ANALGESIC.

Vigneron (*Annales des Maladies des Organes Genito-Urinaires*) is convinced from its employment in three cases that antipyrin will prove to be a valuable vesical analgesic. Injected into the bladder the remedy is free from harmful effects, even when employed over a protracted period. As an antiseptic the author believes it to be superior to solutions of boric acid. When the solution of antipyrin is allowed to remain in the bladder, it not only relieves the pain but checks spasmodic contractions. A 4 per cent. solution left in the bladder for ten minutes is sufficient to diminish the pain attending subsequent washing or instillation. Antipyrin may be employed in all cases of cystitis in which local treatment induces pain. When the bladder is not distended, two and a half to five drachms of 4 per cent. solution, left in the bladder for ten minutes, is sufficient. When the bladder is much distended, fifteen to thirty drachms of a 1 or ½ per cent. solution should be injected and allowed to remain in the bladder.—*Medical and Surgical Reporter.*

EMPYEMA OF THREE YEARS' STANDING, TREATED BY RESECTION OF THE RIB.

By J. D. Southard, M. D., Fort Smith.

Empyema is probably much more prevalent than we suppose and its treatment is and must ever be a matter of the greatest interest and importance, both to the physician and the surgeon. It is most always a result of suppurative pleurisy and is purely a surgical affection. Its early diagnosis is obviously of the greatest importance, and to this end, in cases of doubt, the aspirating needle should be used unhesitatingly as a means of diagnosis and also as a therapeutic agent, and if used aseptically it is entirely harmless and attended with very little pain.

While many cures have been reported by aspiration, when performed early, it is not to be trusted in chronic cases and should not be much relied upon in any stage of the disease, since should it fail to cure, just so much valuable time is lost. Thorough drainage, as has been abundantly proved, is the only thing to be relied upon and should be secured early, either by free incision or by resection of a rib.

In chronic cases, the latter will undoubtedly give the best results. An interesting case came under my care recently.

The patient was a young man 19 years of age, presenting the general appearance and some symptoms of one in the last stage of consumption, in fact several good physicians had so diagnosed and prognosed his case. He was coughing and expectorating large quantities of very offensive pus and was extremely weak and emaciated. From his mother I obtained the following history: Three years previously he had pleuropneumonia, followed by chills, fever, anorexia and loss of flesh and strength, accompanied by cough, expectoration and pain and soreness in the right side. During those three years he had consulted and been treated by thirteen different doctors, some of whom lived at Magazine, some at Boonville, and some at Huntington, and some at Fort Smith, most of whom told him he had consumption and that very little could be done for him, and as before intimated I was ready at first glance to concur with them as to both diagnosis and prognosis. The right side of his chest was flat, showing collapse of right lung. There was dullness on percussion, and tenderness extending from the fourth rib down to the crest of the ilium both in front and posteriorly. The liver was apparently much enlarged and very painful on pressure; auscultation and percussion showed the left lung to be healthy and its capacity apparently much increased.

Fluctuation was felt below the right nipple and there was a fluctuating swelling posteriorly just over the crest of the right ilium from which about two ounces of pus mixed with air bubbles was drawn with aspirator. The needle was also introduced in front between the fifth and sixth ribs, but passed, I suppose, above the pus cavity. It entered a very firm substance which afterward proved to be the remains of the collapsed lung.

Fluctuation in this locality soon became more prominent and a free incision was made, through which about half a gallon of foul pus escaped. Simultaneously with this discharge, his cough and expectoration ceased and he began to gain flesh and strength.

This incision was kept open for several weeks, but it was evident that the cavity was not being thoroughly drained, so it was allowed to close. A few days later fever and pain developed and he was send to the hospital. A three inch incision was made over the sixth rib and one inch of the rib removed subperiosteally with bone forceps. The cavity was opened and a large quantity of pus escaped. Upon introducing my finger into the cavity the remains of the collapsed lung could be felt, appearing as hard as a fibroid and occupying the anterior portion of the cavity. An irrigating curette was introduced and the cavity curetted and irrigated with sterilized water, two good size drainage tubes were introduced and a thick aseptic dressing applied. Drainage has since been good, gradually decreasing in amount. The boy is rapidly gaining flesh and strength. The upper portion of the lung is well filled out again and the prospects for his ultimate recovery seem good.

Had this operation been done early in the case there is little doubt but that a speedy and permanent cure would have resulted and the patient would have been spared much suffering.

After having finished the above report, I received a journal containing a very interesting report based upon 141 rib resections for empyema by Dr. Carl Beck, of New York. He strongly advocates resection in all cases after pus has been demonstrated with the exploring needle. He mentions no case of as long standing as the one I here report and in only four of his cases—all fatal—was the pus offensive. There were only eight other deaths, five of which were from tuberculosis. All of the cases (63) in which the diagnosis was made early, recovered. This is certainly a remarkably good showing and furnishes the strongest possible argument in favor of rib resection.—*Journal Arkansas Medical Society.*

CHORDEE.

Dr. W. P. Carr, of Washington, D. C., states ("Med. Bull.") that chordee may be promptly relieved by putting on a condom containing 2 or 3 drachms of a 2 per cent. carbolic acid solution and that any pain in the penile portion of the urethra or pendulous penis may be controlled in this way.—*Med. Standard.*

GYNECOLOGY AND OBSTETRICS.

INCONTINENCE OF URINE IN CHILDREN, TREATED WITH ATROPIA.

By T. P. Satterwhite, M. D., Louisville Ky.

Incontinence is a malady more frequent in boys than girls. It may come on at any period of childhood life, and often continues until puberty if not relieved. Many persons having the control of such children resort to punishment for a cure; the ignorant, and I regret to say more intelligent people, are often cruel to the little subjects.

It should be the duty of all medical men, whenever they are consulted on this subject, to take especial pains to explain that the trouble is beyond control of the child, that punishment is not only fruitless but absolutely cruel, and not infrequently assists in perpetuating the habit.

The causes of incontinence are numerous, requiring careful analysis to determine the source. Simple enuresis is purely a nervous trouble. That occurring not only at night but during the day may be caused from some congenital malformation or from reflex trouble. The nocturnal incontinence is far more frequent and less serious than when it occurs both day and night.

Some of the causes that produce this affliction are atrophy of the bladder, overflow from vesical paralysis, phimosis or adherent prepuce, leucorrheal discharge in little girls, calculus in the urethra or bladder, and impacted fecal mass in the rectum, the round or thread worm, or any rectal or intestinal irritation; in fact, irritation of the remotest part of the body may cause incontinence. Cystitis will cause loss of control of the bladder, and when severe enough there will be no difficulty in determining the cause in this instance. Indigestion is a prolific cause; excessive acidity of the

urine is frequently an exciting cause. Improper feeding at night or late in the evening may produce gastric disturbance, which, by its reflex irritation, causes wetting of the bed. When the cause can not be discovered our treatment will of course have to be experimental. The general health in all cases should receive our first attention. The disease can not be cured as long as the digestive apparatus is disturbed. Poor health is a potent factor in maintaining enuresis. The child should have a liberal amount of strictly wholesome food; a very light supper and but little fluid during the evening. If there is hyperacidity of the urine that must be corrected. We must see that the patient is kept in the best possible general health and remove any reflex trouble that may be discovered.

The treament by belladonna has been a practice of such long standing that probably every member of this society can remember when he commenced the practice of medicine this remedy was recommended and used. Various results have been obtained from its use, but its long continued employment in this trouble shows its usefulness notwithstanding the varied experiences of practitioners. This varied experience is due, in my opinion, to two causes: first, that the incontinence was not due to a neurosis simply but to a reflex trouble which required surgical interference; second, that the remedy was not pushed to its full physiological effect and continued long enough.

When the smallest physiological dose of atropia is administered the only symptom is dryness of the throat and mouth, possibly some disordered vision. When a larger amount is given this dryness becomes more intense and is associated with redness of the fauces, dilated pupils, disordered vision, and possibly diplopia. Often from the first, certainly after a short time, in all cases, the heart's beat becomes rapid, and after a large dose of the alkaloid exceedingly rapid, often accompanied by a peculiar red flush on the face and neck, which may spread over the whole body; in very severe exhibitions of the rash, desquamation of the skin sometimes follows. Intelligence may remain perfect, but there is generally some lightness of head, giddiness, and confusion of thought, as well as a staggering gait. Even with doses that are medicinal there are spectral illusions. Drowsiness is not a general or at all characteristic symptom. When a decidedly poisonous dose of belladonna or its alkaloid has been taken, all these symptoms are intensified; sometimes the patients are exceedingly violent, and convulsions may appear, followed by stupor and paralysis. Lividity of the face showing imperfect aeration of the blood is

not seen in atropia poisoning except in a stage of most imminent peril. Death is preceded by marked heart and respiratory failure.

Upon the muscular structure of the heart itself atropia acts as a depressant, but it would have to be taken in very large amounts to be apparent; on the other hand, atropia acts, it is claimed, on the cardiac nerve centres as a stimulant, and unless taken in very large amounts it does not destroy excitability of these nerves.

Evidence is directly in favor of the fact that atropia in small doses contracts the capillaries, and only when poisonous doses are given do they become dilated. Atropia acts on the peripheral filaments of the nerves; it is mainly eliminated by the kidneys, and its local action on the nerve filaments of the bladder, I have no doubt, is one of the modes of relief for incontinence, when the interior of the bladder is the seat of the trouble. We are all familiar with the local action of belladonna to relieve pain as in myalgia, lumbago, pleurodenia, etc.

In the last eighteen months I have treated five or six cases of nightly incontinence, all of which responded satisfactorily to the atropia treatment when administered to its full physiological effect. In all my cases I used the metric granules, manufactured in Philadelphia, commencing with the one five-hundreth of a grain three times per day, increasing the dose gradually for the first few days. After that the increase was more rapid until there were some decided symptoms of distress; even then the dose was continued cautiously, and the toxic symptoms would often disappear without decreasing the amount. In only three cases did I have to gradually decrease the dose that was being administered. It is also necessary in the treatment to require the child brought under your daily observation to consider the propriety of increasing, maintaining, or decreasing the medicine. I find we can not entrust to the parent the dose that is to be administered, and it is not improbable the mental effect of visiting the doctor every day is beneficial.

In one case a boy, age nine years, had wetted the bed every night from birth, and seldom less than twice a night. The first dose administered was one five-hundreth of a grain; it produced such nausea, with vomiting and general redness of the surface, that his parents were alarmed. I decreased the dose slightly for several days; the child that week soiled the bed only three times. The dose was then gradually increased daily with the result, at the end of the second week, of a slightly improved record. The dose at the end of the third week had gotten to one-hundreth of a grain three times per day, with the

result of additional improvement. The atropia was increased to one-fiftieth of a grain before the child was cured. Singularly to state even at this dose, although the pupils were fully dilated, he never complained of his vision or any other unpleasant symptom. Nor did any of the children I have treated, though they played out in the sunlight.

The second child was eight years of age, a robust, healthy looking boy, who had been soiling the bed for five years. He was relieved very promptly and I withdrew the medicine abruptly. The incontinence returned in a few nights and I had to recommence the treatment. The medicine was then gradually withdrawn and the cure was completed.—*Atlanta Medical and Surgical Journal.*

A PREGNANT TUBE IN THE ACT OF ABORTION.

Dr. G. M. Edebohls presented to the New York Obstetrical Society a specimen illustrating apregnant tube in the act of abortion, a report of which we reprint from the *American Journal of Obstetrics:*

The specimen consisted of the normal left ovary and the left tube dilated to a pear-shaped tumor ten centimeters in length, with a diameter at its thickest part of five centimeters. In the fresh state the surface of the tube presented a livid blue, intensely congested appearance, with a number of ramifying large vessels, mostly of the venous type. The walls of the tube were thickened at some places, much attenuated and ready to burst at others. The inner half of the tube was but slightly enlarged and thickened; the outer half and the ostium abdominale were distended by an intact ovum, the fœtus being still completely enveloped by all of its membranes, the latter in an unbroken condition. The ovum was in the act of passing through the ostium abdominale into the peritoneal cavity, one-third of it being already free of the tube in the abdominal cavity, the remaining two-thirds still within the tube. The ostium abdominale, at the point where it encircled the protruding ovum, was dilated into a thin ring 4½ centimetres in diameter. There was no indication anywhere of a rupture of the tubal wall.

The specimen was of interest from the fact that it afforded an opportunity to study a tubal abortion in progress, an opportunity which, from the nature of things, would only be afforded by the merest luck on the occasion of either a cœliotomy or an autopsy. Immediately after the removal of the specimen the slightest pressure upon the pregnant tube would have sufficed

to empty it completely. Indeed, to the operator's mind, it seemed probable that the tubal abortion would have been found completed had the operation been deferred but two or three hours.

The age of the ovum it was impossible to determine accurately from the history. It was apparently about two months. That point, however, would be determined by Dr. J. Whitridge Williams, of Baltimore, who was engaged in a study of the subject of extra-uterine pregnancy, and for whom Dr. Edebohls wished to preserve the specimen intact.

The patient, K. K., a woman of 26, married nearly four years, was brought to him for examination on July 5, 1894, by her physician, Dr. James Geary. She began to menstruate at 15; type, four to five days every four weeks, with moderate pain on first day of flow. She had a miscarriage in the early months in May, 1891, and gave birth to a still-born child of seven months on December 24, 1893. Seven months after this event her periods reappeared, and for a few months were somewhat irregular, the intervals varying from five to seven weeks. Last normal menstruation May 3, 1894. On June 1 the flow reappeared, accompanied by severe pains in the left groin. Ever since that time, a period of five weeks, she has suffered from irregular bloody discharges and persistent pain in the left groin.

Examination.—Right tube and ovary about normal in size and position. Behind and to the left of uterus a globular tumor eight centimeters in diameter and quith sensitive on pressure. Uterus in normal anteversion, slightly enlarged. Cervix patulous and soft, with some eversion of the mucosa. Appendix vermiformis tender on pressure, though not enlarged. Right kidney movable eight to nine centimeters.

A positive diagnosis of pregnancy of the left tube was made and cœliotomy with curettage of the uterus advised.

Operation July 10, 1894, with patient in good general condition.

1. Curettage and irrigation of uterus, removing a small quantity (two teaspoonfuls) of decidual membrane.

2. Cœliotomy. About thirty grammes of free blood in the peritoneal cavity. Pregnant left tube shelled out of some soft adhesions and removed with its ovary. Appendix vermiformis, the seat of a mild chronic inflammation and adherent to the right tube and ovary, was tied off at its base and removed. The right tube and ovary appeared fairly normal, with this exception, that the fimbriated extremity of the tube grasped the ovary and was firmly fixed in this position by rather strong adhesions. As both the patient and her husband were very

desirous of offspring, the ovary was liberated from the grasp of the tubal ostium, the mucosa of the latter stitched to its peritoneal covering, and the range of mobility of the fimbriated extremity increased by a little plastic work upon the outer part of the right broad ligament; fundus uteri attached to anterior abdominal wall by a single catgut suture, temporary suspension only being contemplated; closure of abdomen without irrigation and without drainage. Patient left hospital, a well woman, August 6, 1894.—*Kansas Medical Journal.*

PRURITUS VULVÆ.

Abnormal sensibility of the external genitalia, although common to several diseases, often assume a distinctive character. In some instances this condition occasions intense mental and physical discomfort or gives rise to difficulties greater than the so-called minor gynecological ailments.

Of the vulvar complaints none come more frequently under observation, or are of greater practical interest, than pudendum pruritus, not only from the immediate trouble, but from its significance as a symptom of uterine cancer or of diabetes, or constitutional disease. Local pruritus of the external genitalia is, when neglected or injudiciously treated, of wide importance as a frequent factor in nymphomania, or the gravest forms of hysterical or cerebro-nervous disorders.

The causes of vulvar pruritus must sometimes be sought in constitutional diseases beyond the scope of consideration. It may, however, arise from direct local irritation occasioned by acrid vulvo-vaginal secretions which accumulate, decompose, or become the seat of pathogenic micro-organisms. It may originate from neuromata or from serpiginous ulceration, or from subacute inflammatory vulvar mucous membrane disease frequently evinced in catarrhal or specific vulvitis and vaginitis. In many instances pruritis is an accompaniment of pregnacy. In others it is consequent on the general genital hyperæmia that ushers in the catamenial periods or attendsthe menopause.

In dealing with so many sided etiological conditions recognition and if possible removal of the exciting causes, whether constitutional or local, should be the chief object. If vulvar pruritus be connected with a constitutional neurotic condition or hysterical temperament, primary attention should be given to its abatement by nerve tonics and sedatives. If the pudendal irritation be symptomatic of uterine cancer surgical interposition is the only remedy. If that be beyond pos-

sibility, then the general methods of palliative treatment are equally applicable. In cases wherein vulvar irritation results from renal disease, no remedy affords more general relief than soda salicylate given in full doses.

Much may be done to palliate symptomatic irritation of the external genitals by judicious use of locally employed agents still more effective in primarily vulvar forms of pruritus, although in these also constitutional medication should be generally conjoined with local treatment. The first point is to secure the thorough asepsis of the affected parts by frequent ablutions with hot water (120 deg.) and either coal-tar soap or an antiseptic superfatted soap. Immediately after the vulva should be freely swabbed with antiseptic solutions, like corrosive sublimate (1 to 1000), boric acid (1 to 25), or carbolic acid (1 to 40), so as to destroy pathogenic micro-organisms that may have escaped previous ablution, and thus prepare the pruritic surface for local sedative applications.

The local application, at frequent intervals, of a strong solution of methylene blue was conjoined with internal administration in grain doses in pill form, twice or thrice daily, until relieved, except in cases where it produced strangury. The chief objection to methylene blue is the staining of the parts, linen and fingers of the patient by whom it is locally employed. Even when given by the mouth blue-stained urine speedily produces similar discoloration of the vulva. This prevents many from persevering sufficiently long in its use.

When methylene blue fails to relieve pruritus the physician must fall back on older sedative applications until the disease subsides or its exciting cause can be dealt with. One of the most effectual is cocaine in 5 per cent. solution with peppermint-water, or in the form a cream in combination with menthol, powdered camphor, and chloral. Other useful applications are a 20 per cent. solution of boric acid, or a lotion with hydrocyanic acid, borax and morphine in the carbonated solution of camphor.—*Medical Standard.*

THE RELIEF OF SPASMODIC RETENTION OF URINE.

Excessive irritability is one form of interference of the higher centres; the other form is spasmodic retention. Thus when a man wishes to pass water he is anxious, especially if some one else is standing by and waiting, as in a public urinal, to make water in a hurry; the desire to make water quickly prevents him from passing it at all. This form can frequently be relieved by some such plan as that adopted by Boerhaave.

He lived before taps were so common as now, and he used to have a screen in his consulting room, behind which was placed a tall footman. When he desired any of his patients to pass water, the footman, at a given signal from him, poured water from a water bottle into a basin on the floor, so as to imitate the sound of a person passing water, and this at once had the desired effect. If in the out-patients' department you want ro get a specimen of water quickly, in order to examine it, the best thing you can do is to turn on a tap, and if that is not sufficient leave the patient to himself and tell him there is no hurry whatever. As a rule, if there is more than two teaspoonfuls of water in the bladder, you are sure to get it by this plan. Sometimes, also, when there is no water running, if the patient only thinks of the sound of running water it will make the bladder act. The introduction into the urinals at railway stations of constantly running water has been of great service to many. Some passengers can now empty their bladder at a railway station who could not have done it before, although it does not occur to them that the constant running of water has anything to do with the evacuation of the bladder; it has, however, a great deal to do with it. Washing the hands with cold water is another help, as also the application of a cold wet sponge or hot water to the perineum; and making the patient sit down in a hot sitz-bath will frequently enable him to pass water into the bath when he could not do it otherwise.—*N. Y. Medical Times.—Medical and Surgical Reporter.*

THE MODERN TREATMENT OF HÆMORRHOIDS.

Dr. Tuttle in *New York Medical Journal.* The author states "that hæmorrhoids can rarely be cured without an operation is far from the truth; equally so is the doctrine disseminated by quacks and advertising specialists that the disease can always be cured without surgical interference."

External hæmorrhoids are those developing outside of the external sphincter muscle and clearly in view; they are also those originating in the inferior and middle hæmorrhoidal vessels, and are therefore connected with the general circulation. Internal hæmorrhoids are those out of view, inside of the external sphincter; they develop from the interior or superior hæmorrhoidal vessels, and are connected with the portal circulation.

External hæmorrhoids he classifies as thrombotic, varicose, inflammatory and connective tissue piles.

The thrombotic variety is treated by laying the tumor open under cocaine or local ether anæsthesia.

The varicose variety rarely demands an operation; regulation of the bowels, short time at stool, ice water application and the following astringent ointment:

℞ Ung. belladon.
Ung. stramonii. } aa ..... ℥i. M.
Ung. ac. tannici

Four minims of Shuford's solution can be injected into the varicosities.

Inflammatory external piles are composed of distended arteries and veins and considerable connective tissue, with more or less serous effusion. The radical or operative, the palliative or antiphlogistic methods of treatment may be tried. Cocaine anæsthesia used in operation, preferably cold applications, with 50 per cent. of hamamelis added to the water thus used, adds to its efficacy. Watch for secondary bleeding after cocaine is used.

Internal hæmorrhoids he classifies into capillary or nevoid and varicose internal hæmorrhoids.

The hæmorrhage in the capillary variety will be found to occur from a sulcus at the point of junction with the normal mucous membrane. To these the author applies an electrocautery by a round platinum electrode.

He states that the injection treatment has its field in simple internal varicose hæmorrhoids, and uses a modified Shuford's solution, as follows:

℞ Ac. carbolici ..... f ℥iss.
Ac. salicylici ..... ℥ss.
Sodii biborat ..... ℥i.
Glycerini ..... ad. f ℥i. M.

Inject not more than four drops, and exercise care as to antisepsis, using this weak solution.

—*Matthew's Medical Quarterly.*

TREATMENT OF URETHRITIS IN WOMEN.

M. E. Rollet, after showing that urethritis claims always immediate treatment, tells of the various remedies which can be employed externally and internally. With a special sound ending in a full tip, he opens the neck of the bladder, and performs lavage of the urethra. The washings with corrosive sublimate (1:2000) or the permanganate of potash (1:250) give the best results. An antiseptic crayon may be inserted, or the urethra coated with a preparation of resorcin (10:30). The antiseptic vaginal walls act as barriers between the bladder and the uterus. This is the method adopted at the clinic of Antiqueille.—*Gazette de Gynécologie, November 15, 1894.*

Book Reviews and Notices.

Diseases of the Skin. Malcom Morris, M. D. Lea Bros. & Co., Philadelphia, 1894.

In a small book of some 550 pages, the author has succeeded in presenting the subject of his work in a comprehensive and complete manner. It is hard to conceive how this has been so well accomplished. In most handbooks, the detail is neglected in the attempt at condensation. There is at once the impression of newness in the handling and the presentation of the material in Dr. Morris's book.

Beginning with an interesting and complete chapter on the pathology and bacteriology of skin diseases, the author takes up the classification of these affections. "Classification is a good servant but a bad master, and the student must never allow himself to be beguiled into thinking that any system of pigeon-holing is an Armane's thread which will guide himself safely through the mazes of the pathology of the skin." And this is the key-note to the method of the author in his book. Diseases are generalized first, then excluded, and the treatment is not discussed until the whole class and its subdivisions are separated and digested. The details of diagnosis, special and general symptoms, individual pathology, and finally special treatment, are full in their discussion. It would be difficult to conceive of a more desirable presentation of dermatology of to-day, for the student, in a brief, ready and comprehensive form, than the "outline of the principles and practice of dermatology" before us, presents. The well selected plates add to the value of the book. ISADORE DYER.

State News and Medical Items.

DR. L. C. RAMAGE, of Winnsboro, La., has been in the city attending a special course of lectures at Tulane.

DR. J. J. ARBERRY, of Louisville, Ky., was in the city last month.

THE annual meeting of the Louisiana State Dental Society was held at Tulane Hall, commencing February 27, at 10 A. M.

The following are the officers: President, Dr. T. M. Comegys, of Shreveport; first vicepresident, Dr. Joseph Bauer, of New Orleans; second vicepresident, Dr. J. H. Landry, of Plaquemine; treasurer, Dr. M. W. Rainold, of New Orleans; recording secretary, Dr. J. Paul Bayon, of New Orleans; corresponding secretary, Dr. H. A. Truxillo, Morris building, third floor, New Orleans.

Dr. W. A. Moore, of Monroe, La., was married lately to Miss Cornelia Spencer, of Redwine, La., Rev. Father Enaut officiating. The Journal extends congratulations.

Dr. J. P. Matthews has moved from Ripley, Texas, to Mount Pleasant, same State, and formed a partnership with Dr. C. S. Stephens.

Patient—"Doctor, do you think you ought to believe everything you hear?" Physician (with his ear at the stethoscope)—"Yes, when I know I'm getting some inside information. Hold still a moment."—*Chicago Tribune.*

The Medical Association of Georgia meets in Savannah, Ga., on April 17, 18, 19, 1895. The officers are: W. F. Westmoreland, Atlanta, Ga., president; R. H. Taylor, Griffin, Ga., vice president; W. Tate, Tate, Ga., vice president; E. C. Goodrich, Augusta, Ga., treasurer; D. H. Howell, Atlanta, Ga., secretary.

At a recent meeting of the Butler County, Medical Society, of Georgia, the following resolutions were adopted:

Whereas, in the providence of God, death has removed our lamented co-laborer, Dr. N. E. Hamilton:

Resolved, That in his death the profession has lost an ardent member, who, had he lived to fulfil the promises of his youth, would have been an ornament to his chosen vocation and a credit to the State.

Resolved, That we as a body extend to his family our sincerest sympathy in their affliction.

Resolved, That a copy of these resolutions be forwarded to the family of the deceased, the Greenville *Advocate* and the New Orleans Medical and Surgical Journal for publication, and a copy spread upon the minutes of the society.

H. G. Perry,
J. B. Kendrick,
Committee.

Dr. and Mrs. T. W. Tarleton, of Patterson, La., were in the city last month.

Dr. Morgan Gordon, of Bayou Current, La., was in the city a short time ago.

Dr. Morgan Billieu has returned to Shreveport after several years' study and practice in the New York hospitals.

Dr. H. A. Minor celebrated his sixtieth birthday at Macon, Miss., last month and entertained his friends.

Dr. R. L. Randolph has resigned the presidency of the Alexandria (La.) Board of Health.

Dr. T. C. Karnes has been appointed Assistant Superintendent of the Southern Insane Asylum, at San Antonio, Texas.

It is proposed to hold a congress on yellow fever during the Cotton States and International Exposition at Atlanta. The plan proposed is that the leading physicians of the South Atlantic and Gulf cities be invited by the physicians of Atlanta, with a view of securing concert of action on quarantine measures and methods of dealing with the disease.

The Louisiana State Medical Society.—Annual meeting at New Orleans, May 7, 1895. R. Matas, M. D., president, 72 South Rampart street, New Orleans, La.; P. B. McCutchon, M. D., secretary, 559 Prytania street, New Orleans, La.

Mississippi State Medical Association.—Annual meeting at Jackson, April 10, 1895. P. W. Rowland, M. D., president, Coffeeville, Miss.; H. H. Haralson, M. D., secretary, Forest, Miss.

A bill to regulate the practice of medicine has been reported favorably in the Texas Legislature.

A Successful Operation.—Dr. Pulser—"Did you remove old Bonder's vermiform appendix?" Dr. Cutter—"Yes." Dr. Pulser—"And was there anything in it?" Dr. Cutter—"A cold two-fifty for me."—*Doctor's Factotum.*

Dr. J. S. Fuller has located at Cheneyville for the practice of his profession. He was formerly from Doyline, La.

Hon. Representative Robertson has secured the appointment of a board of pension examiners at Baton Rouge, composed of Dr. Joe S. Jones, Dr. Chas. McVay, and Dr. A. F. Barrow.

The *New York Independent*, for its first issue of March, contained a symposium treating of the various interests of the South. It contains a large number of short articles by prominent men in all the Southern States and is well worth reading. Copies can be had by sending 10 cents to Mr. H. S. Chandler, 130 Fulton street, New York, N. Y.

Dr. F. E. Yoakum, who left Shreveport, La., several years ago to accept a chair in the Gross Medical College of Colorado, met with a severe accident. He was run into by a carriage while crossing the street, and received injuries that were thought to be fatal. His many friends will be glad to learn that he is now at Garranza, Cal., and slowly recovering.

Dr. J. C. Wilson Turner died February 26, 1895, aged 65 years, at Loreauville, La.

The estate of the late Dr. Alfred L. Loomis is valued at $1,000,000. He bequeathed $25,000 as a fund for the Loomis Laboratory, the income to be applied to the annual expense account of this institution. The New York Academy of Medicine is remembered in a handsome bequest of $10,000, to be designated "Loomis Entertainment Fund," the income of which is to be devoted to entertaining fellows of the college.

Dr. C. H. Power was married last month to Miss Mary W. Cunningham, of Rayne, La. The wedding was private. The Journal extends good wishes.

Dr. T. J, Turpin, of Madison parish, has been appointed coroner by the Governor.

The Alabama State Medical Association will meet in Mobile, April 16.

At the regular meeting of the Board of Administrators of the Charity Hospital in New Orleans, February 4, Dr. J. D. Bloom was re-elected surgeon, and Drs. Parker and Fortier were again chosen his assistants. Dr. E. S. Lewis was elected president of the board.

THE TEXAS MEDICAL COLLEGE (Medical Department, University of Texas).—The Legislature has made an appropriation of $40,500 for the medical branch, in addition to the $35,000 for the University proper.

THE TEXAS STATE MEDICAL ASSOCIATION will meet in Dallas, April 25.

STATE BOARD OF MEDICAL EXAMINERS.—The next meeting of the State Board of Medical Examiners for the Louisiana State Medical Society will be held Monday, April 15, at 9:30 A. M., at the Medical Department of Tulane University, on Canal street. All applicants must bring diplomas, and those who can not speak English must bring interpreters.

T. S. KENNEDY, M. D., *President.*
H. S. COCRAM, M. D., *Secretary.*

WHALE'S MILK.

The following appeared several years ago in the Rockland (Maine) *Courier-Gazette:*

Whale's milk is now highly recommended for certain diseases. The only difficulty that we can see in carrying out the idea is in getting the milk. Who will milk the whale? Nobody has ever tried it, and it is not known whether or not the moral nature of the whale will permit such liberties being taken. Of course if you could get a whale of good disposition, one that is kind and affectionate by nature, there would be no difficulty; but suppose you run across a whale that is vicious, and just as you get a pail full of milk she flaps her tail around and catches you in the eye, and then steps in the pail? Though, come to think of it, a whale couldn't step in the pail, because she hasn't any feet—but we don't know as that makes any difference, either, for a yardstick has three feet and it can't step in a pail. But really and truly, and no joking, we don't see how this whale milk industry is to be cultivated. Suppose a man wants to go into it for a speculation, and he advertises in advance that he will supply whales' milk to all kinds of invalids at lowest prices, with reduced rates to clubs. It will be his object, of course, to keep a stock of thoroughbred whales, though grades would not be undesirable.

In order to get the best stock, he would have to send a vessel after his whales and lasso a brood in their watery fastnesses. Then he'd tow them into port. Then the only

way they could be milked, as it looks to us, would be by a diver, and, as sure as you live, if a stranger went poking around a whale in a suit of diving armor, he'd be certain to tickle her, and that would make her laugh, which would be liable to curdle the milk. But how could he milk in a pail under water? The water would run into the pail in that case as freely as it does in ordinary milking on land, and the result would be milk like that in every-day use, with possibly not quite so much water. Nobody is more friendly than we to new industries of this character, and we are glad to encourage anything that will ameliorate the condition of invalids, but the whale-milk business strikes us as being a trifle far-fetched. Better leave the whale to furnish stiffening for women's dress waists and let its milk accomplishments remain uncultivated.—*Brooklyn Medical Journal.*

FIRST AID TO PERSONS INJURED BY ELECTRIC CURRENTS.

Prof. Gariel, of the Paris Academy of Medicine, presented a report of a committee at a recent meeting of that body upon the means to be taken in treatment of persons coming in contact with electric wires or apparatus. The following are the the conclusions:

When a person meets with an accident due to contact with electric conductors or generators, the contact must first be broken, if it still exists, as otherwise those who come to render assistance may also become victims of the same accident.

The victim is to be carried to a well-ventilated room, from which all persons except, at the most, three or four assistants, are excluded.

The clothing should be loosened at once, and efforts are to be made at the earliest possible moment to re-establish respiration and circulation.

Lastly:

To restore respiration, recourse should be had mainly to the following two procedures: Rhythmical traction on the tongue and artificial respiration; but both must be continued for a sufficiently long time.

Lastly, concurrently with these procedures, the circulation should be stimulated by rubbing of the skin, flagellation of the trunk with the hand or wet towels, and any other means usually resorted to in such cases.—*Am. Med. Surg. Bulletin.*

GREEK PHYSICIANS AT ROME.

Maurice Albert has just published, under the title of "Greek Doctors at Rome," a curious volume dedicated to our friend, Dr. Gerard Marchant. This work gives numerous and interesting details regarding medicine and the physicians of ancient Rome. He shows how they nursed and improved theories from the time of Æsculapius, how they took advantage of patients and beat them out of large sums of money from the days of Thessalos, how some paid their doctor and others mocked him. It also demonstrates that patients and physicians have changed but little since the days of Dioscorides and Archagatos. Let us briefly note a few of the more striking points in this interesting study.

The ancient Romans had a profound contempt for doctors. Never, up to the end of the Empire, did the state claim proofs of skill, diplomas or guarantees from those claiming to be healers of the sick. According to Tiberius, thirty years passed during which time each man was his own family physician. It was the head of the family who treated his wife, children and slaves. Cato, in his celebrated work "De re rustica," has left the receipts with which he treated his two wives and families, as well as his servants and cattle, for fifty years. All—even the hog—that died then died at the hands of Cato. The basis of Cato's therapeutics was *cabbage*. It was used externally and internally, for cabbage cured every malady. It was an emetic and purgative, a diuretic and aperient. Aided by some magical formulas, such as *daries*, *dardaries*, *artataries*, he made polypi drop out of diseased noses, and even reduced luxations.

The Greeks introduced less primitive methods into Rome. The first Greek doctor to install himself on the banks of the Tiber was Archagatos. He had his office and drug shop on Acilius street. He had a consultation room and laboratory; he also had a private hospital. He treated wounds, prescribed, held consultations, operated on patients. He had the real modern polyclinic. The fashionable Roman matrons came there every day to indulge in gossip and idle talk, just as modern female gossips do in the rooms of fashionable specialists, that now resemble an ancient barber shop, where the silly went to be *bled*.

The ancient Romans were no more fond of bathing than the modern Italians, for, according to recent statistics, the Italian of the present day bathes but once in two years. From the time of Cato, according to Seneca, the Romans washed their arms and legs daily, but ablution of the entire body only

occurred once in eight days. A taste for real bathing was only developed later among the select few. It was Æsclepiades who initiated this movement. They called him "the cold water giver." He was the first to treat fevers by cold water baths.

Under Augustus cold hydrotherapy had a fashionable run, thanks to Antonius Musa, who cured the Emperor by this treatment. "It is true it killed," said they to Marcellus, the *Tu Marcellus eris of Virgil* by the same treatment. It was the style to be a *Pyschrolutes*—that is to say, an amateur in cold-water bathing; and for long periods of time after we notice men, even aged men, boasting, like Seneca, of being able to plunge their bodies in the ice cold waters of January, the coldest of Roman months.

Under the Cæsars Greek medicine triumphed without a contest even. There are only Greek terms and Greek remedies. Pills had become *catapotia*, liniments *acopa* and *malagamata*. To refresh the breath there was nothing like *catigmata*, a sort of candy that was melted in the mouth; and to perfume the body nothing was equal to *diapasma*.

Each doctor had his own drugs, that he prepared, and each doctor's remedies then, as now, were superior to all others. The more marvelous the name, the fuller of promises the vendor, the more mysterious and learned the instructions for taking it, the easier the public then, as now, was humbugged. There, for instance, was that immortal remedy, "*Athanasia;*" the divine "*Ambrosia;*" "*Isotheor*," the equal of the Gods; "*Isochrŷros*," the equal of gold; the great "*Panacea*," that cured all diseases. Pharamaceutic remedies do not date from yesterday. Then there was the "*Theriacum*," that Nero's physician, Andromachus, invented and described in an elegant Greek poem of elegiac verses. Only sixty different substances entered into the composition of this magical electuary, of which viper's flesh was the basis. With "*Theriacum*" Andromachus cured every disease. Nero took one of his pills every morning before breakfast. Its success was prodigious. It triumphed for several years, and even after barbarian invasions, and at the end of the eighteenth century, according to Bordeu, all the patients at the Montpellier Hospital took a "Theriacum Pill" at bedtime, just as Nero, eighteen hundred years previous, took his before breakfast. It is a wonder no modern Pasteur or Koch has re-introduced the remedy.

In the natural order of things concurrence grew ferocious. What was the remedy? The same as to-day, the practice of specialisms carried to the extreme—men who doctored mouths and others who practised solely on the anus. Cicero had

already complained of the number of specialists. "Do you think," he writes, "that at the time of Hippocrates there were men who treated diseases, others who dressed wounds and others still who cured sore eyes?" Under Antonious the specialists became legion. Not only were there general practitioners, surgeons and oculists, but there were doctors for every part of the body, a surgeon for each kind of operation, two classes of oculists—one that treated diseases of the orbit and others that operated. There were also *aurists*, *auriculari*, dentists, some of whom treated teeth, others that pulled them; there were throat specialists who cared for that part of the anatomy, and could remove tonsils without cutting them. There were fistula operators, doctors whose sole occupation was to reduce hernias; there were specialists who castrated and did nothing else. It is the female client and not the male that now has use for the latter specialist. There were female physicians without number, some who attended midwifery cases—they were the medical, others who treated diseases of women—they were the clinical.

There were charlatans then as now, such as Thessalos, of whom Galen remarked: "There was never an actor nor a juggler that appeared in public with more company than that with which this Greek impostor surrounded himself." Thessalos promised to teach any one who listened to him all that is known in medicine in six months. So a drove of students followed him from street to street, in all his professional visits. At every street corner were met what the populace called "the asses of Thessalos." Thessalos was an accommodating physician, like many of his modern followers. He did anything to please his clients. "Thessalos," says Galen, "obeys his patients like a slave its master. Those who wish to bathe he bathes. Do they demand cold drinks? He gives them ice or melted snow. Do they want wine? He never refuses it."

Other charlatans, then as now, sought to impress the public with brutality or vulgarity. There were those who had curious prescriptions and complicated drugs; those who overwhelmed their clients by their pedantism and their strange language. For then, as now, the dear public were impressed by a man who spoke to them in terms they did not understand, and ordered you to eat to the tune of Latin verses.

Terrigenam, herbigradem, domiportam, sanguine cassam?

As may be believed, the question of medical fees was not neglected. The *Græculus esuriens*, coming to Rome to make a fortune, knew how to make patients pay, and this was one of the reproaches addressed by the parsimonious Romans to Archagatos, for he made them pay good big fees in exchange

for his medical cares. But everything went on well, and the sick could not refuse large fees to a man in whose skill they had confidence.

Let us terminate this recital by a citation from Seneca, which goes to prove that Rome also had physicians worthy of the name and patients who appreciated their services: "My doctor evinces more solicitude for me than his profession requires him. It is for me, not for the honor of his art, that he trembles. Not content to indicate the remedies, he gives them with his own hand. Always uneasy on my going out, he runs to my aid at critical moments. The most painful services seem to cost him nothing. He hears my groans with sympathy and emotion. In the crowd of those who invoke his medical services, I am his preferred patient; he never attends to others except my condition of health permits his absence. He is not only my physician but my friend. I shall never be able to pay his fee, and he will always remain my creditor; the debt of the heart will ever exist—*pretium operæ sotvitur, animi debetur.*"—*Lancet-Clinic.*

A VICTIM OF DELUSION.

Placid I am, content, serene,
I take my slab of gypsum bread,
And chunks of oleomargarine
Upon its tasteless sides I spread.

The egg I eat was never laid
By any cackling, feathered hen;
But from the Lord knows what 't is made
In Newark by unfeathered men.

I wash my simple breakfast down
With fragrant chiccory so cheap;
Or with the best black tea in town—
Dried willow leaves—I calmly sleep.

But if from man's vile arts I flee
And drink pure water from the pump,
I gulp down infusoriæ,
And hideous rotatoriæ,
And wriggling polygastricæ,
And slimy diatomaceæ,
And hard-shelled orphryocercinæ,
And doubled-barreled kolpodæ,
Non-loricated ambrœilæ,
And various animalculæ,
Of middle, high, and low degree;
For nature just beats all creation
In multiplied adulteration.

MORTUARY REPORT OF NEW ORLEANS.

FOR FEBRUARY, 1895.

CAUSE.	*White.....*	*Colored...*	*Male.....*	*Female....*	*Adults ....*	*Children.*	*Total .....*
Fever, Yellow							
" Malarial (unclassified)	5	4	3	6	7	2	9
" Intermittent		1	1			1	1
" Remittent	6	2	4	4	7	1	8
" Congestive	1	1	1	1	1	1	2
" Typho	2	1		3	2	1	3
" Typhoid or Enteric	6	3	3	6	9		9
" Puerperal							
Influenza	9		4	5	9		9
Scarlatina	1			1		1	1
Measles	17	2	12	7	1	18	19
Diphtheria	11	1	8	4		12	12
Whooping Cough	2		2			2	2
Meningitis	6	3	4	5	4	5	9
Pneumonia	31	43	51	23	45	29	74
Bronchitis	13	18	16	15	7	24	31
Consumption	50	36	50	36	85	1	86
Cancer	13	6	6	13	19		19
Congestion of Brain	8	3	7	4	9	2	11
Bright's Disease (Nephritis)	22	15	30	7	36	1	37
Diarrhœa (Enteritis)	8	13	15	6	16	5	21
Cholera Infantum							
Dysentery	2	4	3	3	6		6
Debility, General	2	2	2	2	4		4
" Senile	23	14	11	26	37		37
" Infantile	4	6	7	3		10	10
All other causes	198	111	171	138	223	86	309
TOTAL	440	289	411	318	527	202	729

Still-born Children—White, 17; colored, 22; total, 39.

Population of City—White, 195,000; colored, 80,000; total, 275,000.

Death Rate per 1000 per annum for month—White, 27.13; colored, 43.20; total, 31.81.

L. F. FINNEY, M. D.,
Chief Sanitary Inspector.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XXII. APRIL, 1895. No. 10.

Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

CONTINUED FEVER. *

BY THOS. Y. ABY, M. D., MONROE, LA.

GENTLEMEN—There is a great dearth of literature on the subject of slow, or, as I prefer to term it, continued fever, such as we have it in this and other sections of the Gulf States. Most of that which has been written and published is to my mind absolutely worthless, though we occasionally find in the medical journals a well considered article on this disease that will repay perusal.

In respect of the pathology of this fever we know little or nothing. The comparatively rare fatal termination (an event I think never occurring in uncomplicated cases in persons previously healthy) and the difficulty, nay the impossibility, of securing post-mortem examinations in this locality, at least, leaves the causes and origin of the disease in the realms of pure conjecture. And the ideas we may have in regard to its etiology depend rather on the whims and fancies of the physician than on any well ascertained scientific facts. Therefore what I shall have to say on the subject is to be taken merely as an individual expression of opinion—an opinion, however, formed after a somewhat extensive experience in the management of these fevers.

* Read before the Ouachita Parish Medical Association at the April Meeting, 1894.

Continued fever, as we see it in our locality, is rather a new comer. Twenty-five years ago it did not exist here, or at any rate it was extremely rare and not recognized by medical men. I can not call to mind a single case in my practice in those days. At that time malarial forms of fever, intermittent, remittent and pernicious, prevailed extensively, and not a summer or fall passed without a number of lives being destroyed by them—more especially by the malignant types. Now they are becoming rare. In the past six years I have seen but few cases of malarial remittent fever, and during that time, what is remarkable, I recall but one case of unmistakable pernicious malarial fever. Why this is so I shall not attempt to explain. I simply state the fact and leave its explanation to your own ingenuity. I may remark that the physical changes our section has undergone in the past fifteen or twenty years do not account to my mind for this remarkable change in the character of our prevailing fevers. The one certain thing is that the continued form of fever has gradually, and to a very large extent, replaced the several forms of malarial fever above mentioned.

Continued fever attacks by preference the males of our species. Nursing infants are, I believe, never attacked; and as seldom, almost, are elderly men. Nearly all cases seen are persons between the age of childhood and thirty years. Females, of any age, appear to be distinctly less liable than males; out of a large experience I recall but very few cases among them. The pure African seldom suffers, but when he is attacked, I have noted that the fever is commonly of exceptional severity and duration. A few years back this fever prevailed only during the late summer and fall months. Now it appears seemingly without regard to season or climatic influence. Last winter I saw several cases, and in the last three months, January, February and March, I have seen five—all males. It is no respecter of persons. All classes, the well-to-do and the poor, are equally liable. Nor do external surroundings appear to influence it, either in severity or duration. In short, it appears to be unique among fevers, as it seems to be as totally insensible to externals as it is to medical treatment.

With this very brief history of continued fever, I now

proceed to consider its etiology, symptoms, diagnosis and treatment; promising to be as concise as the nature of the subject will allow me to be.

In regard to the etiology of the disease under discussion I must remind you that I am expressing an opinion which I have, almost insensibly, formed after a good many years of close observation, and that I am by no means wedded to it, or sure of its correctness. I regard this fever as a direct consequence of an autogenetic poison resulting from defective elimination of the waste products of tissue metamorphosis. There has never appeared to my mind any fact in support of a theory of germ origin. Indeed, I was not aware, until quite recently, that the latter idea was entertained by any. (Since this paper was read some active investigators, notably among them Dr. R. Matas, have, as the result of post-mortem investigation, arrived at the conclusion the fever in question is an atypical typhoid.) The conditions impressed by the poison on the blood, and in fact on the whole organism, appear to to be of that peculiar character as to render the ordinary depurating apparatus incapable of their elimination; and elimination is finally accomplished by an organ not originally designed for such service—the mucous membrane of the small intestine. I can not regard the arrest of function of any of the great organs of elimination, such as the skin, liver, kidneys and colon, and consequent charging of the blood with effete matters, as capable of producing the fever in question. We see in our daily practice the result of such arrest in the development of other fevers, but I am quite sure you will agree with me that it does not cause continued fever. Whatever be the cause, I feel confident its correction or elimination is accomplished chiefly, if not entirely, by the mucous membrane of the small intestine, and when I come to describe the symptoms of this fever I shall present one fact in support of my views. Just here I will say that I have seen many times, as doubtless have you also, cases of this fever in which every organ of the body, concerned in the depurating process, in apparently full functional activity, and yet the fever persist for weeks. It is really to be regretted that so far as I know no skilled microscopist has investigated the blood and tissues in

these fevers. Such an investigation may throw a flood of light on the whole subject.

In describing the symptoms of continued fever as it presents itself in this locality, I shall take a typical case of the ordinary and usual degree of severity as an illustration. It is exceptional for the fever to develop suddenly. It however does so occasionally, usually after a varying period of malaise, loss of appetite and impaired energy, resembling in these respects, and some others, genuine enteric fever, the patient takes to his bed, often he continues to go about for days attending to his affairs until increasing debility compels him to desist. When seen by his physician the following conditions usually present themselves: A pulse beating anywhere from 90 to 120, and but slightly influenced by temperature variations, a morning temperature of 100 to 102 degrees, increasing as the day grows older, until it reaches, usually about midnight, 1½ to 3 degrees higher. A pale, clean, moist tongue, skin usually soft and moist in the morning, sometimes continuing so, but oftener becoming harsher and drier as the temperperature rises, notable absence of the flushed features and febrile aspect incident to most other fevers, markedly less thirst than in other febrile states of equal degree of temperature, loss of appetite, sluggish bowels, or at least nothing like diarrhœa. Indeed, constipation is the rule. Stools usually normal in appearance but showing on close examination, mucus in excess. A soft, flat abdomen, excepting more or less rigidity of one or both recti muscles. (In the more severe forms diarrhœa may be present, but nearly always in small degree; and a more or less distention of the abdomen may also exist.) No nausea, vomiting or gastric disturbance. Absence of pain anywhere, especially headache. No delirium, even in cases where the temperature rises continuously high.

I call your attention particularly to the absence of delirium in these fevers. I do not remember a single exception to the rule. Normal, or but very slightly accelerated respiration, even when fever is highest. Normal activity of kidneys. On being questioned the patient says he feels weak, but he is unable to give any definite account of himself. Such are the prominent symptoms in a typical, uncomplicated case of this

fever. This state of affairs may persist from day to day and week to week with but slight variations, and totally uninfluenced by any sort of medical treatment. The pulse beats at nearly the same rate at the same hours and the thermometer will likewise show the same or nearly the same degree of temperature. After a period of time varying from ten to thirty days, sometimes for much longer, the fever begins, without apparent reason, to abate. The morning and evening temperature begins to lessen. The pulse gradually gets slower. Nourishment is taken less reluctantly; the patient expresses his improvement. After a few days more the morning temperature drops to normal and below; still there is a rise of one or two degrees in the evening temperature. After a little longer time the evening fever fails to develop, and the patient is convalescent. His recovery is usually rapid, and in my experience he enjoys a more vigorous health than before the attack; a fact similar to that which obtains after recovery from yellow fever.

Among the several symptoms enumerated, the one alluded to as sustaining my view that the mucous membrane of the small bowel plays an important part in the disease processes, is the fact that there is, almost without exception, an excess of mucus in the stools. Even where these are moulded and apparently normal in every respect, a careful examination will reveal it. Of course, this excess of mucus means a degree of engorgement, or, if you prefer the term, congestion of the mucous membrane of the bowel. But if it does not mean an increased activity of that organ for the purpose of ridding the system of the operating cause of the fever, what does it signify? Cases frequently present themselves where the abdomen is soft and flat; where the most careful examination fails to elicit the slightest degree of pain; where the digestive function is apparently properly performed; where the action of the skin, liver and kidneys, and, as far as we can ascertain, every other function of the organism is normally, or nearly so, exercised. How, then, to account for this engorgement or congestion? I frankly confess I can not explain it excepting on the theory that a slow process of elimination is going on in the organ mentioned. I once held widely different views—

indeed, at different times as many different ideas. My treatment of these cases differed accordingly—not greatly, I fear, to the advantage of my patients.

In relation to the diagnosis of continued fever I shall not have much to say. Time and the failure of medical treatment are, after all, the best diagnostic points. An early differentiation of malarial remittent and continued fever is confessedly difficult. There are, however, two symptoms nearly always present in continued fever, on which I am accustomed to rely in aiding me to an early diagnosis. I refer particularly to the absence of headache and tension of the recti muscles. In nearly every case of the uncomplicated fever it has been my fortune to see, I have noted the absence, or slight degree, of cephalalgia and some rigidity of the recti—sometimes one only, and that the left, or right, as the case might be. Often the degree of tension is slight, but attention to the matter will result in its appreciation. I know of no other symptoms in the least degree pathognomonic, and therefore ask your attention to these.

What I have already expressed in respect of the etiology of continued fever will have prepared you to divine, in great part, my method of treating, or, more properly, managing it. In the present state of our knowledge, I regard all attempts by medicine to abort or to control this fever as worse than useless. In earlier days, when I was less a skeptic in regard to therapeutics than I have since become, I very faithfully and vigorously physicked these fever cases according to the ideas I happened at the time to entertain. I even entered rather boldly into the field of experimentation, as this or that idea in respect of the nature of the fever would obtrude itself. I did all I knew or imagined I knew, and all that my confrères knew, or thought they knew, with the same unvarying result—disappointment, until finally I arrived at the conviction that to do nothing, or next to nothing, in the way of medical treatment, was the very best thing to do. This conviction still possesses me. However, in the management of these fevers we may do something to render their effects on the organism less serious, and aid to a quicker and more perfect convalescence. Of course, in a fever usually characterized by

such long duration, alimentation plays an important part. When it is not repugnant to the taste of the patient, I think buttermilk, to the extent of a pint and a half to two pints a day, better than any other form of nourishment. I never look elsewhere for food when the patient will take it. If the patient is averse to buttermilk, the different soups and broths, beef essence, boiled custards, chocolate, etc., may be given. Cool drinks, such as lemonade, soda and Appollinaris water are allowed *ad libitum*. I never, under any circumstances, allow solid food of any kind. I have abundant reason to believe strongly that they do harm. The same may be said of sweet milk in the vast majority of cases. The manner of feeding I consider to be of importance. My rule is to begin at 6 A. M., and give the nourishment, in proper quantities, every three hours, up to and including 9 o'clock P. M. The patient is not disturbed after this hour so that he may obtain as fair a night's rest as possible. The whole body is sponged, once daily, with tepid water, holding enough soda bicarbonate in solution to make it feel slippery. This is preferably done about 9 P. M., when the fever is near its point of maximum intensity.

The effect is to keep the skin clean and lessen temperature. It also soothes the patient and helps him to pass a better night. Unless the bowels spontaneously act daily an enema of tepid water, if the fever is moderate, and of cold if it runs high, and as large as the colon will receive, is daily administered. I regard this point as of considerable importance. Experience has strongly impressed on my mind the danger of using even the mildest purgative in these cases. Absolute rest in bed is enjoined, and the linen of the bed and patient daily changed if possible. Regarding the cause of the fever as beyond our control, I never resort to the use of the several temperature depressants. I do not think it philosophical, nor do I believe it to be good practice, to endeavor to remove or modify a symptom while the cause that creates it remains in full operation. I once entertained, like young practitioners generally, exaggerated ideas as to the evil effects of high temperatures. It is only when they are high indeed and continue steadily high for a considerable length of time that they require special attention. In the fever under discussion I have often seen a morning temperature of 103½

deg. and an evening one of 104½ and 105 deg., for several days at a time, and beyond a greater amount of tissue waste I could perceive no special difference in ultimate results from other milder cases. In but very few cases of the fevers I have met with in my professional career have I found that exaltation of temperature which demanded control. And when it is necessary to lessen it, cold water is the safest and best agent. The nature of the inhibiting action of the antipyretics on the heat centres is not understood, and until more is known of it I prefer to let the nervous systems of my fever patients alone.

I ceased to give quinine in continued fever some years ago. Abundant experience proved to me that, even in small doses, it was detrimental, much more so in the large doses frequently given by those who have little experience in handling these fevers. There are occasions during the course of the disease when medicines may be used advantageously to meet symptomatic indications. These will readily suggest themselves to the judicious physician. Sometimes the liver is torpid and good may done by minute doses of calomel. Or the urinary secretion may be scanty, calling for the exhibition of one of the potash salts. Usually, however, very little medicine is needed. Of all the medicine in our armamentarium, opium has appeared to me to possess more control over the disease than all the rest put together. For a long time I have relied on it almost entirely. I can not too earnestly commend it to your consideration when properly administered. I do not contend that it has any specific action in the premises, but it most unquestionably places the patient under the best possible condition for a regular and uninterrupted progress toward recovery. And sometimes it has seemed to lessen the duration of the fever. I can recall a number of cases in other hands, in which the patients had got into a fever groove, as it were, and were dragging out day after day with scarcely a particle of change, and in which the exhibition of opium was suggested and applied with an almost magical result. Nowadays, when the diagnosis is clear, I immediately begin the use of the drug. It is, according to circumstances, given by mouth or rectum. A teaspoonful of the camphorated tincture every three hours, per orem, or fifteen to twenty drops of Battley's sedative, or good laud-

anum, every six or eight hours by the rectum. These doses are for adults. Correspondingly less doses for children. Very many of my cases get no other medical treatment whatever.

Now a word in respect of opium. It is regarded by the laity generally, and I think by a large majority of physicians, that it arrests secretion. This is, in my opinion, a very serious error. I hold exactly to the contrary and believe thoroughly that it is, by odds, the best promoter of secretion we possess. No doubt it arrests the muscular action of the bowels, for instance; but that does not argue that the secretion of the mucous membrane of the bowel is thereby lessened. It will obtund the sensibility of the bladder and therefore lessen the frequency of the act of urination; but that does not imply that the kidneys are secreting less urine. And where we can see and feel the effects of the drug on the secretory apparatus, as in the skin, we do not find it to act as an arrester of secretion. It is the conviction, formed a good many years ago, as to the effects of opium, that has led me to use it in *all* cases wherein the indications were to promote secretion, and, consequently, elimination. Notably so in the fevers under discussion. I do not propose to discuss the *modus operandi* of the drug further than to say that its effects on the capillary circulation is just of that character that will favor secretion. Believing as I do that continued fever is a disease whose most essential feature is an effort at elimination, and regarding the action of opium as directly aiding the process, you will understand the reasons for advocating its use outside of the benefits it confers by soothing and sustaining the nervous system, and equalizing the distribution of nervous energy.

This, gentlemen, is the management and treatment my observation and experience have taught me as best adapted to continued fever. In the main, I believe it will be found applicable to all grades of the fever, though, of course, in some of the more severe forms a considerable divergence may be found necessary. Occasionally we meet with a case on which nothing, not even time itself, seems to make the least impression. Such cases are best dealt with by sending them to another place, and it don't seem to matter where it is. It is really astonishing how very quickly they get well under the influence of

a change, even if it be only from one end of town to another. It has repeatedly happened to me that my patients, who had been ill for weeks, would begin to convalesce the very day they were carried on a mattress to the steamboat or railroad train.

THE TREATMENT OF DIPHTHERIA.*

By S. L. THÉARD, M. D., New Orleans, La.

A year ago in this same meeting room, in a discussion on diphtheria, I spoke of a number of cases successfully treated with peroxide of hydrogen corrected by an alkali. Because there were in the room at the time brother practitioners of maturer years who had not met as many cases of diphtheria in their own, and, as they thought (rightly or not), their larger practice; and because of my reluctance and failure to report my cases of diphtheria, a measure the propriety of which I have always questioned; and more particularly because the clinical diagnosis had not been bacteriologically confirmed in each and every case (bacteriological examinations, remember, being at that time unavailable), the statement was received by some in a manner bordering upon incredulity and uncivility.

Confident that I could do in the future what I had done in the past, and anxious to convince the most obstinate, I agreed to flag my cases for a year and expressed the hope that I would see as large a number of cases that year and cure them, God helping, as in the past. 1894 has rolled by, and during that year I have seen thirteen cases of diphtheria, all of which have ended in recovery. To-day I can pin to the clinical the bacteriological diagnosis. The Board of Health has been duly notified and houses systematically ransacked. The fact remains that peroxide of hydrogen has one more year proved a success in my hands; and my conviction that this agent at the seat of the infection is the ideal method of local treatment remains undisturbed.

I insist upon the words *local treatment*. In a paper read before the State Medical Society in May, 1894, after mentioning the good work done by peroxide of hydrogen, I deplored the fact that we had not yet discovered an agent ca-

* Read before the Orleans Parish Medical Society, February 9, 1895. See proceedings in this number.

pable of combating the diphtheritic poison in the blood. To-day I rejoice that Behring and Roux have given to the world a powerful systemic antidiphtheritic agent.

Antitoxin—I do not speak from personal experience, but from a conviction based upon a careful perusal of the statistics with which our medical journals teem—antitoxine is an agent which has come to stay. It shall reduce the death rate of diphtheria, and do so markedly. But to rely exclusively upon antitoxin for a cure would be an error born of fanaticism and overconfidence. Roux himself claims for antitoxine the virtues of a specific only in pure diphtheria. In cases of mixed infection, and in fact in all cases, the exclusion of the local treatment is a sin of omission which may lead to the burial of the dead patient alongside of the dead germs. Lœffler himself warns the follower of antitoxin against such an error; and it is my personal conviction that some of the cases which died under antitoxin alone might have been saved by antitoxine and the local treatment combined. When I speak of the local treatment I mean, of course, peroxide of hydrogen corrected by an alkali. This is the ideal method of local treatment—one in itself capable of effecting a cure in every curable case of diphtheria, of whatever type and in whatever locality. And the refusal of physicians here to recognize and admit that fact would be but another example of man's natural myopia to home truths.

All that can be argued against peroxide is the enormous amount of time and medical attention which the use of that agent entails; and all that can be argued in favor of antitoxin over and above peroxide in pure diphtheria is the rapidity with which the agent cures when it does cure. But I insist that *both* will cure, and that neither should be used to the exclusion of the other, each one curing in its own peculiar and different way. If compelled, however, to choose between the two, I would unhesitatingly give the preference to peroxide of hydrogen, the slower but the safer of the two. I confess, and proudly, that I am not yet prepared to sacrifice the humble but faithful friend for the better clad stranger.

In the face of the statistics furnished by our German and French brothers, it was right and proper that the medical profession of New Orleans should fall in line and also try the an-

titoxin treatment. But whether the experiments were rightly and properly conducted is a question with me. I may here state once for all, and in such a manner, I hope, as will hurt the feelings of none, that I completely disapprove of the manner in which the experiments were conducted, for a number of reasons. (1) The taking of the public into our confidence is a bad precedent. This is always objectionable, because it exposes our already much scoffed at noble profession to further ridicule and sneers in the event of a very possible failure. I say undeserved, because it is always grand and noble to seek after truth, even when success fails to crown our efforts. (2) The taking of the press into its confidence was another error of the Commission. In any series of experiments these repeated bulletins and reports, so widely published and circulated, these repeated interviews connecting this or that name with this or that case, or disease, give to a group of individuals (usually on some self-constituted committee) a prominence which is distinctly at variance with the spirit of our code of ethics. If in the particular case to which I refer I do not brand the method as such, it is simply because from my knowledge of the members of the Antitoxin Commission I believe, and because of my personal friendship for a large number on that commission I may add that I am happy that I can believe, that the ethical advertisement came unsolicited. (3) I do not here insist upon the propriety of always conducting such experiments in hospitals instead of in our private practice, because, if I have been rightly informed by a member of the commission, the doors of both the charitable and pay institutions of the city were uniformly closed to such experiments for reasons which are not within my knowledge.

But let us return from this digression, and let us look at the statistics furnished from abroad and at home regarding antitoxine. What does their careful perusal and analysis reveal?

1. A greater death percentage in diphtheria abroad than at home before the use of antitoxine, a difference due to the more rational methods of local treatment in America, notably in the last three years, peroxide of hydrogen with an alkali.

2. The now admitted, but once denied, utter uselessness of

tracheotomy in diphtheria, an operation which I have always held as barbarous and unadvisable.

3. The very limited field of usefulness of intubation in diphtheria, save perhaps in the hands of O'Dwyer himself.

4. The possibility of effecting a cure with antitoxine in cases of pure diphtheria due to the typical Klebs-Lœffler germs; its questionable utility in cases of mixed infection.

5. The perfection and assertion by Roux of a method of treatment which, because of previous shortcomings, had been tried and abandoned by others.

6. The unhappy sequels attending even now the use of Roux' serum itself—adenitis, fever, erythema, and, possibly at times, blood-poisoning.

7. The imperative necessity of instituting the Roux treatment early in order to effect a cure.

8. The remarkable rapidity with which antitoxine cures when it does cure; a fact which should make us look with leniency upon some of its shortcomings.

Debarring the number of cases which were allowed to get well of themselves by the abandonment of meddlesome and injurious methods of treatment, there still remains a large contingent of cures by antitoxine, and the very remarkable work done by that agent is a fact which even the most obstinate must admit. I was myself among those who first looked upon antitoxine with suspicion (the unfounded claims of Brown-Sequard, Koch and others being still fresh in my memory), but to-day I submit to the universal concourse of favorable reports in which but one discordant voice of note rises—that of Hausman; that voice itself now disavowed by the very authority which it was supposed to echo, Virchow.

Treatment.—The systematic treatment of diphtheria (the subcutaneous injection of antitoxine) is remarkable in its simplicity and need not here be insisted upon at length, for in this time of antitoxine enthusiasm medical journals the world over teem with descriptions of the technique of its application.

The local treatment is somewhat more complicated and requires more than a passing mention. Here the first point, and the all-important point to remember, is that wherever there is diphtheritic white, there the peroxide and alkali must be ap-

plied at once, whether below or above the cords, and from the very moment that a mere suspicion of diphtheria is entertained. Roux prefers not to have his antitoxine injected before a bacteriological diagnosis of diphtheria has been made. A wise law; for no living physician has a right at any time to inject the counter-poison before he knows that the poison is there, or to inject the antitoxine in the absence of the toxine itself. An agent to which the system reacts so markedly and which has such accompaniments as fever, adenitis and putrid intoxication can not be instilled in the circulation on a mere suspicion of diphtheria. While waiting for the result of the bacteriological search, we must necessarily fall back upon the local treatment, which should be instituted vigorously and diligently kept up thereafter. If the physician folds his arms in sinful apathy, from false confidence in what antitoxine will do to-morrow, he may be allowing such ingress of toxic elements in the blood as no amount of antitoxine will be able to combat—to-morrow. Here peroxide will perform giant work, as it has done in the past, and make the scales lean to the safe side of cure.

Another point which we should bear in mind is, that peroxide is to be douched rather than sprayed. This is especially true in the case of infants; and here the nose is the proper channel for reaching the throat. Douche the peroxide first through one nostril with the child's mouth shut, then alternately through both nostrils with the child's mouth open, allowing the peroxide now to clean the anterior and posterior nares, and now the throat. Repeat this until the solution returns clear, or almost so. Even when there is no nasal diphtheria the nose is a very eligible route for treatment.

When we come to laryngeal diphtheria, peroxide serves its grandest purpose. I refer to the possibility of setting aside those two unreliable methods of prolonging life, tracheotomy and intubation, if we resort to the laryngeal douche. Now my cases have met that which some one termed, on a previous occasion, the crucial test of bacteriological investigation, and because the laryngeal douche has served its purpose in cases thus diagnosed, I mean to speak to-night with authority upon this one truth which I profess. I say that peroxide of hydrogen for a number of hours relieves all suffocation (by momen-

tarily eliminating the obstructing membrane) whenever it is douched in the vestibule of the larynx in supra-glottic diphtheria. I equally insist that it relieves suffocation when injected in the larynx and trachea, below the cords, in subglottic diphtheria. And let no one say that the procedure is unsafe or fraught with danger; that is false! The procedure is a simple and a safe one, save perhaps in inexperienced and clumsy hands. This is a fact which physicians must recognize and accept; and tracheotomy and intubation should at last be relegated where they belong.

The manner of douching the larynx I have mentioned on a previous occasion.

I use a mixture composed of one part of peroxide, one of bicarbonate of soda solution (2½ grains to the oz.), and one of water for supra-glottic douches; and one composed of equal parts of peroxide and the soda solution for subglottic douches.

I use a hard rubber syringe with an eight-inch nozzle capable of assuming any shape with the aid of heat. I apply the douche myself every five or six hours the first three or four days, and every six or eight hours succeeding days. To do this satisfactorily a mouth-gag, or a good-sized rubber cork with a string fastened to it is essential.

The procedure requires the aid of two assistants—one to hold the child in his lap, "shake hands" with him, and steady both legs between his knees; and one to steady the child's head and hold the gag in place. The physician requires both his hands.

In *diphtheria of the vestibule of the larnyx*, with exudate above the vocal cords, I introduce the index finger of the left hand into the patient's mouth, lightly hook the epiglottis, and with my right hand introduce the long curved nozzle of the syringe up to the nail of the left forefinger; I then rapidly press down this finger on the vocal cords, blocking the larynx and momentarily suffocating the child, and simultaneously douche enough of the peroxide to fill the throat and completely bathe my finger. I repeat this three or four times at each visit.

In *subglottic diphtheria* I first douche the vestibule of the larynx as above. After this is clear, I reintroduce my finger

and, with this as a guide, rapidly insert the tip of the nozzle of the syringe in the chink of the glottis, past the cord, and douche from one-half to one teaspoonful of the solution in the larnyx and the treachea. I do this once or twice and even oftener at each visit.

The peroxide acts with great rapidity, causing instant effervescence, and the appearance of a whipped-cream-like foam, which the child expectorates. I believe that the danger of death by suffocation from accumulation of this foam is greatly imaginary. The child may, and often does, get red in the face; but this need not alarm us, as he soon regains his breath. A similar accumulation in the smaller bronchial tubes might, and probably would, induce death; but its presence in the larynx and trachea should not make us feel at all uneasy. In my humble opinion the procedure is a simple and safe one.

The cases of diphtheria which shall require subglottic douches shall be very few indeed if the vestibule of the larynx is properly cared for and douched from the onset. For, see what occurs when the vestibule is being douched. On withdrawing the finger which blocks the glottis, the child makes an attempt at breathing which he at once resists. The first motion is a quick, short inspiratory effort, which sucks in some of the solution below the cords and allows it to act beneficially there. The second motion is a violent expiratory effort which protects the child against suffocation or drowning and rids the throat of all liquid.

We should always insist upon absolute rest in bed in our cases of diphtheria, and guard against all sudden exertion in convalescence.

A last word regarding the use of antitoxine as a prophylactic. The same line of argumentation which forbids its use in diphtheria before the presence of the toxine-giving germs has been demonstrated renders its use in healthy subjects unadvisable. Let us rather educate our patients to the fact that diphtheria often bites without barking; that a daily examination of children's throats is imperative during epidemics and exposure; that diphtheria is curable when taken from the onset; and that the family physician should be called in without delay whenever a suspicion of diphtheria is entertained.

A CURIOUS CASE OF TOTAL BLINDNESS FOLLOWING A SLIGHT TRAUMATISM OF THE ORBITAL MARGIN, WITH REMARKS.

BY WILLIAM C. AYRES, C. E., M. E., M. D., NEW ORLEANS, LA.

I was called in consultation some time ago by the late Dr. Holthoff, of this city, to see a patient concerning whose condition the doctor did not seem to be greatly alarmed himself, but from the anxiety of the family readily consented to consult an oculist.

On arriving at the bedside I found an elderly German gentleman who gave me the following history:

Three days before he had taken his usual quantity of beer, and returning home slightly under the influence had retired to bed. His bed was a massive affair with two short posts at the foot, about three-quarters of a foot in diameter, with flat tops. After having extinguished his light he retired and went to sleep. Some time after he awoke and got up in the dark to relieve his bladder, not feeling intoxicated in the least. Somehow he lost his orientation, and stooping down to find his night glass he brought his head squarely in contact with the top of one of the lower bed-posts. He relates to me that it did not hurt him any to speak of but made him see stars. On accomplishing his object he retired to bed again and fell asleep as usual.

When he awoke in the morning his eyelids were swollen to such a degree that he could not open them, and in great anxiety to know whether he was blind in that eye he sent for his family physician to help him to open his lids in order to ascertain whether he could see with the eye or not.

The doctor could not move his lids, but reassuring his patient, began what he styled an antiphlogistic treatment, consisting in cold compresses to the eye changed at frequent intervals. This did not seem to act as nicely or as rapidly as they wished and therefore the consultation.

I found the eyelids very much swollen and chemotic, presenting a tense glistening appearance. They were so stiff that it was with the greatest difficulty, without paining the patient too much, that I succeeding in allowing the light to fall within the area of the pupil. He answered on being questioned that he

did not see any light whatever, indicating of course what I had already expected, namely, total blindness. This was my opinion, since it is a well known fact that a goodly amount of light can be seen through a closed lid, and no matter how much the lids are swollen some light must be perceptible through them if the ocular media are clear and the retina and optic nerve have not been interfered with.

The prognosis was stated to be very unfavorable, and all that could be expected was reduction of the inflammation, a retention of a normally appearing globe, but an eye which would be virtually blind. The treatment was advised to be kept up, but the request made that, when the swelling was sufficiently reduced, the eye should be examined with the ophthalmoscope, for the satisfaction of all concerned (*i. e.*, my own).

It is interesting to relate that the skin around the eye was in no way injured at the time I saw the man, and the family physician says his attention was not called to any bruising when he first saw his patient. It was also insisted on that if at any moment he could satisfy himself of the probability of pus having formed within the orbit or around it, to let me know, and I would evacuate it.

I saw the patient about two days after, and was able to examine the optic papilla and retina. It was pale, but not in the condition of complete atrophy—still no perception of light. There was some swelling, but no fluctuation. Subsequent examination revealed a condition of complete atrophy, and the eye has been blind ever since, but with the globe remaining intact as to shape and tension.

There was still another opportunity of examining the eye after eighteen months, with all the conditions as above described, and which in all probability will remain permanent.

REMARKS.

Injuries of the margin of the orbit are not of too great rarity, but the literature of ophthalmology, and general surgery is remarkably scarce concerning them—unless it be those found in the commentaries on the surgery of military expeditions, etc. And while these are of great interest to us, yet

they do not seem to reach our sympathy so acutely because we would naturally expect local and serious damages done to the orbital walls and its contents by virtue of a passage of a bullet through their domains. But when we find that such serious consequences are brought about by seemingly trivial traumata to the orbital walls, and especially its anterior margins, the attention seems riveted, as it were, by the marvelous and unexpected results.

In a paper read before the Minnesota State Medical Society, June 22, 1894, Dr. Horton of that city has classified these injuries under three heads, and we can not do better than accept his classification.

It is as follows:

1. Fracture of the orbital wall from direct force, and usually unassociated with severe injury to the globe.

2. Fracture of the orbital wall by direct force, transmitted from the orbital margin or other parts of the skull, and usually associated with ocular injury or with injury to the brain.

3. Fracture of the orbital wall from direct force, usually spoken of as "penetrating fracture," and always associated with more or less severe injury to the globe or contents of the anterior or middle fossæ.

Dr. Horton also calls attention to the fact that the outer orbital wall is the best protected, having the external angular process of the frontal bone and the frontal process of the malar bone as a buffer. On the other hand fractures of the floor by direct force, usually penetrating fractures, are not uncommon, although less so than the pentrating fractures of the roof.

These fractures are usually caused by pieces of wood or metal or the end of a cane or umbrella being forced into the orbit with violence. If they come from the inner side of the orbit they usually are deflected and pass into the temporomaxillary fissure or the temporal fossa. If, however, the line of force is from the outer side and downward, the body is apt to pass directly into the antrum. But if the body pass the rim of the orbit and strike further back, it is apt to pass to the apex and thus into the middle fossa.

We must also add that if the line of force comes from below, or if the head is thrown back, the body, on account of

the thinness of the bony roof of the orbit, may pass into the brain direct.

Fractures resulting from force applied to the upper part of the orbital margin are apt to extend to the frontal sinus.

Agnew states that: "In applying the physical laws to the mechanism of the skull we have the explanation of the fact that a blow over the frontal region, should it be forcible enough to reach the base, will fracture the orbital plate or plates of the frontal."

If, with the history of a violent blow at orbital base (front) or upon the frontal region of the skull we have added the symptoms of ecchymosis of the conjunctiva and sometimes exophthalmos, our suspicions may have some foundation. If followed by sudden blindness, we have strong evidence of a fracture of the roof of the orbit passing through the optic foramen. This has been pointed out by Berlin and Von Holder and is due to extravasation into the sheath of the optic nerve. Similar symptoms may follow from fractures of the base behind the orbit, but the symptoms are slower in making their appearance, as time is required for the blood to pass forward to the orbit.

Thus we see that in the present case the slight blow received was to the frontal bone, resulting in a fracture of the roof of the orbit, which extended into the optic foramen. Blood, either from the lacerated periosteum or from some severed vessel, extravasated into the sheath of the optic nerve and by pressure produced the sudden blindness, also the chemosis of the conjunctiva and lids, resulting in a general cellulitis of the orbital contents. I have seen a few of these cases in the clinics of Europe, New York and New Orleans, and all of them have resulted in permanent blindness when the sight was lost early in the process resulting from the traumatism. The present case is interesting from the very insignificant amount of the original injury resulting so rapidly and fatally to the eye as an organ of vision.

Simply to add more interest, without using too much space, we will quote a few cases of curious results which happen after such fractures as here described:

In one case of Dr. Martin, a fracture of the bend of the

orbital roof produced no symptoms at the time, and only two weeks after a swelling was observed at the inner angle of the eye. This suppurated, and when opened, a necrosis at the fracture was found.

Cerebral symptoms may not appear until the removal of the body, and may be then followed by abscess, resulting in death.

We find recorded a case where the fracture of the orbital wall communicated with the lachrymal gland, and, after healing, formed a sinus discharging the tears upon the cheek.

Also a case where a man in passing from a car, in rapid motion, was struck by an open door over the supra-orbital nerve. No attention was paid to the accident for three weeks, when a swelling at the inner canthus attracted his attention. Pus was evacuated and wound almost healed when another abscess formed and was evacuated. On further operation a transverse fracture about one inch long was found with necrosed bone, at the bend of the roof, extending into the frontal sinus. Recovery.

Agnew reports a sailor who had fallen a hundred feet from the mast of his vessel. He died. Post mortem showed a separation of the articulation of the angular process of the malar with that of the frontal. A fracture of the orbital process of malar, and also one extending across the roof of the orbit into the frontal sinus.

Billroth reports a case of fracture of both orbitals extending through the sella turcica from a fall on the head.

Noyes reports a case of a boy injured by the explosion of a gun. It was not known that there was a foreign body until seen by Noyes five months later. He discovered that the breech-pin four inches long had penetrated the nasal cavity, passed through the floor and roof of the orbit, piercing the frontal lobe of the brain. No cerebral symptoms. It was removed and fourteen days after an abscess formed. Boy died thirty-nine days after removal.

We all remember the recent case of an American having punched the end of an umbrella in the inner upper corner of the orbit of an Englishman in London, causing death, and what a hard time the former had of getting out of his scrape with his neck intact.

Finally we may remark that the prognosis as to the ultimate result of these injuries to the rim of the orbit must be very guarded, since no symptoms may occur until weeks after all has been forgotten about the accident, and remembering Noyes' case, even after several weeks or months, things have gone on nicely, and we find a foreign body. It becomes a very grave question whether we should remove said foreign body or not. And against all of our established principles of good surgery it might be well to let good enough alone.

HYPNOTISM.*

By RANDALL HUNT, M. D., Shreveport, La.

Hypnotism is the psychical influence that causes abeyance of the material or objective force, and a corresponding rise and controlling and dominating influence of the subjective power of man's brain or nature.

Material or objective force is that part of our mental economy which we educate for our personal use and aggrandizement, instruct at school, polish by travel and in a thousand other ways teach, constituting what the world calls a scholarly mind of common sense.

Objective mind is the mind of the imagination; music, arithmetic, true art, etc., and to make it plain I will give you this illustration: Blind Tom has no objective force, but if Rubenstein, Paderewski or any other great musician played a most intricate and difficult opera, Tom could sit down and without trouble reproduce the whole. Thus we see that perfect memory is a factor in the grand aggregate of the subjective qualities, and I mention this especially as mere recollection and not true memory is a property of the objective faculties.

The material mind reasons by all higher logical methods, whereas the subjective does not, syllogistic power being its best rationality, which can under certain circumstances be most faulty; but before leaving this part of my subject I would add that it is a peculiar property of this part of the mind to be controlled absolutely, within the domain of morality, by suggestion.

*Read before the Shreveport Medical Society at its Meeting March 5, 1895.

Right here I would like to correct an erroneous impression conceived by the laity, that wrong or crime can arise from the prosecution of this mental science, for the public, as a rule, are grossly ignorant of its qualities, clothing it with mystery and all kinds of superstition, instead of according it its right sphere—one entirely, as I shall endeavor to show, in harmony and concord with the laws of nature.

England and France have specially investigated this point, and the most learned men of both nations, members of great psychological societies, declare that after unlimited trials it is impossible to cause either a good woman or man to do moral or physical wrong in the hypnotic state.

Since I have tried, and, I trust, have succeeded, in making plain the two great psychological divisions of mind, I will now give the usual method of hypnotizing as practised by the school of Nancy, and then endeavor to account on physiological grounds for each and every phenomena.

The percipient (or person hypnotized) is placed on a bed or in a large chair, told to think only of going to sleep, to be passive, not to move and to look you steadily in the eyes, while you (operator) make passes before the percipient. Then the following formula: your eyelids are growing heavy, your eyes begin to wink, you can't see distinctly, you are growing so sleepy, your eyelids are almost stuck together, you'll soon be sound asleep, you can't resist any longer, your eyelids are stuck together, a torpor steals all over your body, you are sound asleep, you can't move your arms or your legs, you are sound asleep, sleep, sleep, sleep. By this time your patient is generally hypnotized, but in case not, continue to suggest and you will usually succeed.

No person, however, can be hypnotized unless perfectly willing, passivity being indispensable, but at the same time I urge the surroundings to be such as rather to add an air of mystery and occultism, for the ordinary person is comparatively untutored and yields and submits far more readily when you appeal to his superstition.

I will now try and explain each phenomenon upon a biological basis. The percipient is first told to think only of sleep, then to look you steadily in the eyes; next, not to move

and to pay no attention to what you do—in fact, you crowd three or four different thoughts simultaneously upon the intellect, producing intense cerebral confusion, for it is a mental impossibility to entertain more than one separate and distinct idea at a time.

The eyes are held at a most unnatural angle, causing the ocular muscles to soon tire, the tense contracted condition of the muscles effect lachrymation, tears flow and vision is dimmed, thus preventing the retina from doing effectual work and consequently the optic nerve from telegraphing the correct impressions to the brain. To this mental and visual tumult and disorder anæmia is superadded, the head being thrown back interferes with circulation and produces a condition analogous to natural sleep. Now the ears become the great tools by which you accomplish all your good work—I say good work, for I do not think this condition should be produced without ultimate benefit in view, and as the subjective mind is now dominant your every suggestion is heard, accepted and implicitly believed.

Some time ago a lady sent for me suffering from attack of megrim, and being afraid of contracting the morphine habit implored me not to give her an opiate, a request I respected, but at the same time stated the benefits to be derived from hypnotism, and she being willing and eager for relief, catalepsy was soon induced, and suggesting that the pain was gone and would not return, in a few minutes I had the pleasure of arousing her free from all pain.

On another occasion a young lady came to my home office in a carriage, suffering from acute ovarian neuralgia, and in the presence of my wife I hypnotized her, and in about four minutes she left smiling and well. I called with Dr. T. G. Ford upon a lady of our city that had signified her willingness to the experiment, and without trouble produced a cataleptic condition, and while she was in this state we placed her limbs in all kinds of positions to satisfy ourselves of its genuineness, and furthermore passed a large pin through the flesh of the forearm without the slightest disturbance or even knowledge of the patient. The doctor was entirely satisfied, as was I, and we both agreed in relegating a large field of

usefulness to this science in medicine and minor surgery. Gentlemen, if there is anything in hypnotism we as medical men should know it and use it, and being students it is our duty to master the science, for protected as we are in Louisiana by the most stringent professional laws, unless we take advantage of this therapeutic agent our opprobrium will be that of the dog in the manger.

Are we so well equipped with remedial agents that we can afford to let any really good one pass unnoticed? I think not, so let us make a united effort to investigate this subject scientifically, and not be contented to only follow in the lead of others.

Our twentieth century civilization and inquiry is unveiling the light, and science is conquering and enfolding mystery and confirming revelation, aye, elucidating and promising the solution of sublime and grand truths to the generations yet unborn.

The weak are cheered and made strong by hope, and the sick are cured not alone by discoveries in physiology and chemistry, but also by the suggestive phenomena of hypnotism.

While I feel the crudeness of this paper, and its feeble handling of a great subject, still I will be more than satisfied if I succeed in waking the society up and infusing into it the true spirit of research.

DIPHTHERIA AND THE EYE.

By WILL H. WOODS, M. D., New Orleans, La.

In discussing this subject I shall do so under two heads, viz.:

(1) Conjunctivitis diphtheritica; and (2) post-diphtheritic ocular affections.

(1) Diphtheria of the conjunctiva is exceedingly rare in America; out of nearly ten thousand cases of eye diseases treated at the New York Eye and Ear Infirmary in 1891, says Dr. St. John Roosa, there was not a single case of this affection.

It is more common in Europe on the continent, and espeeially in Belgium, Holland and north Germany.

It may occur in connection with or independently of the disease of the nose, pharynx, or larynx. The constitutional disturbances are the same as when occurring in other organs and localities. The mucous membrane of the conjunctiva becomes in the first stage of the infiltration very red, hard, tense and swollen, with very slight if any secretion oozing through the closed lids. In from two to ten days the characteristic yellowish gray patches of diphtheria show themselves over the membrane. These patches are bloodless areas, which have become devitalized by the exudate of fibrin in and around the vessel walls. When these patches become confluent, the prognosis is very grave, for the cornea is then generally involved and almost invariably lost. If may affect one or both eyes, and presents itself in three stages: (1) Infiltration, (2) blennorrhœa or stage of resolution, (3) cicatrization.

The treatment varies at each stage; during the first stage warm applications are best borne (Fuchs warns against cold applications), and a weak antiseptic wash of boric acid, permanganate of potash or bichloride of mercury solution and a mild salve at night.

During the second stage, when we are positive that all infiltration has disappeared, we resort to weak solutions of silver nitrate wiped over the conjunctiva.

In the third stage the chief indication is to prevent a growing together of the bulbar and palpebral conjunctiva, which is best done by passing a blunt oiled probe between the surfaces every day or so. At all stages the twice daily use of a midriatic is indicated.

Two cases of diphtheria of the conjunctiva have already been reported as having been successfully treated by the injections of antitoxin. Dr. H. Coppez (*Journal Med. et de Chir. de Bruxelles*, Nov. 24), reports a case treated by serotherapy. He says the disease is cured at the outset; that there is no process of suppuration and repair, and that the membranes disappear in from 24 to 48 hours, leaving behind them perfectly healthy tissue. They seem to disappear by a process similar to that by which they came. He claims that the last

two stages of the disease may be suppressed, and if the treatment is begun at the proper time the trouble can be conquered in two days, the case going on to rapid and complete recovery.

(2) Post-diphtheritic ocular disturbances.

Now that the antitoxin treatment of diphtheria has given such excellent results, and while the medical world is thinking of diphtheria and its treatment, with the many failures of the past which at the time promised so much, it may not be out of place to discuss some of the sequelæ of this disease, and see if this new remedy, of which so much is claimed, has or does in any way modify or prevent post-diphtheritic affections.

Statistics on the subject are of course at this early stage very unreliable. Before we can state positive facts and figures we must wait until the enthusiasm and flurry which always follows any new discovery, is over. Many cases diagnosed and treated as diphtheria are not the true disease.

The memory of the late Brown-Sequard elixir and Koch's tuberculin is fresh to us all; a great wave of conviction swept over the country that the tubercle bacillus was doomed and that youth and joy were things forever.

If the reports on antitoxin be correct it has certainly done much good by even a reduction of 50 per cent. of the death rate, but in nearly all of these cases other treatment was also instituted, so it is rather a difficult matter to say just how much of the recovery was due to the serum. If this reduction is positive, even with assistance of other treatment, a great deal has been accomplished in the right direction.

When 50 per cent. more cases are cured the question arises as to the various sequelæ; by increasing the number of recoveries we increase correspondingly the number of cases liable to post-diphtheritic disturbances. Does the antitoxin treatment prevent or diminish the liability of the little sufferer to these affections, and if so how does it act? It is a well known and generally accepted fact that these disturbances are just as liable to follow a mild as a severe attack; sometimes they are the only symptoms presented of the disease. Most of the writers on the subject claim that the antitoxin treatment is either abortive or renders the case very mild. Unless then it has a *direct action against the poison in the blood, it does not*

render the patient less liable to these sequelæ, for they follow both mild and severe alike. By controlling the severe cases and aborting the mild ones much has been achieved, but, to my mind, if what has been written on the subject in the past few months be true we have not lessened the liability to post affections, although Dr. J. C. Cook (*Chicago Med. Recorder*, March, 1895, p. 202), says: "As the disease is shortened in duration and lessened in severity so are its sequelæ and complications. At the Emperor and Empress Hospital in Berlin they have quite a large alumni from the diphtheria wards who are returned at stated intervals for inspection. From the observation of these cases one would conclude that the after effects of diphtheria are much less than formerly. In a few cases albumen can be seen in the urine, and occasionally one would see a case of paralysis, but in all cases I did not see a single one of general or multiple paralysis."

this be true it appears to me that the serum not only cuts the attack short, but also, as it were, immunizes the patient against an attacking something formed either during or after the febrile stage; or might there not be a product or ptomaine developed during convalescence which the presence of the serum in the system prevented; and in those cases, where the paralysis did occur, might it not have developed after the serum influence had passed off, or there was not enough given to neutralize the ptomaine, or perhaps prevent its formation?

Strumpell thinks these paralyses are due to peripheral nerve degeneration. Professor Max Knies, in his new work, "The Eye in Relation to General Diseases," thinks these post-diphtheritic affections are rarely central or nuclear, but generally peripheral—that in most cases we have to deal with either a hæmorrhage or a neuritis. The paralysis of the velum palati is regarded by most writers as a direct effect of the virus.

The most frequent post-diphtheretic affection is a paresis of accommodation, more rarely a complete paralysis, which begins during convalescence, and generally disappearing in from four to six or eight weeks. There is very often associated with this a like condition of the pharynx or larynx. It has been noticed that these affections follow more frequently a pharyngeal diphtheria; that they are generally bilateral, with a concentric nar-

rowing of the field of vision. Ptosis and paralysis of the other ocular muscles, either simple or complex, are occasionally seen. Sometimes paralysis of the trigeminus and facial nerves occurs. Disorders of vision rarely happen, and when present as a complication, are attributed to uræmia. The prognosis in nearly all these cases is very good, recovery occurring gener ally within eight weeks.

A CASE OF A WHITE MAN, 37 YEARS OLD, WITH AN HEPATIC ABSCESS, COMPLICATED WITH A METASTATIC ABSCESS OF BRAIN: EPILEPTIFORM CONVULSIONS AND HEMIPLEGIA—DEATH.*

BY FELIX LARUE, M. D., NEW ORLEANS, LA.

This case is one of great interest, especially to Southern practitioners, who are often confronted with abscesses of the liver.

The history of this case is not merely interesting and most instructive from its clinical aspect, but more so and especially from its pathological standpoint.

In January, 1894, this patient had a violent attack of grip, with tenderness over right lung; he remained several days in bed.

About the middle of May he had a severe attack of dysen tery which lasted two months.

I saw him on September 23, 1894, for the first time, and from that time on I had occasion to examine him very carefully several times.

From the symptoms described and from the local conditions, such as pain over hepatic region, intensified by pressure and during inspiration, constantly accompanied by a slow form of fever, I diagnosed the case hepatic abscess.

October 10, 1894. Application of fly-blister *loco dolente*, followed by flax seed meal poultices, were ordered; so beneficial was this local medication that not only was it possible to freely palpate the region without provoking the slightest pain, but naturally permitted Prof. Matas, whom I had called in consultation, and myself to think that possibly we had had to deal with a simple case of hepatitis.

*Read before the Orleans Parish Medical Society, February, 1895.

I will mention that our patient never at any time of his illness presented any signs of jaundice.

November 1, 1894. Seeing that the fever persisted, and despite all absence of bulging, we punctured for pus.

We inserted medium size needle (Dieulafoy's aspirator) in the right lobe of liver, anteriorly, between the seventh and eighth ribs, about midway between axillary and median line. Removal of seventeen ounces of typical chocolate-colored pus.

November 3, 1894. We made a short incision in same region and placed one stitch in hepatic tissue, surrounding it with several punctures so as to excite inflammatory adhesions of peritoneal folds.

November 6, 1894. Resection of tips of eighth, ninth and tenth costal cartilages; puncture negative; packed with iodoform gauze.

November 13, 1894. Punctured in four different and opposite regions and found no pus, but inserting needle in spot a few days previously opened and punctured, we aspirated about a tablespoonful of serous fluid with a greenish tint. Patient always received proper general medication and good diet.

December 24, 1894. Fever continuing and re-accumulation of pus seeming certain, we inserted hypodermic needle in middle line of epigastric region and removed a syringeful of pus.

December 25, 1894. On inserting slowly the needle of Dieulafoy's aspirator in exactly the same region aspirated the day previous, to our great surprise no pus came.

We punctured again the very same spot, and this time we got pus (the aspirator we used always worked very well). On introducing the needle fully five inches into old wound we struck a large pouch of pus, which we freely incised, thoroughly irrigated with pure peroxide of hydrogen, followed by a hot weak carbolized solution; we afterward injected liquid vaseline, with 5 per cent. iodoform, inserted a spiral gutta-percha drainage tube and packed with iodoform gauze.

Same night, after all these surgical manœuvres, patient had no fever and felt relieved.

Owing to lack of drainage, we substituted two soft rubber drainage tubes.

January 20, 1895. At 1 A. M. patient was seized with what proved to be epileptic convulsions.

January 20, 1895, 1 P. M. Hardly had I terminated the dressing than our patient had eight typical violent epileptic convulsions.

January 21, 1895. Prof. Matas was present when I dressed the wound, which was no sooner done than our patient became cold, fell into a stupor, from which he was aroused but several hours afterward. His mind became more and more affected, dull, with loss of memory; disposition irritable. Lobar pneumonia of base of right lung with diaphragmatic pleurisy, causing incessant coughing, complicated matters for a few days.

January 31, 1895. Patient complained of pain across forehead for over 24 hours, with occasional bilious and alimentary vomiting.

February 3, 1895. Speech became disturbed about 5 P. M., but no other symptom present, but at 11 P. M. I found the patient in a stupor from which he could be momentarily aroused, but with great difficulty. Breathing was embarrassed and rapid, 42; pulse 88 and irregular; left hemiplegia with no facial palsy, no control over bladder or rectum.

February 4, 1895. Respiration 42, pulse 60 and still irregular. A peculiar symptom which struck me was the constant tossing about of his right leg, but especially the right arm, very frequently rubbing the right side of scalp, forehead and face and interior of same side of mouth as if he had something itching him over that area. Pupils reacted evenly and equally.

February 5, 1895, 10 A. M. Pulse slower, 58; no fever; respiration 40; at 8 P. M. pulse became rapid, respiration also, accompanied by slight temperature, 101, which kept on until he died, 11 A. M., February 7, 1895.

AUTOPSY.

Dura mater: Very much thickened.

First and second frontal convolutions of right cerebral hemisphere broken down—suppurative and softened mass with a large yellow purulent clot imbedded therein. Suppurative meningitis covering this focus.

Extensive adhesions, both pleuræ.

Base of right lung consolidated.

Two and a half to three inches from anterior portion of right lobe of liver a large pouch the size of a goose egg, full of thick pus; the posterior wall of pouch separated but by a quarter of an inch from the posterior surface of liver.

Two inches below pouch in substance of liver, almost on its surface, another suppurative focus of apparently recent origin, and a little to the left, disseminated foci of pus.

No pus or foci in left lobe, which was hard on section.

Proceedings of Societies.

ORLEANS PARISH MEDICAL SOCIETY, FEBRUARY 10, 1895.

Dr. S. Theard read the following paper on THE TREATMENT OF DIPHTHERIA. [See page 714.]

Discussion.

The discussion was opened by Dr. A. Weber, who expressed his gratification at hearing so elaborate and strong a paper from one of the younger members of the society. He is in perfect accord with Dr. Theard in ascribing to peroxide of hydrogen very powerful therapeutic effects in diphtheria. He regrets to say, however, that he has not had the same brilliant results in laryngeal diphtheria as Dr. Theard. He has had five such cases since January, 1894, with two deaths. He is inclined to ascribe the fatal termination in these cases to the age of the patients, both of whom were infants. They were treated before antitoxin came into use in this city. As far as technical skill is concerned he feels that he douches the larynx pretty thoroughly when he goes about it. He does not alkalinize the peroxide—he simply dilutes it with an equal volume of water; and he thinks that this gives better results than the alkalinized pure solution.

Dr. Larue said that he has a high opinion of peroxide of hydrogen as a remedy in diphtheria, but he by no means regards it as a specific. In the hospitals of Paris they do not use the peroxide at all in diphtheria; they use boracic acid and toluol locally, and the mortality is the same as in this country under the use of the peroxide.

Dr. John J. Archinard differed from the essayist in regard to the supposed untoward effects of diphtheria-antitoxin. While in the service of the antitoxin commission he inoculated eighty-two cases of diphtheria, embracing all forms and varieties of the disease and all sorts and conditions of patients. Among all of these patients he did not once observe any of the unfavorable symptoms that Dr. Theard lays to the charge of the antitoxin.

Dr. Theard said that he based his statements upon current literature, and not upon home observations only; all medical journals made mention of such unhappy results as he had described.

Dr. Dupaquier thought that Dr. Theard had misquoted Roux. Roux at once injects every diphtheria patient that comes under his notice, and the bacteriological examination is made afterward; thus no valuable time is lost.

Dr. Theard asked if it was right to inject the antitoxin before it is ascertained that the toxin exists.

Dr. Dupaquier said that the antitoxin is not to be regarded as a poison, but as a harmless ferment. It increases the power of resistance of the cells of the body to the invasion of disease.

Dr. Formento concurred in this statement and added that it was accidentally discovered that the antitoxin was prophylactic as well as curative. Some cases of sore throat were injected with the serum that were afterward found to be non-diphtheritic anginas. They were later exposed to diphtheria, but escaped infection, while others, not protected by the antitoxin, were stricken down. There is no harm in antitoxin; on the other hand, it possesses undoubted curative powers. In doubtful cases, it is safer to give it; no harm can come of it, and much good may be done. It is a matter of personal opinion for Dr. Theard to prefer peroxide of hydrogen to antitoxin if he should ever be so placed as to have command of but one of these agents. Dr. Formento thinks that a wise and conscientious physician will give his patients the benefit of both of these valuable remedies concurrently.

Dr. Larue asked: Can paralysis of the soft palate, following an attack of undetermined angina, be regarded as strongly indicative of diphtheria?

Dr. McShane thought the paralysis of the soft palate forcibly pointed to a precedent attack of diphtheria in such cases. In the clinic of Dr. A. W. de Roaldes at the Eye, Ear, Nose and Throat Hospital, and in his private practice, Dr. McShane had seen a number of cases of acute fibrinous or pseudo-membranous rhinitis, some of which were followed by paralysis of the soft palate. Before the establishment of a bacterio-

logical laboratory here, these cases were surmised to be diphtheritic; but since these, a bacteriological examination has demonstrated, in most of these cases, the presence of the Klebs-Lœffler bacillus. Several children have been brought to the clinic on account of a peculiar change in the voice and difficulty in swallowing. Examination revealed a paralysis of the soft palate. The history of every one of these patients was that of a mild sore throat some weeks before, which the parents thought was too light to require the aid of a physician. It is safe, in Dr. McShane's opinion, to set down every one of these cases as a case of diphtheria.

Dr. Matas, while not minimizing the significance of palative paralysis in the differential diagnoses of diphtheria, thought it was a mistake to consider the phenomenon pathognomonic. Let us ask, what is the pathological condition that underlies paralysis of the soft palate? It is a peripheral neuritis, set up by the action of some toxine which can be elaborated by other organisms besides the Klebs-Loeffl bacillus. A streptococcal or septic invasion of the throat may cause the neuritis; and unless we can effectually exclude such a factor from our problem, we are not fully justified in exclusively attributing a paralysis of the soft palate to the action of the diphtheria-bacilli. Dr. Matas has seen typical wrist-drop following an attack of diphtheria. Returning to Dr. Theard's paper, Dr. Matas thought Dr. Theard laid too much stress upon unskilled use of the douche in producing the alarming symptoms that immediately follow the intralaryngeal injection of peroxide of hydrogen. These symptoms are not due, in Dr. Matas' opinion, to the unskilled injection of the liquid, but rather to the more thorough intralaryngeal application of the skilful attendant who succeeds in introducing the peroxide into the larynx and trachea, thus causing a brief strangling, whereas a novice does not usually get it further than the pharynx and vestibule of the larynx, where it merely causes the patient to expel it by coughing. Some years ago, it fell to Dr. Matas' lot to have many cases of diphtheria. Before he began to use the peroxide in these cases, he always went to them with a heavy heart; every call to a new case of diphtheria seemed to him like a veiled invitation to attend a funeral. With the introduction of the peroxide into his routine practice, he gained confidence in the ability of science to cope with the disease, and this feeling has been vastly strengthened since the introduction of the antitoxin. He thinks that the peroxide should be more widely used than it is, for in that remedy we certainly possess a most powerful weapon against a most formidable disease. It is greatly to be deplored that Dr. Jacobi,

of New York, issued his fiat against the peroxide in diphtheria. In doing this, a really great physician has, from a feeling of irritation against the advertising manufacturer, done a great deal of harm by discouraging his numerous followers from using a remedy of unquestionable value.

Dr. Theard, in closing the discussion, said that it may be possible that the type of diphtheria in Europe is more virulent than in this country. He thinks that if the mortality there can be reduced to 13 per cent. under the use of antitoxin alone, it can be reduced to less than 1 per cent. by the proper use of the peroxide in conjunction with the antitoxin. As for the supposed innocuousness of diphtheria antitoxin, this was as yet an unsettled question; that no one knew how antitoxins effect a cure. If Behring, Kitasato, Fedoroff and others are right in their belief that the bacterial poisons are *directly* neutralized by the antitoxins, antitoxins are poisons, or rather counter-poisons, and should not be used as prophylactics, whatever may be their merits as curative agents. If Buchner and Tizzoni, who hold an entirely different opinion on this matter, are right in claiming that the effect of antitoxins on toxins is not a direct one, but is based upon a certain influence upon the living cells, then there can be no objection to antitoxins as prophylactics. But this is an unsettled question in my mind and with a doubt as to what is, I am not yet prepared to use diphtheria antitoxin in the absence of the diphtheria toxin.

Dr. Felix Larue read a paper on

A CASE OF A WHITE MAN, 37 YEARS OLD, WITH AN HEPATIC ABSCESS, COMPLICATED WITH A METASTATIC ABSCESS OF BRAIN: EPILEPTIFORM CONVULSIONS AND HEMIPLEGIA —DEATH. [See page 733.]

DISCUSSION.

Dr. Matas said that the case was indeed a remarkable one in several ways. To begin with, the case was exceptional in its origin. The majority of our cases are of the tropical type—single, non-metastatic abscess due to amœbic dysentery. This case was multiple, metastatic, and must have been caused by septic (pyogenic) infection from the bowel. The seat of metastasis was also exceedingly uncommon, the secondary abscess being formed in the right cerebral hemisphere. The treatment of the case was also complicated by many puzzling features.

At the first consultation with Dr. Larue we were struck by the very slight enlargement of the liver anteriorly. Notwith-

standing, a comparatively superficial puncture, made but a few days after, in close proximity with the cartilage of the right eighth rib, about two inches from the surface, permitted us to remove without difficulty over seventeen ounces of typical anchovy sauce-colored pus. When we returned on November 6, 1894, we were so confident that we were dealing with a large abscess of the right lobe that we began by making a curvilinear incision, following the right costal arch, about five inches in length, and resected subperiosteally the eighth, ninth and tenth costal cartilages and a portion of the tenth rib, with the view of providing a sufficient opening for drainage and packing after the retraction of the liver, which follows the evacuation of large abscesses. Having made a sufficient opening to the peritoneum, we then punctured with the exploring needle, with the view of ascertaining the thickness of the tissue that intervened between the abscess cavity and the peritoneal surface. To our astonishment there was no pus. Repeated and deep punctures with a long needle attached to the aspirating chamber failed to reveal even a trace of pus. We then decided to pack the wound with iodoform gauze, and wait a few days before exploring again.

On November 13, 1894, the packing was removed and the wound found in good condition. A systematic attempt was now made to find pus, but nothing more than a sero-sanguinolent fluid was ever withdrawn, amounting to a tablespoonful, from a point corresponding to the site of the old abscess. The right lateral and posterior surfaces of the organ were now explored deeply with the long No. 3 needle of the Dieulafoy aspirator—always with negative results. In the meantime the patient had fever of a typical hectic type, and the wonder increased with the negative results with exploration. Our systematic exploration was repeated again and again until it appeared as if the original abscess had been mysteriously absorbed. These repeated failures were exceedingly discouraging, especially as the general condition of the patient plainly contradicted the theory of absorption; nevertheless, we felt that we had pushed exploratory puncture to the fullest limit, and that we dare not go further without actual danger; we searched carefully for fever-causes in all the other organs and failed to find a sufficient explanation of the fever. After an interval of rest, during which the patient was carefully watched, local examinations being made daily, no marked change in the outline of the liver was noticed, though hectic fever persisted.

On December 24, 1894, I discovered a point of softening in the middle line about two inches below the xyphoid carti-

lage. I had nothing but a hypodermic syringe with me, but I desired to try it; and introducing it full length, aspirated a few drops of a distinctly yellow, creamy pus. Thereat we were prepared to operate, and we verified the existence of pus superficially in the left lobe; and, cutting alongside of the needle, reached a superficial subperitoneal collection that did not hold two drachms of pus. This was evidently a new collection, and not the abscess that was causing all the mischief. We again tried another systematic exploration, and this time we found pus by exploring through the bottom of the *first* wound on a level with the resected ribs. The pus was found at a great depth. The long needle was buried in the liver to its full length before pus came into the aspirating chamber.

We did not propose to allow this abscess cavity to be missed again, and we immediately introduced a long, narrow knife alongside of the needle, and followed this with the closed blades of a uterine dilator. The pus now came in great abundance, grayish-yellow, without marked odor. Fully two pints of pus were discharged by the opening, which, fortunately, had not completely cicatrized.

This abscess cavity was evidently situated in the posterior portion of the liver, as the index finger introduced to the fullest depth could not touch the posterior wall. It was only with a long-handled hysterectomy forceps that the furthest boundary could be touched. In order to reach this focus about 4½ inches of hepatic tissue had to be cut through. It is almost unaccountable how the cavity escaped when the repeated explorations were made a few days previously in the scapular line. The conclusions that must be drawn from this experience are that even the most systematic exploration of the liver is fallacious, and that as long as the hectic symptoms persist the surgeon must continue in his search until the pus is found.

The next interesting feature in this case is the development of metastatic suppurative cerebritis twenty-six days after the abscess had been drained and was doing apparently well. The mode of onset of the cerebral symptoms is exceptional, *i. e.*, a series of epileptiform convulsions which followed in rapid succession. The convulsions were of the most typical sort, and were followed by intervals of lucidity. The intelligence was perfectly clear immediately before the epileptiform symptoms. The first suggestion that came to my mind was that the symptoms were analogous to those of the *epilepsie pleuretique* of de Cerneville, Vallin, etc., and were possibly of reflex origin. The rapid development of hemiplegia and other cerebral symptoms pointed to the organic character of the lesion, which was confirmed by the autopsy. The autopsy revealed a

large cerebral abscess which filled the right anterior lobe and compressed the capsule. There was no evidence of embolism of the middle cerebral or anterior cerebral arteries, and the abscess must have been caused by septic capillary emboli.

Dr. Parham said that, while he wished in no manner to be construed as criticising the treatment of the case, he did wish to emphasize the inefficiency and unreliability of aspiration of liver abscess. It was evident that Drs. Larue and Matas both took their view of the matter, since they made an attempt a few days afterward to perform the more radical operation. At this time, when two ribs had been resected, they failed on exploration to find any pus, so incision was out of the question. Had they been prepared to operate radically when the aspiration was done, the quantity of pus would have made it readily accessible to operation by resection and incision of the liver. While, therefore, any surgeon, under the same circumstances, would have acted just as Drs. Matas and Larue had done, still the experience of such a case would urge us, just so soon as exploration has revealed the presence of an abscess, to make our preparation for evacuation of the abscess by means of an incision sufficiently large to enable us to deal thoroughly with the abscess walls by scraping and afterward stuffing with iodoform gauze. Dr. Parham also agreed with the reader of the paper as to the difficulty of finding deep-seated pus in the liver, and referred to the case of a suspected abscess of liver pointing below the costal arch, in which, finding pus on exploration, he sewed the liver subsequently to an abdominal incision and, waiting forty-eight hours for adhesions to form, had been compelled to abandon the opening by incision because no pus could again be found in exploration. The case afterward was found to be, or thought to be, by Dr. Logan, who succeeded me in the service, one of malignant disease of the liver.

A. McSHANE, M. D.,
Secretary.

EXTRACT FROM THE PROCEEDINGS OF THE SHREVEPORT MEDICAL SOCIETY, HELD MARCH 5, 1895, SHREVEPORT, LA.—DISCUSSION.

Dr. Randall Hunt, essayist for the occasion, read an essay entitled "Hypnotism." [See page 726.]

The president asked Dr. C. H. Blackman, a visitor upon this occasion, to open discussion.

Dr. Blackman, after complimenting Dr. Hunt upon his paper, said that he believed he had nothing to say further than

that he had had some experience in the observation of hypnotic trials, but only in a few instances, and thought that there was something more in it than mere suggestion as contended for by some.

Dr. W. J. Mobley, also a visitor, was asked for his views upon the subject of hypnotism. Dr. Mobley expressed himself as feeling interested in the matter, and complimented the essayist, and added that, unlike Dr. Blackman, he had never had any experience in such things, but believed that there might be some hidden force that was not yet fully understood.

Dr. J. S. Callaway complimented the essay, but gave no expression to his views.

Dr. T. J. Ford corroborated some of the statements made in the paper, especially in regard to the case of the young lady who was hypnotized by Dr. Hunt, and into the flesh of whose arm a pin was thrust without seeming to cause pain, and who, after being brought from under the hypnotic influence, was not aware of the fact that a pin had been thrust into her arm. Dr. Ford assured the society that the features of the case were genuine, both the lady and Dr. Hunt being above suspicion; and referred to cases of amputation performed on patients while under the hypnotic influence by Charcot at the Salpetrière, in Paris.

Dr. T. J. Allen mentioned his observations in cases of mesmerism, and inquired of Dr. Hunt if mesmerism and hypnotism were the same. To which Dr. Hunt replied that he had no doubts of their being identical. Dr. Allen then recounted cases of mesmerism. One instance he related of a young lady who was mesmerized and blindfolded with her back toward both the mesmerizer (Dr. Heller) and Dr. Allen. The latter produced his watch, and at Dr. Heller's request opened it so that Dr. H. was enabled to read the name of Dr. Allen with his initials engraved within the case, dimly outlined, however, while the young lady, blindfolded and with her back toward them, could not possibly have distinguished anything. Dr. H. asked the young lady what was in the hands of Dr. Allen. She replied "A gold watch." Dr. H. inquired if there was anything engraved within the watch. She replied "Yes, a name;" and then gave Dr. Allen's name with the initials. Dr. Allen affirmed before the society that there was not and could not have been any collusion in the matter, and that it was impossible that the young lady could have known anything of him or the watch, and especially of the engraved name. Dr. A. gave some other instances of a mesmerism of a minor nature that seemed startling in their results.

Dr. J. F. Griffin believed that there is some occult force

or power with which the profession is as yet unacquainted. He thinks that hypnotism is in some way akin to the manifestations in the theosophy of India as illustrated in the teachings of Madame Blavatsky, and he alluded to the statements of Stinson Jarvis, made in the journal called the *Arena*, but thought that these should be taken *cum grano salis*. He thinks also that there is a relation between hypnotism and somnambulism, and related a case he knew of a lady, who, in her ordinary state, could not sing at all, but in a state of somnambulism could sing exquisitely. He alluded also to the well known case of the girl related by Dr. Abercrombie, who had lived in the family of an English minister, who was quite ignorant, but who, in a somnambulistic state, would quote passages of Latin and Greek which she doubtless had acquired by listening to the minister reading the same. Whether these belonged to the class of hypnotic phenomena he could not say.

The discussion having ended, on motion it was resolved unanimously that Dr. Hunt be requested to allow that his paper should be published in the New Orleans Medical and Surgical Journal, and that the Committee on Publication, with his consent, should forward the same for publication.

J. F. Griffin, M. D.,
Recording Secretary.

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Editorial Articles.

THE SIMPLE CONTINUED FEVER OF LOUISIANA.

The interesting paper of Dr. Thos. Y. Aby in this number of the JOURNAL is a valuable contribution to the literature of a disease, the existence of which has long been recognized in the Southwest, but of its etiology and pathology nothing definite is known. There are many cases of persistent high temperature due to a purulent focus somewhere in the body, in a Fallopian tube, a maxillary or frontal sinus, or in any organ susceptible to infection; and this, apart from any tubercular lesion. After eliminating typhoid fever, malarial fevers, tuberculosis, and circumscribed accumulations of pus, we still have left a group of cases that present no striking feature except an elevation of temperature, usually slight, with its attendant headache and lassitude. The picture has been accurately drawn by Dr. Aby, and it is one that is familiar to every physician in Louisiana and Texas, where the disease is also frequently met with. The case of a young lady comes to mind, who had a slight elevation of temperature for two years, with the exception of one month, when it was normal. The patient

took her own temperature daily, and the record was an extraordinary one. With the exception of one month the temperature ranged from 99½ to 102 degrees. The patient has been free from fever for over a year, and has regained the weight lost during her protracted fever. A careful search failed to reveal any purulent accumulent in the cavities of the head; the generative organs had never been the seat of disease, and repeated physical examination showed the lungs to be in perfect condition. All of the organs of the body acted properly, except the intestines; there was a tendency to constipation, which, however, antedated her fever. A variegated course of antifebrile medication was pursued until every available drug had been tried; then she was let severely alone, and hygiene was relied on. At the end of about two years the fever went away. This was an extreme case, but it serves to bring out forcibly the protracted course of the fever, and its non-interference with the tasks of daily life.

The fever in question has always been a matter of lively interest to every physician practising in the South. A great many of the older physicians stoutly denied that typhoid fever was a steady factor in our mortality lists. At a meeting of the defunct New Orleans Medical and Surgical Association about twelve years ago, when the continued fevers were under discussion, some of the older members, who had had much practical experience, inclined to the belief that true, typical typhoid fever did not exist in New Orleans; others thought that the type, or physiognomy of the continued fevers, was undergoing somewhat of a change, so that the malarial element so commonly seen in the early days, when New Orleans was comparatively small, was becoming less important, and another, an adynamic, feature seemed to acquire greater prominence. In those days it was not unusual to hear it boldly asserted that every case of true typhoid fever that died in New Orleans was imported from some other locality. With increasing experience and knowledge of typhoid fever in its various forms, we find that it gradually grew in our mortuary tables. In the *Johns Hopkins Hospital Reports*, Vol. IV, No. 1, which was entirely devoted to typhoid fever, Dr. Wm. Osler gives a table of mortality from typhoid fever in thirty-nine cities provided with

sewers, and in 313 not so provided. New Orleans falls in this last category. In the sewered cities the average mortality from typhoid is 2.4 per 10,000 of population; in unsewered the average is 10 per 10,000—a little more than four times as high as that in the sewered cities. The rows of black columns showing the relative mortality from typhoid are very striking. In Catania the mortality is greatest, 19.8 per 10,000; in New Orleans it is smallest, 2.7 per 10,000; *i. e.*, in the unsewered cities. New Orleans has thus a typhoid mortality but little above that of well sewered cities. The explanation is given in a brief note in Osler's chart: "Water supply from cisterns *above ground*." It is more than possible that a chart prepared in the near future may show a larger mortality from typhoid, since the disease is becoming more widely recognized than in former times, and there will be fewer deaths from "bilious remittent fever" and more from typhoid fever.

It gives us pleasure to state here that work on the sewers of New Orleans is steadily going on, and in a reasonable time this city will be supplied with as good a system of sewers as any other city in the Union. While speaking of the water supply of New Orleans and the spread of typhoid fever, it might not be amiss, in view of the filthy condition of some of our dairies, to quote from Osler's report: "It is possible that the virus may be spread widely through the water, not in dosage potent enough to cause the disease except in very susceptible persons, but in the presence of favoring conditions capable of rapid development. Thus one or two typhoid bacilli in a glass of water may be, probably often are, taken with impunity by an individual not specially susceptible; but a few in water used to rinse a milk can or jug would find in the milk such a suitable medium for growth that in twenty-four hours the food would be highly infective."

One of the most interesting discussions on continued fever that it has been our privilege to read was that elicited at the last meeting of the Association of American Physicians (*Transactions*, Vol. IX, 1894) by a paper of Dr. Gilman Thompson, of New York, who treated of malarial organisms in typhoid fever. He mentions that much attention was in former times given to the subject, but that the belief in the

coexistence of the two diseases in the same individual was gradually losing advocates. Thompson says: "The theory originally advanced by Woodward, that a 'typho-malarial fever' exists as a specific and independent disease, other than a typhoid fever made irregular by admixture with malarial poison, has been more and more abandoned by competent clinicians, as it subsequently was by Woodward himself, although it is occasionally revived in the South and Southwest in discussions upon the continued fevers of the South, especially in newly settled localities whose success as health resorts is closely connected with a belief in the entire absence of typhoid fever."

We are rash enough to assert that the so-called simple continued fever is recognized as a clinical entity in localities that are perfectly innocent of any ambition to shine as health resorts; and it is recognized as such by men who know typhoid fever when they see it, and who seek as earnestly after the truth as any of their brethren who do not possess the same opportunities for observing the disease, but who do not allow their critical faculties to suffer from disuse.

Dr. Thompson adduced evidence that conclusively established the existence of the plasmodium of malaria in the blood of a patient suffering from typhoid fever. He also briefly refers to the paper of Dr. Johnston, read six years ago, in which he summarized replies received from 350 physicians residing along the Atlantic and Gulf seaboards, to the following questions: 1. "Do you recognize in your practice a distinct type of continued fever, which is neither malarial nor typhoid, or one which is composed of both—a typho-malarial fever?" 2. "Do you think that the typhoid fever which you see is modified by malarial infection?" The answers to the first question corresponded with the geology of the region. The existence of a "typho-malarial" fever was very generally denied in the Northeastern States, and affirmed in more than one-half of the answers received from Eastern North Carolina, South Carolina, Georgia and Florida. In answer to the second question, some stated that nearly all forms of fever are more or less complicated by malaria; while others, living further to the northeast, affirmed that there were no mixed continued fevers.

In the long and interesting discussion that followed the reading of Dr. Thompson's paper, the fact was strongly brought out that many cases of "typho-malarial" and "malarial remittent" died of plain typhoid fever. Dr. Osler contributed cases showing the coexistence of the malarial and enteric infections; he called attention to the fact that chills in typhoid fever are not due exclusively to malaria. Dr. F. P. Kinnicutt was not familiar with any other exact observations showing the double infection with malaria and the typhoid bacillus. Dr. Kinnicutt and the other speakers (except Dr. George Dock) seemed not to have known of the valuable investigations of Dr. J. J. Kinyoun, the able bacteriologist of the Marine Hospital Service. Dr. Kinyoun examined the blood and fæces of more than a hundred men, and in many he found the plasmodium in the blood during the course of undoubted typhoid fever. The JOURNAL commented on Kinyoun's work (May 1, 1890), which perhaps remains the largest single contribution to the subject of coincident malaria and typhoid.

Dr. Janeway called attention to a point that was very forcibly brought out by Dr. I. T. Young, of Lindsay, La., in his paper on typhoid fever (see JOURNAL, June, 1894), namely, the influence of the coal tar antipyretics in producing chills in the course of typhoid fever.

The most valuable remarks were made by Dr. George N. Sternberg, Surgeon General U. S. Army. His skill as a bacteriologist, and his wide personal knowledge of yellow fever, malarial fevers, and all forms of fever that prevail in the tropics and in the Southern States, gives his views an importance that does not attach to those of writers who study Southern fevers from the safe but distant professorial chairs of Eastern colleges. Dr. Sternberg believed the concurrence of malaria and typhoid to be not very rare. He desired, though, to call special attention to the fact that the cases described by Dr. Thompson (occurring in New York City) differed from those commonly diagnosed as typho-malarial in the Southern States and in other sections of the country. These cases are usually of a comparatively mild character, and do not present distinct malarial paroxysms characterized by a chill and a sudden rise of temperature. During the first week the fever is irregular and the physician usually prescribes quinine. In the second week

the temperature does not oscillate much, and as quinine has no effect the physician says that the disease has assumed the typhoid type. It has really been typhoid from the outset. Dr. Sternberg had studied the statistics of continued fever which occurred in our armies during the war, when they were classified as simple, continued, typhoid and typho-malarial. These statistics showed that the mortality from the fever diagnosed as typhoid was very much greater than that from typho-malarial. If the so-called typho-malarial fever was a mixed infection, it presented the anomaly of being less fatal than simple typhoid fever. In other words, if it was typhoid with a malarial complication, the complication modified the severity of the specific fever. This hardly seems probable, and, in Sternberg's opinion, these are cases of mild, atypical typhoid. It is possible, he adds, that we are mistaken in this, and that there is a widely prevalent endemic fever which is specifically distinct from typhoid; if so, it is equally distinct from the malarial fevers, as quinine has no effect upon it.

This last statement of Sternberg's coincides with our views and with those of numerous other physicians who have seen cases that are neither enteric fever nor malarial fever. Dr. Jas. E. Reeves, the distinguished microscopist of Chattanooga, Tenn., insisted on a morbid entity distinct from typhoid fever, and yet insensible to quinine, which, indeed, is often more detrimental than remedial. He dwelt particularly on the absence of immunity from a second attack of the simple continued fever. One attack of typhoid, even if atypical, confers immunity for the remainder of life; in "continued malarial fever" no such immunity is conferred, but, on the contrary, the patient is all the more liable to a second attack. We think that Dr. Reeves strikes the key-note of the situation when he asks: "May it not be true that there is an unrecognized specific fever, intermediate in its march and complications between enteric fever, and the forms of malarial fever, *which should be called by some other name?*"

It is the belief of many physicians that there is such a disease. If this belief be well founded, there is at hand an opportunity for some Southern pathologist to acquire enduring fame by solving the riddle, and linking his name to a malady that causes much suffering.

THE STATE MEDICAL SOCIETY.

As the time for the fifteenth annual meeting approaches increasing interest is felt in the measure of success that will crown it. The publication, last month, of the proceedings of the meeting of 1894 has served to emphasize the growing importance of the State Society as a scientific organization and moulder of events. The handsome volume that records the doings of our last meeting may well be a source of pride to any one who is privileged to be enrolled among the members of the society. The task of preparing was one of greater magnitude than is commonly supposed, and many thanks are due to the committee that labored so faithfully in behalf of the society.

The responses to the appeals of the chairmen of the various sections give promise of a large and fruitful meeting. In addition to the usual features of our meeting operations will be performed, as was the case when the Southern Surgical and Gynecological Society met in New Orleans. This feature will greatly enhance the scientific value of our meetings and will carry out in a very practical manner that object of our constitution that refers to mutual advancement in matters medical.

It is as yet too soon to give an outline of the prospective work before the society. The indefatigable Committee of Arrangements will sustain its enviable record and hand in a report of work that will make it profitable for every member of the society to attend our next reunion in May.

Abstracts, Extracts and Annotations.

MEDICINE.

A CASE OF EXOPHTHALMIC GOITRE TREATED DURING TWO YEARS WITH TINCTURE OF STROPHANTHUS.

By Charles O'Donovan, M. D., Baltimore.

On January 1, 1892, I was called in to see M. T., female, white, an orphan since childhood, unmarried, age 36 years, who

was suffering from exophthalmic goitre, and who gave the following history:

As long as she could remember she had been always thin and delicate, of a nervous, excitable disposition, with a poor and capricious appetite. She had always a cough since childhood, and once, about eight years ago, she had expectorated a few mouthfuls of blood, but there had been no return of this symptom. Her greatest weight in the past had been 120 pounds, but she weighed at the time that I saw her 110 pounds. Her height was about 5 feet 6 inches.

She menstruated for her first time at 18 years, but had never been regular, having missed her periods entirely between her twentieth and twenty-second years, and at several times she had missed for five or six months. She had been regular during the last two years.

Her periods when I saw her first lasted for three days and her flow was rather scanty; she suffered some pain before the flow and during the first two days. She had first noticed the swelling in her neck when she was 23 years old, when it came on after exposure to the contagion of mumps; but whether she had mumps, or whether, looking for mumps she noticed the goitre which had for a long time existed unnoticed, or whether the goitre developed either during or after an attack of mumps, she is uncertain, but she and her family have always connected the two together.

Ever since she has been able to work she has been compelled to support herself by sewing, always doing hand work, and for several years the work has been very fine and delicate, to which she has attributed the eye protrusion and stoop of shoulders which are so prominent in her case.

So much for her past history; her condition at my first visit was as follows: She was confined to her bed, to which she had gone during the last two days because of increasing dyspnœa with rapid, fluttering action of the heart; her pulse rate varied between 130 and 150, being rapidly accelerated by any excitement, even the slightest, such as the closing of a door or the appearance of a stranger in the room; the pulse was weak and also intermittent at times. The pulsation of the carotids was very marked. She complained chiefly of a sense of suffocation that compelled her to be propped up on pillows, and a craving for air that was insatiable; although the weather was cold she had the window open near her bed, and objected strongly to having it closed.

She was extremely restless, constantly changing her position in bed, and never comfortable for more than a few moments in any one posture. Her appetite was lost, even the

simplest foods being hard to retain and digest. She slept very poorly, waking frequently during the night with a sense of suffocation, or starting up in a nervous fright from some unpleasant dream. She coughed a good deal, but her expectoration was scanty, a little tenacious mucus at most. Her extremities were always cold and slightly blue from deficient circulation, yet she felt always hot and would uncover herself if not watched. Her heart sounds were normal, although the action was jerky and irregular. The urine was pale, but contained no albumen. Exophthalmos was pronounced, both eyes protruding so that the lids seemed tightly drawn over the balls: vision was perfect. The ophthalmoscope was not used.

The goitre was not large, but was unmistakable. She was kept in bed, with careful attention to her diet, and iron and digitalis were ordered for her. Each day her condition grew worse, her heart acted more rapidly and feebly, her sense of suffocation increased, her appetite failed completely, so that she would take next to no food. So much had she failed that by the first week in February her case seemed hopeless. The little food that she took was aided by stimulants in increassing quantities, until on February 6 she could take only a little white of egg and sherry, and she seemed about to die.

She lay unconscious except when urged to take her food, which she always resisted, but which was fed to her with a spoon in small quantities, repeated as often as possible. By this time her pulse rate was 160 to 170, and so small and thready that it could hardly be counted. As a last resource I ordered tincture of strophanthus in ten-drop doses every four hours, and no other medicine, all energy being directed to nourishment. The next day her pulse was distinctly stronger and slower, about 155 to 160, and she seemed a trifle easier. The dose of the strophanthus was reduced to ten drops three times a day. Day by day she gradually improved, growing brighter and stronger, taking more nourishment, complaining less of suffocation and faintness, until after four weeks she was allowed to get out of bed, and gradually got about.

For two years she continued without intermission to take ten drops of tincture of strophanthus. She was able during that time gradually to assume the duties of keeping house, cooking, sweeping and cleaning up about the house. Several times she had attempted to return to her sewing, but whenever she stuck at it regularly she would fail in health.

In February, 1894, two years after I saw her first, her condition was as follows: Pulse 126, weak and intermittent; her heart sounds were normal, but irregular; her weight was 108 pounds. She had pains in her back and limbs, sometimes

very severe; she was nervous and fidgety, especially at night, when she would often feel like suffocating and must have air. Her appetite was usually good and digestion fair, but she soon tired of any food and must have changes; her tongue was fairly clean, but large and flabby. She was very thin, stooped like an old woman, and presented generally a very miserable appearance.

She often noticed at night that her feet and ankles were swollen. She coughed a great deal, especially at night, and expectorated considerable white mucus; sometimes the expectoration would be yellow; there was nothing in her lungs except some few bronchial rales in the medium sized tubes. The goitre had lessened distinctly in the two years and the exophthalmos was a little less, although still very pronounced.

Since February last I have heard that she has been steadily at work, but I have not lately been able to see her.—*Maryland Medical Journal.*

PSEUDO-MEMBRANOUS ENTERITIS, WITH REPORT OF A CASE.*

By John Grant Coyle, M. D.

The subject of this paper, pseudo-membranous enteritis, bears no less than twenty-seven distinct names, of which I have selected the simplest and most rational to head this article. It would be inferred from the existence of so great a variety of names that the disease in question was a very common one, indeed of almost daily occuraence. But upon questioning some of my older colleagues concerning their experience with this disease, I elicited that of the five whom I questioned the aggregate number of years they had been in practice was eighty-nine, yet not one of them had seen a case. Having had the good fortune to observe a case, I thought it worthy to present my observations to the association with some collated facts and opinions about this singular disease.

Membranous enteritis has been written about by many authors. The examination of their writings discloses a wide divergence of opinion regarding the category in which the disease should be placed, some regarding it as a distinct disease and others holding that it is a symptom of general gastro-intestinal derangement. This difference of opinion stamps it as a more or less obscure disease, elusive of close observation, and such, in my opinion, it is. Modern authors, however, unite in recognizing the affection as a disease by itself and give it a place in every system of medicine.

*Read before New York County Medical Association, May, 1894.

Etiology.—It occurs almost exclusively in women between the ages of 30 and 45, very rarely in men, and hardly ever in children. The subjects attacked are generally nervous, excitable, or hypochondriacal. Whitehead* noted that many of the women had flaxen hair and light complexions.

Symptoms.—The chief symptoms are the discharge at irregular intervals and for varying lengths of time of membranous exudation from the bowels, preceded by loss of appetite, gastric disturbances, mental depression and great lassitude, and accompanied by severe pains located in the colon and by lack of febrile excitement.

Were these the only symptoms the diagnosis would be exceedingly simple; but as a rule the patients have suffered for so long a period with symptoms of fermentative dyspepsia or gastro-intestinal indigestion of apparently commonplace type that the physician has directed his treatment to these prominent symptoms so unremittingly that they have masked their real origin, which was the gradual formation of an exudation of membranous character upon the mucous membrane of the large intestine.

At the time of the attack, during which the exudations are cast off and appear in the dejecta, the pain may be constant and severe, or it may be intermittent, like that of an ordinary gripe, or it may amount only to a feeling of rawness along the line of the ascending colon. Frequently the pain precedes the discharge of membranous exudates for from ten days to two weeks, during which time the dejecta are normal in appearance and composition.

The menstrual function is frequently disturbed. In the case herewith reported the menstrual flow had, on two occasions long separated in time and not coincident with the discharge of enteric membrane, contained small but numerous pieces of reticulated membrane unaccompanied by clots.

The Membrane.—The formation of a false membrane anywhere in the body is a curious phenomenon which is of unfailing interest to the clinician and the pathologist alike. Owing to the location of this disease it is impossible to study the processes of the formation of this curious pathological product, enteric membrane. It can not be removed except by the processes of nature; and hence we are compelled to confine our observations upon it to the remains of it found in the dejecta.

The membrane as it appears in the fæces is always accompanied by some of the intestinal mucus, which appears in stringy pieces, like the product of laryngeal catarrh or in more or less solid plugs

*Quoted because my case had flaxen hair and a light complexion.

In the process of dislodgment the pseudo-membrane is torn or broken into pieces of various sizes, from that of a pin-head to huge masses several inches in length and of considerable weight. In one case reported in France in 1855 the exudates weighed en masse 3 kilograms. In another case, reported by the same author, the membranes were longer than the patient. In my own case there was one piece six and a half inches in length and an ounce and a half in weight. The larger pieces frequently exhibit the tubular form of the bowels. Distinctly annular portions of this membrane will always be found in the passages occurring during the early period of the attack. The membrane varies in consistency from extreme softness to a firmness equal to a vaccination crust.

Microscopically the membrane generally presents a reticulated surface upon the side farthest away from the intestinal mucous membrane. The surface which rests upon the mucosa of the intestinal tube is broken and rough, presenting many inequalities. The membrane is essentially and almost entirely mucin, and its laminated structure shows that it is not the result of continual or steady exudation, but that from time to time the exudative process ceases for an unknown period. When this process is again resumed, whatever happens to be on the then surface is entrapped and imprisoned between that surface and the new layer of mucin. Thus we find small fragments of undigested food. I have found pieces of an apple entirely unchanged—indigestible substances, such as fig-seeds, minute fecal fragments and small granules of unrecognizable character.

No fibrin is found in these membranes, and herein lies the vital difference between the products of this disease and those of other diseases of the intestines, accompanied by membranous formations, more especially intestinal diphtheria, that rare and horrible disease.

Strange Features.—The disease is remarkable in that, despite the undoubted fact that it is the severe inflammation of the intestinal mucous membrane that produces and discharges the false membrane, there is scarcely any fever except what will ordinarily occur from easily assignable causes, such as anorexia, worry, and loss of sleep.

Again, it is on record that patients with this disease have passed yards of membrane of such length and size as to fill a chamber vessel and to be mistaken for a gigantic tape-worm; yet such cases have been able to resume their ordinary occupations in a few hours after such an occurrence.

Differential Diagnosis.—During the period preceding the formation or discharge of the membranes this disease may

simulate simple fermentative dyspepsia or intestinal indigestion. It can not be differentiated from either of these until the acute pain comes on, when an examination of the stools will, in the majority of cases, at once reveal the nature of the disease. As the pain in some cases is located at the site where the soreness in appendicitis develops, it might perhaps be mistaken for that disease; but the apyrexia and absence of vomiting would soon settle the question. From diphtheritic inflammation of the intestinal canal it can be distinguished by the absence of diphtheria elsewhere, and the absence of fibrin in the membranes.

Prognosis.—The disease is chronic. It can not be cured. There will be intervals of good health in some cases, but generally the disease once developed produces permanent derangement of the functions of the intestinal canal which makes the patient susceptible to attacks upon slight causes. An acute attack of pain and membranous diarrhœa, lasting one day, was caused in my patient by eating a piece of raw apple when the person appeared to be in good health. The attack ended only when the apple was passed undigested, but very much hardened.

The disease lasts for years, the longest recorded case enduring for fifteen and the shortest for three years.

Treatment.—During the acute attacks the best treatment is liquid food, or very light diet, excluding meat, adding digestives if necessary, and saline enemata of warm or cold water, preferably cold, with morphine internally to relieve pain, Counter-irritation for pain is useless. The strength of the enemata may be varied from two drachms to an ounce of borax, bicarbonate of soda, or salt to the quart of water. Enemata should be given night and morning anyhow, and repeated whenever the patient feels adesire for movement of the bowels. These enemata serve to cleanse the rectum thoroughly of shreds and mucus and prevent the accumulation of foreign matter and diarrhœa, which will occur if the rectum is not washed out. A purge, preferably a saline, should be given at the commencement of an acute attack. The watery movement caused by a saline purge assists in detaching the membrane, and relief soon follows. The citrate of magnesia, Rochelle salts, or the always reliable sulphate of magnesia may be employed for this purpose. Heat to the abdomen for relief of the pain is of little use. It may serve to impress the patient that something potent is being done for her, and, as these cases are generally impressionable women, moral effects must not be lost sight of. Rest in bed and quiet in addition to the above measures will shorten the attack.

In the intervals between the attack the diet must be restricted to those substances which give the patient no disturbances of digestion. Laxatives for the bowels, especially cascara in small doses, digestives, such as pepsin and pancreatin, whenever they appear to be necessary, and tonics for improvement of the general health constitute the only efficient means at our command to render life endurable for these cases. In spite of all treatment, the patient will from time to time suffer from fermentation in the stomach. Sulphite of sodium in from 5 to 10 grain doses after meals does more for this annoying symptom than anything else. With our present knowledge the disease must be classed as one of the chronic incurable diseases that do not furnish much comfort to the medical attendant except as affording an opportunity for experimental therapeutics.

History of Case.—The patient, a well-nourished woman of 35, single, by profession a nurse, had been under treatment some months before for chronic constipation, which had yielded to drug treatment, the chief feature of which had been small doses of fluid extract of cascara sagrada at regular intervals.

On April 24, 1893, while attending a case of pneumonia which required a great deal of exertion on her part, she was seized with an excruciating pain in the rectum, which she at first attributed to œdematous piles, from which she had suffered before, undergoing treatment for constipation. As her bowels were irregular at the time, she dosed herself with cascara without obtaining any relief from the pain when movement did occur. The pain continued with undiminished severity until on April 27 she gave up her case and sought medical advice.

I, too, believed at first that the pain was due to the inflamed and swollen hæmorrhoids, but the persistency of the pain under appropriate treatment for the piles, together with the intense severity of it, led me to look further for a cause. The pain became localized after two days in a new region, the right iliac fossa. Upon the day that this occurred the patient passed a piece of intestinal mucous membrane, annular in shape and nearly five inches in length. There was no discharge of blood accompanying it, nor had there been at any time a temperature over 99 deg.

The patient was kept on liquid diet and rectal injections of salt and water for five days, during which the dejecta contained constantly mucus, shreds of false membrane and pieces of genuine mucous membrane. The pain disappeared after the first large discharge of membranous matter, but soreness along the line of the colon persisted for ten days. Retention of urine necessitating the use of a catheter during convalescence. She made a good recovery, an denjoyed good health until her second attack, in November.

For three weeks preceding this attack in November the patient had had headaches, gaseous eructations, and a feeling of great lassitude. Severe pain came again in the right iliac fossa, and after twenty-four hours the passages contained blood and mucus, shreds and bits of membrane. This was the first appearance of blood discharges. After three days the blood disappeared, but larger quantities of false membrane replaced it, and for ten days every movement contained some shreds. The second attack subsided in two weeks from its inception. She was not confined to the bed during this attack, which occurred while nursing a case in a private hospital. She has enjoyed excellent health since, with the exception of the attack lasting one day, caused by a piece of undigested apple, and the further exception of occasional gastric fermentation.

The previous history of this patient is worth noting. Her father died from phthisis three days before her birth. Her mother is living, at age of 70, and her only sister is 39, both healthy. Patient had typhoid fever at 19, and had uterine hæmorrhages during the course of the fever. Menstruation did not reappear for six months after the attack of typhoid. Uterine hæmorrhages then recurred, and continued at intervals for ten years. When she finally undertook treatment for them they were found to be due to polypi and were cured by curetting and tonic treatment.

Since 1885 she had had dysenteric attacks once a year or so, as also occasional loss of appetite and gaseous accumulations in the stomach, relieved only by forced vomiting. It is difficult to estimate the significance of these dysenteric attacks. While she can not recall that they were due to indiscretions in diet, yet their infrequency—occurring but once or twice a year—renders it very possible that they were ordinary attacks of irritative and fermentative diarrhœa.—*American Medico-Surgical Bulletin.*

Book Reviews and Notices.

Laboratory Guide for the Bacteriologist. By Langdon Frothingham, M. D. V. Illustrated. Philadelphia: W. B. Saunders, 1895.

In this handy little book, the author has gathered a good deal of practical information that renders the title a very appropriate one. He is evidently a very skilled and practical

worker in the field of bacteriology. For several years he has used a convenient plan of laboratory work, which was the outcome of daily work; and in his condensed "Guide" he gives the substance of practical technical details usually scattered through a number of larger works. Workers in microscopy will find the "Guide" a welcome laboratory companion.

A. McS.

Relations of Diseases of the Eye to General Diseases. By Max Knies, M. D., Professor Extraordinary at the University of Freiburg; forming a supplementary volume to every manual and text-book of Practical Medicine and Ophthalmology. Edited by Henry D. Noyes, A. M., M. D., Professor of Ophthalmology and Otology in Bellevue Hospital Medical College of New York. William Wood & Co.

In presenting this book to the medical world, Professor Kines has indeed given a valuable aid and go-between to both the intelligent physician and specialist. This is the first work ever published on this subject and Professor Kines has every reason to congratulate himself upon its thoroughness. If there is anything to be added to the realm of medical knowledge it seems to be the German student's lot to furnish it. They go over the whole field of medicine, searching for omissions, and when, with their accustomed attention to what is needed to make the whole perfect, a new principle or truth is brought out, and the outside world wonders why such a thing had not been done before.

That a great deal contained in this work is the result of his investigations during his intimate associateship with the late Professor Horner, of Zurich, gives the work more solid value, for Professor Horner was both a hard student of general medicine as well as a noted oculist.

While the work is very valuable in many ways, it lacks a great deal of being perfect. The author lays more stress upon the relation between general diseases and eye disturbances, and devotes but little time to the influence of eye diseases upon the general system. The work is written more from the standpoint of the intelligent physician than as an aid to the oculist. The work is arranged in nine chapters:

1. Diseases of the Nervous System, covering 244 pages—more than one-half the entire volume.
2. Diseases of the Skin.
3. Diseases of the Digestive Organs.
4. Diseases of the Respiratory Organs.

5. Diseases of the Circulatory Organs.
6. Diseases of the Urinary Organs.
7. Diseases of the Sexual Organs.
8. Poisons and Infectious Diseases.
9. Constitutional Diseases.

In Chapter I, under Diseases of the Trigeminus, he warns the student against attaching any special importance to the hyperæmia of the fundus, because it is due to the diminution of intra-ocular pressure which is usually present in such cases.

In the same chapter, under the head of hysteria, he cites a rare symptom: "Unilateral or bilateral diplopia, or monocular polyopia. No sufficient explanation has yet been offered, although there is much in support of the assumption of partial or irregular contraction of the ciliary muscle (Charcot and Parinaud). Astigmatism may be produced in the same way (Boree, *Arch. f.* Aug., 1886, p. 253).

[A case of monocular polyopia in each eye, sometimes passing into tetropia, because the two eyes did not always co-ordinate in their movements, came under my notice. It was due to astigmatism, combined with latent strabismus convergens, in an extremely hysterical woman. By suitable glasses, both cylindrical and prismatic, and general treatment, the symptoms were removed.—Rep.]

In Chapter IV, Diseases of the Respiratory Organs, he notes the oft-relapsing cases of disease of the lachrynial sac, despite the fact that the sound almost enters by virtue of its weight, so long as the nasal mucous membrane is not cured, and the constant formation of crusts occludes the opening of the lachrymo-nasal duct, and that a dacryo-cysto-blennorrhœa, which has not lasted too long and in which there are no bony occlusions, may be cured by suitable treatment of the nasal mucous membrane and a persistent emptying of the sac.

Chapter VI, Diseases of the Urinary Organs, is replete with very interesting matter. On page 303, in giving a prognosis in albuminuria, he says that life is rarely prolonged more than a year, and most rarely two years, after discovery of the retinal affection.

On page 304 he mentions the rarity of unilateral retinitis albuminuriæ, "Bull (*N. Y. Med. Journal*, July 31, 1886) describes ten cases. Cheatham (Amer. Med. Ass., 1885, Vol. V, p. 150) found in a case of left-sided retinitis that only the left kidney was involved. Yoert (*Rec. d' Opth.*, 1883, p. 146) observed left retinitis in a man forty-eight years old. At the autopsy the right kidney was found to be wanting, the left was in the condition of large white kidney." He mentions these

interesting cases, not that any inference may be drawn, but because of their rareness but possible occurrence.

In Chapter VIII, Poisons and Infectious Diseases, on page 329, he makes very clear the difference between alcoholic and tobacco amblyopia; and on page 339 he mentions the fact that several cases are reported where glaucoma was induced by the too free use of coacaine. Syphilis and its results on the eye he discusses at considerable length, concluding with the following remarks: "With few exceptions, all hereditary syphilitic affections of the eye are to be regarded as occurring in *syphilitic infection which has run its course—i. e.*, as analogous to post-syphilitic diseases of the nervous system. Hence *specific treatment* is only useful in the first years of childhood. In later years it may even act injuriously by producing weakness of the general system."

The introduction of this work to American readers by so well known and able a writer as Prof. Noyes will still further add to its value and popularity. His additions to the original work are not many, but where made are very instructive. Over all, the work is a good one, and merits a successful reception by American readers.

WILL H. WOODS.

The Nurse's Dictionary of Medical Terms and Nursing Treatment. Compiled for the Use of Nurses. By F. Cannon Morton. Philadelphia: W. B. Saunders. Price $1.

This little dictionary is to the nurse what the pocket dictionary is to the student. It gives the definition of all terms that form part of a nurse's mental equipment without being burdened by a mass of matter that would be of interest only to physicians. This little lexicon deserves to be in the hands of every nurse.

State News and Medical Items.

DR. M. LANDRY, Tulane Class '93, who, since his graduation, has been pursuing post-graduate studies in Paris, has returned to practise his profession in this his native city.

DR. M. L. BANKS, of Columbia, Miss., was a delegate to the Masonic Grand Lodge at West Point.

Dr. G. W. Acker, of Port Gibson, Miss., has been employed by the authorities to vaccinate all the poor, at the city's expense.

The Texas State Medical Association will meet in Dallas, April 25.

State Board of Medical Examiners.—The next meeting of the State Board of Medical Examiners for the Louisiana State Medical Society will be held Monday, April 15, at 9:30 A. M., at the Medical Department of Tulane University, on Canal street. All applicants must bring diplomas, and those who can not speak English must bring interpreters.

T. S. Kennedy, M, D., *President.*

H. S. Cocram, M. D., *Secretary.*

The Louisiana State Medical Society.—Annual meeting at New Orleans, May 7, 1895. R. Matas, M. D., president, 72 South Rampart street, New Orleans, La.; P. B. McCutchon, M. D., secretary, 559 Prytania street, New Orleans, La.

Dr. R. Fleming Jones, Houma, La., and Dr. W. W. Bockhalter, of Bayou Sara, La., were in the city last month.

Unfortunate.—"I was at a little mixed gathering the other evening," says Dr. E. B. Sangree, "when an incident occurred that rather brought down the house. The conversation had turned on appendicitis, and in the course of the talk a gentleman remarked that Mr. Johnson had had his vermiform appendix removed. A deafish old lady present pricked up her ears at this, and asked, 'What was that you said?' Raising his voice, the gentleman answered, 'I said that Mr. Johnson had his vermiform appendix removed.' Very sympathetically, and in loud tones, the old lady replied, 'Oh, what a pity; and he wanted children so badly, too.'"

Dr. A. A. Forsythe was elected president of the new Board of Health, at Monroe, La., recently, and, in conjunction with Dr. Aby, is busily engaged in establishing a city hospital.

Dr. J. H. Murfee, of Okolona, Miss., has moved into a new office with all the modern appliances.

The DeSoto County Medical Society, of Mississippi,

had an interesting meeting last month. The JOURNAL would be pleased to receive for publication all medical society reports.

DR. J. L. PERRY, who is a graduate of the Philadelphia College of Medicine, has located at Beeville, Texas, for the practice of his profession.

DR. J. S. MILLING, a prominent physician of Bossier parish, died at his home March 18 at College Grove at the age of 65 years. He leaves a wife and four children.

TRIPLETS, one white, two black, were born to a negro woman near Chattanooga, Tenn. The case has been fully verified.

Two "Boston doctors," who came to Meridian, Miss., recently and opened an office at a hotel, were arrested two days later on a warrant sworn out by the physicians of the city for practising medicine in the State without license. When the two quacks were brought before Justice Spinks, they, under the advice of their lawyer, asked for a postponement of their trial until the next day, which was agreed to by the prosecution, $100 each being deposited for their appearance at 9 o'clock the next morning. Before time for trial the following morning, however, it was learned that (still under the advice of their lawyer) some time during the night they had hired a carriage and were driven north twenty miles, where they took the train for Boston; prefering to leave their $200 in the hands of the justice to risking their case in the hands of the law. If the doctors in every city and town in Mississippi would deal with this class of characters as they were dealt with here our State would soon be entirely rid of them and their fraudulent practices.—*Ex.*

Dr. T. SHELBY CHAPMAN has returned to Newton, Miss. after a year's study at Louisville, Ky.

DR. C. B. MCKINNON, of Pensacola, Fla., passed through the city with the remains of his brother, Dr. McKinnon, of Texas, who died suddenly at Boyce, La., while on his way to visit his brother in Florida.

DR. LYMAN D. MORSE and wife, of New York City, were in this city recently. Mr. Morse has succeeded the firm of Bates & Morse, the well known Medical Journal advertisers.

Dr. Ernest P. Jones, of Hermanville, Miss., was married recently to Miss Annie Richmond of that place. The Journal extends congratulations.

Dr. H. S. Hudson died at Selma, Ala., last month. He was a highly respected citizen.

The Louisiana Board of Health decided at its last meeting to move into new quarters in the Liverpool and London and Globe Insurance Building, when completed, at the corner of Common and Carondelet streets.

The many friends of Dr. J. T. Scott will be pleased to know he has returned to the city much improved in health, after a year's sojourn at Bay St. Louis.

The twenty-ninth annual commencement of the Medical College of Alabama was held at Mobile last month. The graduates in medicine were as follows: D. D. Stephens, Louisville, Barbour county, Ala.; Sidney Holmes, Tensas, Baldwin county, Ala.; C. F. Kront, Jericho, Perry county, Ala.; Oliver H. Harris, Mobile; Zadek Moore, Irena, Elmore county, Ala.; Percy B. Wilson, Chipley, Washington county, Fla.; William G. Ward, Mobile; John T. Kent, Stewartsville, Coosa county, Ala.; John I. Barnes, Pearsall, Frisco county, Tex.; Clarence Rice, Prattville, Autauga county, Ala.; D. H. Simmons, Martha, Geneva county, Ala.; L. J. Davis, Bashi, Clark county, Ala.; T. N. McMillan, McKinley, Marengo county, Ala.; C. W. Hilliard, Jr., Troy, Pike county, Ala.; L. A. Gordon, Collerin, Autauga county, Ala. There was but one graduate in pharmacy this session, Dr. J. M. McDaniel, of Camden, Wilcox county, Ala., a former graduate in medicine, who returned to complete a course in pharmacy. The dean, Dr. George A. Ketchum, announced that another privilege had lately been conferred upon the faculty, that of naming a clinical assistant to the Insane Asylum of Alabama, and announced the name of Dr. Troy, of Pike county, for the honor. He also read the roll of honor, which included John Barnes, J. J. Davis, Sand. A. Gordon, Thomas Nelson McMillan, Clarence Rice and Percy Wilson, and the following appointments: Resident physician of the City Hospital, Dr. Oliver H. Harris, of Mobile; two externes from the sec-

ond class, William Woodruff and Burgett Woodcock. The Bush prize, being a set of microscopic glasses valued at $100, conferred annually upon the young man of the graduates who is most deserving of it, was given to Dr. Samuel A. Gordon, of Autauga county, Ala.

Dr. F. Loeber, who left New Orleans last month for a much needed rest, is reported as being much improved. The doctor was at Jamaica when last heard from.

Dr. J. S. Branch, of Evergreen, La., was in the city recently on business.

Dr. H. S. Rushing, who is surgeon for the T. & P. R. R., brought a patient to the city last month.

Dr. Chas. E. Catching, of Woodville, Miss., was married to Miss Mittie Woods, March 21, at the residence of the bride's father, Dr. T. O. Woods. Dr. Catching will practise at Woodville. The Journal joins their many friends in wishing them prosperity.

Dr. J. L. Vialet, of Hopeville, La., is slowly regaining his health after a severe illness.

Dr. A. H. Smith, one of the oldest physicians in East Mississippi, died at Meridian March 13.

Dr. J. H. Fleetwood, of Thibodaux, La., was called to the bedside of his sister, Mrs. Rousseau, who died at Algiers March 7.

Dr. W. L. Van Horn, of Columbia, La., was in the city last month on business.

Dr. G. C. Chandler, who has been practising at Natchitoches, La., for several years, is in the city, a resident surgeon of Eye, Ear, Nose and Throat Hospital.

Drs. Harrison & Porter, of Meridian, Miss , have dissolved partnership and Dr. Porter has returned to his old home at Morton, where he will engage in the practice and drug business.

The faculty of the Mobile Medical College have made a three years' course compulsory before graduation.

Mrs. Young, wife of Dr. N. D. Young, of Royville, La.,

died of pneumonia last month. She was the mother of Dr Roy Young, of Abbeville, La.

An Odd Death Notice.—The following death announcement appeared the other day in the Frankische *Tagespost*, Nuremberg: "The life principle of our dear wife and mother ended to-day in the fifty-fifth year of its existence. The material will be given back to earth in the graveyard on Saturday."

Dr. C. A. Vuvel, of Houma, La., and Dr. L. T. Postell, of Plaquemine, La., were in the city recently.

Dr. J. J. Peters has located at Long Point, La., where he will engage in the practice of his profession. Dr. Peters is from the northern part of the State.

Dr. H. C. Stokes, of Mansfield, La., and Dr. Sidney Montegut, of La Place, La., were registered at Hotel Denechaud lately.

Dr. R. P. Pearson, Jr., died suddenly at Starkville, Miss., March 6.

The Journal extends its sympathy to Dr. P. A. Joyce and wife, of Algiers, La., at the loss of their infant son.

Dr. R. A. McCallum, who has been sick with pneumonia, at Wesson, Miss., is recovering under the treatment of Dr. Beavers.

Dr. B. W. Smith, of Franklin, La., was registered at the Grunewald lately.

Dr. S. R. Dunn and Dr. Toombs, of Greenville, Miss., attended the last State Board of Health meeting, held at Scranton.

Dr. J. Kennedy, one of the most advanced scientists and chemists in the South, who formerly occupied the chair of pharmacy in the State University at Galveston, died of Bright's disease at San Antonio, Tex., last month.

Dr. J. W. Mathews, of Louisville, has been elected president of the Kentucky State Board of Health.

Drs. W. F. Heger, of Meridian, Miss., John Wright, of Sardis, Miss., and E. F. Griffin passed through the city last month to attend the State Board of Health meeting at Scranton, Miss.

MORTUARY REPORT OF NEW ORLEANS.

FOR MARCH, 1895.

CAUSE.	White.....	Colored...	Male.....	Female....	Adults	Children.	Total .....
Fever, Yellow							
" Malarial (unclassified)	2	5	6	1	7		7
" Intermittent							
" Remittent	3	3	5	1	5	1	6
" Congestive	2	2	3	1	4		4
" Typho	4	2	2	4	3	3	6
" Typhoid or Enteric	6	1	5	2	6	1	7
" Puerperal	1			1	1		1
Influenza	10	2	6	6	10	2	12
Scarlatina							
Measles	11	5	9	7	1	15	16
Diphtheria	6		4	2		6	6
Whooping Cough	1	2	2	1		3	3
Meningitis	8	2	5	5	3	7	10
Pneumonia	64	76	94	46	90	50	140
Bronchitis	24	14	21	17	11	27	38
Consumption	44	31	48	27	72	3	75
Cancer	9	2	5	6	10	1	11
Congestion of Brain	9	2	7	4	6	5	11
Bright's Disease (Nephritis)	22	19	31	10	40	1	41
Diarrhœa (Enteritis)	11	10	17	4	14	7	21
Cholera Infantum							
Dysentery	2	3	3	2	4	1	5
Debility, General		2	1	1	2		2
" Senile	28	14	12	30	42		42
" Infantile	6	6	6	6		12	12
All other causes	196	121	186	131	229	88	317
TOTAL	469	324	478	315	560	233	793

Still-born Children—White, 28; colored, 23; total, 51.

Population of City—White, 195,000; colored, 80,000; total, 275,000.

Death Rate per 1000 per annum for month—White, 28.82; colored, 48.60; total, 34.57.

L. F. FINNEY, M. D.,
Chief Sanitary Inspector.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XXII. MAY, 1895. No. 11.

Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

MEMORIAL ADDRESS ON DR. WARREN STONE.*

[BY ALBERT B. MILES, M. D., NEW ORLEANS.†

In observance of a dutiful and befitting custom, we have come, Mr. President, with an humble tribute to a Southern surgeon, whose memory the people of Louisiana especially love to honor. For more than the third of a century his name was familiar in the South and known favorably in the other States, and yet almost a stranger in our literature. He labored industriously in a fruitful field, and yet his published writings tell but poorly the story of his busy life and work. His fame lives in our traditions. As Professor of Surgery in the University of Louisiana for thirty-five years, as Surgeon to the Charity Hospital for thirty-nine years, and as general practitioner from 1832 to 1872, whose experience covered eighteen epidemics of yellow fever and cholera in New Orleans, the name of Warren Stone is impressed indelibly upon the local history of a remarkable period.

This address might have come more suitably from the pen of some friend who knew him in life, and better able to portray those traits that distinguished this remarkable man. However, no personal friend could have discharged his duty with

* Read at the Charleston meeting of the Southern Surgical and Gynecological Association, November 13, 1894, by W. E. Parker, M. D., of New Orleans.

†Deceased.

sentiments of higher respect, and surely no member of this body could have been chosen more deeply sensible of the distinction your choice has conferred. In the effort to make our statements authentic we have incurred obligations, which we desire in advance to acknowledge; to Dr. Charles J. Bickham, of the Board of Administrators of Tulane University, and Professor Stanford E. Chaillé, Dean of the Medical Department, both pupils and friends of Dr. Stone, for their reminiscences of his personal and professional character; and to Professor Joseph Jones, who kindly placed at our disposal the biographical sketch prepared by him for publication in the volume entitled *Eminent American Physicians and Surgeons.* The eulogy delivered by Professor James Jones in 1873 has been consulted for such information as only a contemporary and intimate friend could furnish.

At St. Albans, Vermont, Warren Stone was born on the 3d of February, 1808. He was the youngest of the three children of Peter Stone, a farmer, and Jerusha Snow. The father died before this son was born, but the mother outlived him, and died past ninety years of age. His youth was spent on a New England farm, where the opportunities for attending school were necessarily restricted. The teachings of his mother supplemented these deficiencies, and aided materially in preparing him for the study of medicine, for which in early youth he had shown a strong predilection. The reasons are apparent for the very tender attachment for his mother, so often observed by those who knew him intimately.

In due time he went to Keene, New Hampshire, and became the private pupil of Dr. Amos Twitchell. This accomplished surgeon soon won his affection and imbued him with a special fondness for surgery. In proper time the pupil entered the Medical School at Pittsfield, Massachusetts, and, in December, 1831, received his degree in medicine. In retrospect of those preparatory years he often alluded to his preceptor's teachings, and with such grateful expressions as lead us to look beyond his collegiate courses for much that inspired his splendid career.

In 1832 Dr. Stone was located in West Troy, New York, practising medicine, when the cholera first appeared on this

continent among the immigrants in Quebec and Montreal. These immigrants in their alarm started for the States by way of Lake Champlain and the Champlain Canal, and early in July several cases of cholera occurred in West Troy. To the first of these cases Dr. Stone was called late at night, and promptly recognized the new disease. Several days later the following case occurred, which was narrated by himself thirty-five years afterward in support of an argument against the contagious nature of cholera: "A humane person requested me to see a young man, lying on a pile of lumber, who, he said, appeared very ill. I found him in the collapsed state of cholera. As he was destitute, I obtained an outhouse of the landlord and had him conveyed to it, and stayed with him the greater part of the time for twenty-four hours, administering his medicines, and even injecting a saline mixture into a vein in his arm. The room was close, but I suffered no inconvenience from contact and confinement." This case was related for a controversial purpose, but how well it illustrates that philanthropy which was ever a dominant principle in his professional life.

Looking to the South for his future home, in the latter part of October of the same year he left West Troy, and embarked in the brig Amelia for New Orleans. There were few cases of cholera in New York when the ship sailed. The ship was overcrowded with passengers, and otherwise carried a valuable cargo. The log of this voyage is here given in Dr. Stone's own words: "For the first four days there was a calm, and everything was healthy; but a terrible storm came, and it was found necessary to fasten down the hatches and stifle over a hundred beings in the small space between a small ship's decks. I expected serious consequences. The captain, who was willing to do whatever was proper, said that the hatches could not be raised without imminent danger of sinking the ship, a fact which was subsequently verified. On the third day of the storm there was a cry that there was a man dead below. The weather having moderated a little, I found a deplorable state of things. All seemed stupefied from foul air, and about twenty-five seemed to be in the second stage of cholera. At this period in the voyage, on the 30th of October, the

brig, in distress, was beached on Folly Island, off Charleston harbor, and there subsequently, by order of the municipal authorities, the vessel and cargo were burned. The terrify ing disease of which these unlucky voyagers were suffering spread great alarm, but pity for their misfortunes soon became the prevailing feeling."

Mr. Alexander Milne, the owner of the island, opened his house and all the buildings for the reception of the passengers and crew, and furnished them immediately with necessary supplies. Charleston responded at once, and sent physicians, provisions, and all necessaries for the sick. Dr. Stone remained with his ill-fated passengers, administering to them and rendering every assistance in his power. At this juncture, while in attendance on the sick of the island, he met Dr. Thomas Hunt, then of Charleston, who had been commissioned by the municipal authorities to take entire control of the sanitry affairs of the plague-stricken island. Here, amidst scenes of pestilence, Dr. Hunt and Dr. Stone became friends, and ever afterward, through more than a third of a century, this friendship remained unbroken. This meeting was one of the most fortunate incidents in the life of Dr. Stone. The unhappy experiences of his voyage from New York to New Orleans were not to end until he had himself been stricken by the disease. His friend then became his physician.

The survivors of the Amelia, through the liberality of the city of Charleston, were sent in chartered vessels to their destinations—the steerage passengers to Mobile, the captain and cabin passengers to New Orleans. The generosity of the citizens and Council of this city in offering hospitality to the crew and passengers of the Amelia, shipwrecked and suffering of a spreading plague, and then their exceeding liberality in helping the survivors on their way, are incidents worthy of honorable record in the history of any people. It seems a remarkable coincident that we should come to Charleston to read this memorial address and recount these historic incidents among the important events in the early life of Dr. Stone.

In December, 1833, he landed on the levee in New Orleans a friendless stranger, with only one picayune in his pocket. He once said to a friend, half-humorously, that he would not

have saved this but for the sake of preserving a nucleus. Evidently in the scenes through which he had passed his purse had proven unequal to his generous heart.

Here for a moment we pause to survey the situation presented to the stranger when he had at length reached his destination. This was a memorable year in the annals of New Orleans. Yellow fever was declared epidemic on the 15th of October, and ten days later the cholera appeared. The desolation of one disease was eclipsed by the new horrors of the other. Dr. Lawson, then senior surgeon of the army at New Orleans, afterward Surgeon General, says in his official report that in the city the victims of cholera numbered about six thousand, the population being perhaps fifty-five thousand souls. The new Charity Hospital had just been built, and its wards were crowded with the sick. The best medical talent of New Orleans was being devoted gratuitously to its service.

To this institution Dr. Stone was naturally attracted and offered his services. Through the kindness of Dr. A. H. Cenas, at that time and for many years afterward a visiting physician, he was appointed a supernumerary in the medical department. At that time Dr. J. M. W. Picton was the house surgeon, doing an extensive work in general surgery. He was succeeded in August, 1833, by Dr. Thomas Hunt, who had moved to New Orleans, with the prestige of his splendid reputation in Charleston, and had at once taken rank in the profession. The friendship of Folly Island was renewed, and Dr. Hunt, in a letter to the Board of Administrators of the hospital, very warmly commended Dr. Stone for promotion. A few words from this letter are worthy of reproduction as establishing beyond question Dr. Stone's competency in medicine at that time, and his preparation for responsible service: "It gives me pleasure to state, from my personal knowledge, that Dr. Stone is a humane and worthy man, and a well-informed, skilful, and, for his age, an experienced surgeon. He is in every respect qualified for the office of assistant house surgeon." These men, born in the same year, were of nearly the same age. The faithfulness of their friendship is admirable. The promotion recommended did not follow immediately, but came in due time.

After residing at the hospital but a short time Dr. Hunt resigned. He had conceived the idea of founding a medical college in New Orleans, and desired to devote his energies to that purpose. Dr. John H. Harrison, a scholarly man, and much beloved, was elected in his place. Dr. Stone was elected assistant house surgeon. He was the first appointee to this office, and in this capacity served from 1833 to 1835. This is the first official position held by him in New Orleans. Upon the retirement of Dr. Harrison in his favor, Dr. Stone was elected house surgeon, and served from 1835 to 1839. At the expiration of his term he was elected a visiting surgeon to the hospital, in which capacity he served until his retirement from all active work in 1872. It gives us pleasure to allude, in passing, to the firm friendship between Dr. Harrison and himself—one a man of diminutive physique, the other a giant by his side. In other respects they differed, but their general traits of character were the ties. Dr. Stone, in good humor, used to call Dr. Harrison his walking-stick.

We now speak of a prominet feature in his professional life—his connection with the Charity Hospital of Louisiana. Here wide scope was offered for his tireless industry and his broad benevolence. Here most of his best work in surgery was done. No surgeon on its roster, where many honorable names have been enrolled, has contributed as much to the reputation of this institution. His long term of service, the extent of his practical work, and his charities among the poor have linked his name indissolubly with the history of the hospital.

We have gleaned much in regard to his services at the hospital from Dr. Charles J. Bickham, his ward student in 1855 and 1856, and subsequently the assistant house surgeon. From his personal reminisences, kindly written for us, we have extracted the following: "He was methodical and industrious, quick in perception, and prompt in the execution of what he conceived to be his duty in all cases. His thoughts were rapid, and he seemed always to take in at a glance the whole circumstances and details of a case. This kind of knowledge and ready comprehension as to the true state of things in any case was a peculiar and marked characteristic of the man.

It is often called intuition. Call it what you will, Dr. Stone possessed this faculty to a marked degree, and appeared always to be ready for any emergency that might arise.

"His resources were unbounded. He never seemed to be taken unawares. His knowledge, tact and ingenuity were equal to the occasion, and he never appeared so cool, self-possessed and grand in his whole nature, physical, mental and moral, as he did in the midst of sudden and alarming emergencies in surgery. He seemed to rather welcome such occasions, and in the midst of the most complicated and difficult operations, cool, calm and collected, he would promptly do his duty, at the same time lecturing and explaining to those present the minutest practical details of the case. In truth, every visit to the hospital was an ovation to him, which he acknowledged with becoming modesty, but which served to doubly inspire him; and his entire time at the hospital was one constant discourse upon the various diseases and their treatment to those around him. He seemed to realize his capability and that much was expected of him; yet, withal, he was as modest as a woman and appeared oblivious of his good deeds."

In his surgical clinics he taught the advanced surgery of the old school. He taught the principles of drainage in suppurative arthritis, in hepatic abscesses and in pyothorax. He advocated resection of the rib to facilitate the drainage in suppurative pleuritis. Whether in operative work or in the liberation of pus he made free incisions. In the surgery of the arteries he was an expert. He was among the first in the cure of aneurism of the vertebral artery. In November, 1849, he operated successfully in a case of traumatic aneurism of the vertebral by incising the sac, turning out the coagulum and controlling the artery by a graduated compress.

During fourteen years of his work at the Charity Hospital he operated without an anæsthetic. Realizing the difficulties under which he labored, he was ready to welcome the new era in surgery then about to dawn. The news of the discovery of ether anæsthesia was not received with universal favor. *The New Orleans Journal* joined *The Medical Examiner*, of Philadelphia, in decrying the use of "such an invention as this." Its patented features and its toxic power were strongly

urged in objection. Such was the feeling in regard to the use of ether when Dr. Stone, on the 25th of February, 1847, amputated the thigh of a man whilst in a state of etherization. The operation was performed in the amphitheatre of the Charity Hospital. The reporter of the occasion, in the published record, adds, with apparent exultation, "The operation was entirely satisfactory to all who witnessed it—a thigh had been amputated without pain." This incident illustrates Dr. Stone's independence of action in all medical matters about which his convictions had matured.

When chloroform was introduced it became and continued his preferred anæsthetic. His influence in professorial teaching and in hospital practice before large classes of medical students has been an important factor in determining the choice of this agent by so many of the profession in the South.

In the surgical service of the Charity Hospital his early contemporaries were Luzenberg, Picton, Mercier and Wedderburn; the junior colleagues of his latter days were Smyth, Schuppert, Choppin, Richardson and Samuel Logan.

It is worthy of mention that for thirteen years of the period of his connection with the hospital, Dr. John C. P. Wedderstrandt was the house surgeon, appointed under the auspices of Governor Roman. Dr. Wedderstrandt was a gentle and gifted man, always a student, and highly accomplished as a medical diagnostician. He and Dr. Stone were closely attached friends. They often met in consultation in the wards of the hospital, and their joint opinion, however involved the case, was accepted by their confrères as conclusive and correct.

In 1839, at the expiration of his term as House Surgeon of the Charity Hospital, Dr. Stone, in connection with Dr. William E. Kennedy, founded the Maison de Santé, which stood among the earliest private hospitals established in America. After the retirement of Dr. Kennedy, in 1845, Dr. Stone assumed entire control of the institution. Its domestic management was intrusted to the Sisters of Charity, and under their care its affairs went on prosperously.

In 1859 the Hotel Dieu, the infirmary of the Sisters of Charity, was founded, and the Sisters of the Maison went to

the new mission. The old institution now became Stone's Infirmary, and here, with assistants and associates, he continued his extensive work in general surgery. His infirmary was conducted as a private institution, but medical relief was never withheld from any applicant at its doors. In the summer of 1847, when the soldiers of the United States Army in Mexico were returning, discharged and sick, and filling the hospitals in New Orleans, many of them were kindly cared for in the old Maison.

In 1861 Professor T. G. Richardson, then attending surgeon, in presenting the annual report of Stone's Infirmary, published in the March number of the New Orleans MEDICAL AND SURGICAL JOURNAL, pays this beautiful tribute to his senior and friend: "It is an established rule of the house never to refuse professional services on the score of poverty of the applicant. And in this connection the writer takes the liberty of saying that the charity thus dispensed by his benevolent colleague, Dr. Stone, incalculable in amount and unostentatious in its bestowal, is of itself sufficient to elevate its author to that high rank among philanthropists which his well-known abilities have long since commanded in the profession which he adorns."

This infirmary, widely known in its day, was situated on the corner of Canal and Claiborne streets, adjoining the Stone residence. Its doors were closed in August, 1867, and since then the buildings have been torn down and every vestige of them taken away.

Before concluding the account of his connection with hospitals, it must be mentioned that for many years he was consulting surgeon to the Hotel Dieu, in association with Dr. P. C. Boyer, the physician in charge. When the Hotel Dieu was founded, Dr. Boyer became the physician by recommendation of Dr. Stone, and served for twenty-three years, until disabled by his fatal illness. The friendship of these men is worthy of record in this biography. Dr. Boyer was a physician of high character and a man without stain or reproach.

The most important part of Dr. Stone's professional life and work was his connection with the Medical Department of the University of Louisiana, which was the descendant in direct

line of the Medical College of Louisiana and the parent and immediate predecessor of the present institution. From the first session, in 1834, until his retirement in 1872 he was an active and able teacher.

In the first session he was appointed, through the friendship of Professor Hunt, as the acting demonstrater of anatomy in the place of Dr. John H. Harrison, who was disabled by illness. From January, 1835, to July, 1836, he was the demonstrator of anatomy; from July, 1836, to January, 1837, lecturer on anatomy; from January, 1837, to May, 1837, professor of anatomy and lecturer on surgery; from May, 1837, to April, 1839, professor of anatomy and surgery; from April, 1839, to April 1872, professor of surgery.

His only predecessor in the chair of surgery was Professor Charles. A. Luzenberg, who taught during the first two sessions, and resigned during the third course. In those days Dr. Luzenberg held high rank in New Orleans as a surgeon, and was much admired for his professional accomplishments.

As a teacher of surgery Dr. Stone was never systematic, but usually discursive. In a didactic discourse he would not follow heaten paths. Some topic of the day, uppermost in mind or suggested by some recent case, would often beguile him from the announced subject of a lecture. His lectures, however, were always instructive and authoritative, and replete with axioms in happy illustration of essential principles. His manner as a teacher was earnest and direct, and his convictions were impressed with emphasis. No one came within the radius of his influence, whether graduate or student, without being impressed by the weight of his opinions on the medical questions of the day. His views on medical subjects were well matured, expressed frankly, and sustained cogently by the cited opinions of the best authorities and by the results of his own close observation.

During visits to the Northern and Eastern cities he occasionally lectured by invitation before medical classes. Yellow fever was usually the chosen topic, as it was the absorbing theme in those days throughout the Southern section. A student of the University of Maryland in 1868, now Surgeon in the United States Army, Dr. J. L. Powell, recently in con-

versation recalled vividly the substance of a lecture once delivered before his class by Dr. Stone. The lecturer told his convictions and narrated his cases in such an earnest manner as left an ineffaceable impression on the minds of his hearers. One case of yellow fever was related in which death seemed imminent from excessive temperature, when the doctor packed his patient in an ice-box rather than see him perish of the heat of fever. The temperature was cooled and the patient recovered.

The lives of many men are mirrored in their books and published papers, but the writings of Dr. Stone give but meagre knowledge of his work or his position as an authority on surgery in the South. His pupils and assistants occasionally published surgical memoranda of his lectures and clinics on a variety of topics. His son, Dr. Warren Stone, Jr., himself an accomplished surgeon, published the last of these memoranda shortly before the father's death. These papers and all the more important articles written by himself were published in the MEDICAL JOURNAL of New Orleans.

For thirteen years no article in his own name appeared in the journals. In 1845 he wrote an article on "The Treatment of Wounded Arteries," the purpose of which was to give his views upon the manner in which ligated vesels are closed by a clot. To his opinion, expressed then, nothing essential can be added to-day.

In 1852 his most important article was entitled "Ligation of the common Iliac Artery; Use of the Silver Ligature." This case was reported to show the advantage of the silver ligature, "which was preferred because of its innocuous character." In this paper he alluded to his observation of the experiments of Dr. Twitchell, his preceptor, which were made to prove that ligated vessels were closed by a clot and not by adhesive inflammation, and concluded with this statement: "All that is required of the ligature in the case of aneurism is to arrest the current of blood in the artery, and this can be done without strangulating the tissues inclosed in the ligature, so as to cause a division."

In 1858 his article entitled "Observations on Hernia and Obstruction in the Bowel" appeared in the New Orleans

Medical and Surgical Journal. The author strongly advocated early operation. The following quotation epitomizes his views: "The bowel is in danger from the moment it is strangulated, and should be relieved as soon as possible."

The treatment of hernia was to him always an interesting subject. At a meeting of the Physico-Medical Society of New Orleans, the proceedings of which were published in 1858, he discussed the relative merits of Gerdy and Weitzer's method in the radical cure of inguinal hernia. At that time he employed an instrument devised by himself, and manufactured by George Tiemann, of New York, intended to combine and modify the methods just mentioned. His instrument consisted mainly of a canula and a silver needle or stylet. The canula was made after the pattern of Weitzer's cylinder, but used only for conveying the stylet, which alone was allowed to remain in the canal. The special advantages claimed for this plan was that the resulting inflammation would build up a barrier of lymph throughout the entire length of the inguinal canal.

In 1859 and 1860 he wrote a series of articles on "Inflammation," which were published in the same journal. In these articles the author insisted on the importance of conditions modifying the inflammatory process, and urged the necessity of modifying the treatment of disease according to varying pathological states. He drew the distinction very sharply between the inflammation of esthenic and asthenic subjects from a clinical point of view. He showed a clear conception of the difference in the process by which a clean wound heals primarily and the true inflammatory process. Much attention was given to the subject of inflammation in his lectures and ward teaching. "Under certain conditions" he believed in venesection in the treatment of inflammation. In entertaining this view he was not alone at that time. He was, however, a judicious bleeder.

An article on "Union by the First Intention and Purulent Absorption" appeared in 1860. In this paper he contrasted the American and French methods of treating wounds, concurring fully in neither of the national modes. Observe in the following quotation the judicial action of the author's mind:

"The tendency of us all is to fall into a routine and to adopt some mode of treatment, and apply it to all cases and conditions, and hence the opposite systems of practice often seen, not only in different countries, but in the same country and in the same city, and even in the same hospital. This is strikingly illustrated by the exclusive and opposite methods of dressing wounds adopted by the American and French surgeons. The American surgeons dress with the view of obtaining union by first intention in all cases, whether it is probable it may be effected or not. The French surgeons fill their wounds with lint to prevent union, if there should be disposition to it. The French, however, I believe are not so exclusive in their mode of dressing as the Americans, but both are undoubtedly wrong. It is undoubtedly true that our mode of dressing is far better adapted to our country than to France, but it is evident that neither method is adapted exclusively to either country."

In those days surgeons were playing hide and seek with principles of antisepsis, and in many of their therapeutic methods they were wiser than they knew. Dr. Stone used antiseptic astringents not for their bactericidal properties, but for their astringent action. This he deemed a mild and effectual alternative for the écraseur, then so much in vogue in France, preferring to contract rather than crush the tissues as a means of preventing purulent absorption. His theory was not so good as his practice. In septic states he urged strongly general tonics, a generous dietary and the malt liquors, having so often observed the effect of this regimen upon the local conditions of wounds.

His articles were not confined exclusively to surgical topics. In 1859 he wrote a paper on "Pulmonary Tuberculosis." His views on climatic treatment are worthy of reproduction here: "It is a long time since I recommended a patient to any of the tropical islands. The steady heat of the climate is injurious, and there is but little advantage in the monotonous equanimity of temperature. I verily believe that changes of temperature are of an advantage, provided patients guard against the immediate effect. My situation here in New Orleans, at the outlet of the great West, has given me an opportunity of witness-

ing the sad effect of sending patients in the second and third stages of phthisis from the comforts of home to those hot and debilitating climes. A dry, bracing atmosphere is best, and it is none the worst for being pretty cold, if the patient can exercise with comfort in the open air."

In 1866 he wrote on "Cholera and its Treatment," a subject which always interested him intensely. In this article he says: "It so happened that my professional life and the cholera in this country commenced together, or in the same year; and many incidents came under my observation calculated to throw some light on its character and pathology." The only authentic account of his beginning in medicine appears in the same article, and here, too, we found his own description of his perilous voyage in the Amelia.

We have now mentioned his more important articles, and extracted parts of them, in which one may see his style as a writer. The rarity of his writings is most remarkable in a man so full of practical information and so capable of instruction. His monographs were usually written at the solicitation of medical friends. The following letter is so characteristic, and shows so clearly his disinclination to write, that we reproduce it from an old issue of the New Orleans Medical and Surgical Journal:

"August, 29, 1859.

"Mr. Editor: According to promise, I herewith send you a small contribution, which I fear you will think hardly worth publishing. I have undertaken to give some of my impressions upon an important subject (inflammation), and my method of analyzing it, but find that I have totally failed. I know I have observed much and honestly, but with no object except to learn the right use of medicine; but although my convictions, to me, have all the force of facts, when I come to put them to paper I feel myself in the condition of an ancient philosopher, who, to a difficult question, answered: "If you don't ask me I know, but if you ask me I can not tell." However, good or bad, publish it, and I will continue the subject and try to make something intelligent on the subject of treatment or the application of therapeutic agents to pathological conditions.

"Very truly, your friend, "Warren Stone.

"To Dr. B. Dowler."

He was himself editor of the New Orleans MEDICAL AND SURGICAL JOURNAL from 1857 to 1859, and co-editor from 1859 to 1868. He had little or no aptitude for such literary work.

Our information, gleaned from a variety of sources, is to the effect that Dr. Stone, although disinclined to write himself, was well informed in the medical literature of his day. In foreign travel he was received by some of the distinguished men of that time with marked attention. From his letters written while abroad, we infer that he proved himself quite capable of discussing the operative methods then on trial for the radical treatment of inguinal hernia with the surgeons of Guy's and Westminster; foot amputations and resections with Mr. Syme, of Edinburgh; the relative merits of extirpation and iodine injection in the treatment of ovarian cysts with Baker Brown, Simpson and Trousseau, himself taking the ground that excision was the proper method of treatment. He was distinguished as a diagnostician before the days of instrumental precision. In deciding the time for an operation, which was an important matter in the preanæsthetic days, his judgment was reliable. For his decisive action in emergencies he was much admired. He was, as we may judge from the accounts of all who remember his methods, especially conspicuous for his practical sense in all matters relating to operative and after treatment.

In our researches among the writings of his Louisiana contemporaries we have been profoundly impressed by their respect for his position and opinions. And here, in passing, we desire to pay the highest tribute to those contemporaries. The medical journals of New Orleans published in those days teem with their writings, which characterize them as men of high culture and zealous in their calling. No man in the profession of Louisiana was ever so universally beloved as Dr. Stone. In his relations with other physicians he was gentle and considerate, never intrusive or aggressive. Many of the physicians in Louisiana to-day who knew him in life speak of him affectionately as Old Stone, and always with some expression of endearment and respect. His position in New Orleans may be compared with that of Physick in Philadelphia, Mott in New York, Liston in London, Velpeau in Paris.

Among the people he was the "Great Commoner in Med-

icine," as happily named by Professor Samuel D. Gross in a brief address once delivered before a New Orleans audience. His name was familiar in most of the homes of Louisiana, and dear alike to our gentlest folk and the lowliest. He was on good terms with all classes of the people, sturdy and steadfast among them during epidemics, and a friend on whom they could depend, whatever might befall. Contact with the people never lessened the grandeur of his character in their esteem, but only gave them opportunity for learning those qualities of the man which irresistibly drew them to him. He was so thoroughly a man of the people that when he died their expressions of sorrow were manifested in many ways. The District Courts were adjourned as a mark of respect, the flags of the shipping stood at half-mast, and many of the stores on the main streets were closed at the time of the funeral.

A man of his position and prominence was naturally sought for responsible offices in municipal and State government. He was Surgeon General of the State of Louisiana for a time during the civil war, and his incorrigible spirit brought him in collision with the Federal military authority. At one time he was remanded and sent to Fort Jackson. Federal soldiers were among his patients, but they were treated always without a fee. He was never susceptible of reconstruction.

He was a member of the local medical societies, the Physico-Medical and Medico-Chirurgical, the Louisiana State Medical Society, and the American Medical Association, of which he was vice president in 1869.

In his day in the South he could not escape election as surgeon on the field of honor. Once, early in his professional career, while discharging this duty, one of the principals fell mortally wounded. He deliberately picked up the man and conveyed him into the city from the Bayou Bridge. His herculean strength and his strong will made him equal to any emergency.

Realizing that no biographer can adequately portray traits of character in one whom he had never known in life, we have asked permission of Professor Chaillé to present here a personal letter, written at our solicitation, which gives an insight into his remarkable character.

"MEDICAL DEPARTMENT,
"TULANE UNIVERSITY OF LOUISIANA,
"New Orleans, January, 1894.

"DEAR DOCTOR—You request me to state what were the characteristics and what the professional accomplishments which so greatly distinguished Dr. Warren Stone.

"His unusual weight and height sufficed to attract marked attention, and this was intensified by his large and rugged head and by the imposing strength of features, which were not handsome. In addition to this striking personality he possessed, as Dr. T. G. Richardson, his friend, colleague, and successor, used to declare, the greatest brain and the greatest heart of any man in New Orleans. It has been my good fortune to have personally known many of the most distinguished men of my time—statesmen and political leaders, soldiers and preachers, lawyers and doctors—and I testify that of all these great and famous men not one of them impressed me as having been endowed by nature with intellectual power equal to that of Dr. Stone. His hard common sense wedged its way into every vital question, and the profoundest scholars would be astonished with the depth of his views in matters which had not been specially studied by him. One of my tests of mental superiority has long been the *suggestiveness* of a man's conversation, the extent to which he stimulates mental activity, and I have known no man Dr. Stone's equal in this regard. Let him talk on any subject, and, even if you disagree with him, he would force you to think, and very probably to reinvestigate and to reconsider your own conclusions.

"His language was so simple, direct, pithy, and saturated with common sense that he was always forcible and always easily understood, even by the ignorant. He knew, too, when he did not know, and, as unpretentiously as a baby, he never hesitated to avow his ignorance.

"Dr. Stone was exceptionally sympathetic and congenial, frank and truthful, generous and magnanimous, and he had infinite charity for human frailties. He spoke evil of others rarely and very reluctantly, and only when needful to protect others from the vicious. He declared that those who spoke evil of others were those who were most prone themselves to do

evil and who were least deserving of credence or notice. As frequently occasion arose he would remind others that two wrongs can never make a right.

"He was regardless of dress, and also of fashionable conventionalities to an extent awfully shocking to dudes and dudesses, and his solecisms were often so amusing that they would excite his friends to shouts of laughter. He detested pretension of every kind, and I have known him guilty of what his victims denounced as gross rudeness to some fashionable, rich, pretentious swell, suffering with imaginary disease, and within a few minutes show as much tenderness as mother to babe over some ragged working woman weighed down with poverty, misery and disease.

"Dr. Stone was a very enthusiastic Democrat, yet greatly admired and often quoted Daniel Webster, the great Whig leader. Once I asked, 'Doctor, how is it that you, such a Democrat, are so fond of Webster?' He replied, 'What on earth have my politics to do with my ardent admiration for Webster's great talent?' He was too magnanimous to hesitate to praise the merits of even his opponents. He was a Democrat not only in politics, but also in his tastes, infinitely preferring a laborer if intelligent to a gentleman if stupid.

"Notwithstanding his Northern birth and education, he was as enthusiastic a Confederate as Democrat, and was a great friend and admirer of Jefferson Davis. After several interviews with Mr. Davis when president of the Confederacy, Dr. Stone said of him: 'Some men know a little of many things; some men much of a few things; but Jeff Davis knows more of every thing than any man I ever knew.'

"Notwithstanding the defects of his early education, Dr. Stone was an exceptionally well informed man, owing this to the fact that he sought the company of the best informed men, and was a great reader of the very best authors. He was as notable for forgiveness to enemies as for fidelity to friends. He sought always to promote peace and good will; and to his numerous high qualities it was due that no man's advice was oftener sought for and more confidently followed.

"Of his rare and superior characteristics, probably none served better to promote his great popularity than his inex-

haustible wit and humor. His innumerable jokes and pithy sayings became current among the people from the Ohio to the Mississippi's mouth. He would go with one companion into a club or other place where men congregate, and start this companion to laughing; others would quickly be attracted, and soon a crowd would gather around him shouting with laughter.

"He was, as are all great surgeons, not only a great surgeon, but also a great physician. His experience and knowledge of yellow fever were unsurpassed.

"Dr. Stone was a remarkably close and accurate observer, and had an exceptionally superior knowledge of anatomy; and one of his many good sayings was that 'the doctor who learns his anatomy from wax preparations and plates should operate solely on them.' Though neither a quick nor graceful operator, yet his thorough knowledge of anatomy enabled him to be a very sure and safe one. He was a very skilful diagnostician, and I think he surpassed in prognosis any one whom I have ever known. His profession, with unanimity, conceded to him special and unexcelled superiority in deciding whether an operation should be performed, how and when it should be done, and what subsequent treatment the patient required.

"To his superior characteristics as a man, and specially to his superior knowledge and judgment as to disease and injuries, he owed the very distinguished professional reputation he enjoyed—a reputation which would have left greater and more endearing proofs, and would have shown with greater lustre, but for the defects of his early education, which rendered literary composition always an unwelcome and grievous task, and the results of such tasks always most unsatisfactory to himself. Very truly, your friend,

"SANFORD E. CHAILLÉ, M. D."

A few words more, with your permission, Mr. President, and we will have concluded the sketch of this eventful and useful life. In the spring of 1872, owing to failing health, he retired from all active professional work, and sought recuperation in travel, while away, visiting his venerable mother, who then resided with her daughter at Brattleboro, Vermont. He returned to New Orleans early in the autumn, suffering of

the final symptoms of diabetes mellitus, and died in his own home on the 6th of December at the age of 64 years. His wife and three children survived him—two sons and a daughter. The mother survived her sons, and died in 1892. The daughter, with her family, resides in the old home.

With the rites of the Catholic Church his remains were put away in the Cypress Grove Cemetery, situated in the suburbs between New Orleans and Lake Pontchartrain. The genius of the man still lives, and in loving remembrance of him, his professional labors in their midst for forty years, and his unbounded benevolence, the people of Louisiana have woven the name of Warren Stone inseparably into their traditions of his day.

A CASE OF SYMPHYSEOTOMY.

By Dr. T. E. SCHUMPERT, House Surgeon, Shreveport Charity Hospital, Shreveport, La.

I was called on July 19 to see a case of labor in consultation with my friend, Dr. D. H. B. On entering the room I observed a very large negro woman, who would weigh, perhaps, 230 pounds,a multipara 30 years of age, in the midst of true labor pains. Her two previous labors had been uneventful. Her first pains came on about two weeks before we were called in. The attending midwife at the time informed us that the pains were as hard as she had ever seen, and lasted two days, after which she resumed her household duties, feeling perfectly well, until July 17, when she was again taken in labor, and this time, as was before the case, sent for a midwife who watched over her for two days, when my friend, the doctor, was called, who, with his usual cleverness, soon took in the situation and called for assistance. This was about 3 o'clock in the afternoon; the waters had escaped the latter part of the previous night. Her pains were now very hard, in quick succession, with an interval of perhaps from five to fifteen minutes. Her abdomen was greatly distended, with a solid peal, giving an appearance on inspection of double pregnancy, but palpation soon revealed the fallacy of this idea. On examination per vaginum without chloroform, the anterior

fontanel was soon found to be in a normal location, with the left ear impinging against the promontory of the sacrum, the right against the pubis; in fact the position was perfectly normal, with the head resting snugly against the pelvic brim. I asked the doctor for the cause of his alarm; he replied that he had observed the child's head to recede during the intervals of pains, but notwithstanding the fact the woman had been in labor two days and the pains seemed to be hard enough to rupture the uterus, the head never descended lower than the brim. Under an anæsthetic I was able to insert my hand past the child's head to locate the umbilical cord, in fact to verify the diagnosis already made. This exploration disclosed nothing abnormal save perhaps a slight contracted pelvis in its antero-posterior diameter, and an unusually large head. Of course it was agreed that this was a forceps case, so I administered the chloroform, while the doctor applied a pair of Elliott's forceps, and taxed his skill as well as strength for nearly an hour. I then came to his relief, and after reinserting the same pair a long and tedious effort terminated with the same unfavorable result. I next tried the virtue of a Hodge's forceps, as a pair was convenient, thinking possibly it might be better adapted to this particular case, but was again baffled in my attempt, and it was now clearly apparent that nothing had been gained.

The head seemed as firmly implanted here as a stone wall; I in the meanwhile remarked that this would be a nice case for symphyseotomy. The doctor agreed that it would, but as no operation of the kind had ever been performed in this section of the country, and feeling that it was imperative that something must be done, he picked up the forceps, reapplied them and began to try to deliver the woman regardless of the child's life (so did I), persistently applying all strength, but only to be baffled in the end. It was very evident now that another plan must be adopted. There were three to consider: First, was craniotomy; we listened and could very distinctly hear the fœtal heart sound, and decided that as long as the child yet had a chance for its life in two other operations, that these chances not only ought to be given, but we really owed them to it, especially since the mother's chances were not lessened by so

doing. The next to be considered was Cæsarean section, but as this operation is performed with the same motive in view and considered a much graver operation than symphyseotomy, it was, of course cast aside for the latter. A more unfavorable subject for this operation could not well have been found; the fat of the mons veneris, about three inches thick, obscured all landmarks; the pubic spines could not be distinguished at all.

After every available antiseptic precaution had been used, I drew an imaginary line continuous with the linea alba as far as anterior commissure of the labia majora, and in this line, immediately above the commissure, I made an incision 2½ inches long, but the depth of my wound was so great, owing to the superabundance of fat, and the apex of the cone so small, that it was necessary to enlarge the cutaneous incision to 3 or 3½ inches. More space being secured at the bottom of this wound, I denuded the symphysis to its superior ligament of all tissue; then, with the tip of my left index finger inserted behind the symphysis, permitted it to dissect its way down until its tip engaged beneath the pubic arch; thus, with my finger as a shield to protect the bladder and urethra, with a probe-pointed straight bistoury inserted perpendicularly between my finger and symphysis to about two-thirds the depth of the latter, I cut forward as long as I could feel the resistance and detect the grating sound of the interstitial fibro-cartilage. Next, with a curved probe-pointed bistoury, I severed what remained by inserting this knife until its tip rested upon the tip of my finger, which was yet beneath the symphysis, and by the same indications as before, as well as by the beginning separation of the pubis, was able to judge when I had completely severed these fibres. Then, by flexing the thighs to a right angle to the body, and with a slight forcible abduction, was able easily to separate the bones 1½ inches. The doctor now introduced his forceps and delivered the child without even the aid of a pain. Delivery of the after-birth promptly followed. It was not necessary to ligate a single vessel, and the wound was closed by one layer of deep silk sutures and dressed in the usual manner, a many-tailed bandage pro tem. was placed beneath the patient's hips, extending from the crest of ilium to

about three inches below the trochanter. She was then turned on her side and sufficient pressure exercised over the hips from above downward to bring the bones into apposition, and while in this position the bandage fixed; over this a thin rubber adhesive strip, three inches wide, was applied.

The patient was now placed in bed, and the next day a many-tailed bandage of the same dimensions, with a buckle for each tail, was made to supply the place of the one already in use. The rubber adhesive strip, however, was not dispensed with. She was feeling perfectly easy, jovial in fact; relished her diet, and the temperature was normal. After-pains were not troublesome, though during the first day it was necessary to relieve her bladder with a catheter, because of the temporary paralysis; after which, however, the urine was voided naturally. The second night was passed in peaceful rest, and during the second day everything seemed in her favor. Third day, morning temperature normal, resting quietly, relished her diet, expression bright and cheerful, but about the vagina I observed a purplish tint, with occasional darker stripes; the cervix was very tender and partook of this dark hue; the discharge fetid. From the first day the uterus was washed out three times a day with a copious hot saline solution. At noon her temperature registered 100 deg., with a quick pulse; evening 100¾. Fourth day, morning temperature 102 deg., evening 105 deg., but complained of no pain save when manipulating about the vagina. As this woman was black, the changes which were taking place about the perineum and vulva were not very conspicuous, but within the vagina and cervix evidence of gangrene could be seen; discharge more copious and fetid. I injected into the uterus one pint of peroxide of hydrogen and a copious solution of permanganate potash. At night it was necessary to administer an opiate to promote rest.

Fifth day, morning temperature 103½; another peroxide injection; the discharge more profuse with particles of slough, the genitals were now almost too tender to bear the slightest manipulation. A T-shaped tube was introduced well into the uterus and after another free injection of permanganate solution a constant flow of hot saline solution from a reservoir above was allowed to pass through the uterus. About noon slight tetanic spasms of the jaw were observed and at 5 she died.

This patient's death was evidently caused by the traumatism produced by the forceps. The operation wound healed by first intention. The striking contrast between our arduous but ineffective labors prior to the operation and the ease with which delivery was accomplished subsequently, it seems to me, can not fail to impress one favorably with symphyseotomy in properly selected cases. If a contraction in either diameter of the pelvis is diagnosed the operation is certainly justifiable, *i. e.*, unless it be very slight and the child's head proportionately small. My own experience is too limited to judge from that, but I see no reason to doubt the small mortality report from this operation, or to believe that good union ought not to be obtained. The operation is so easily and quickly performed, and so free from danger to any organ that must necessarily compromise life, that I feel that it is my duty to recommend it in preference to either of the operations above alluded to. I am sure that after a reasonable use of the forceps had we performed this operation we would have saved both the child and mother.

I neglected to state that this was the largest child that I have ever seen, and that both the frontal and occipital bones were fractured and pressed in. I do not think that a child's life ought to be considered of very great importance when the mother's life is *greatly* jeopardized through an effort to save both; but in symphyseotomy it does seem that we might reasonably soon expect to see the mortality report for both reduced to less than 3 per cent.—*i. e.*, if taken in proper time. The very limited number of cases from the work of a few men does not warrant us in drawing conclusions of a radical nature. This operation as a last resort after long delay and repeated futile efforts with pumps, during which the maternal soft parts have been injured and rendered septic, thus producing a condition of things the fatal effects of which are apt to be credited to the operation, and have unjustly increased the record of mortality.

My object in writing this case was not that I had something new to narrate, but to impress upon the profession the simplicity and importance of this operation, and to keep it before them. If I have succeeded in the slightest degree my entire aim will have been accomplished.

NOTES ON A HITHERTO UNDESCRIBED SKIN DISEASE, ENDEMIC IN CENTRAL AMERICA, CALLED BY THE NATIVES "BULPISS."

OTTO LERCH, PH. D., M. D.

FORMER ASSISTANT STATE GEOLOGIST OF LOUISIANA, ETC.

INTRODUCTORY.

During a late visit to Central America, Dr. Lerch was struck with the frequency of the disease he describes below, and wrote me asking for its classification and its diagnosis. At first it seemed to me that he had simply found an epidemic of scabies, but after reading his careful exposition of the symptoms and clinical appearances, attended often with constitutional evidences, at times severe, the disease seems to be a new one, hitherto undescribed. It gives me pleasure to offer the notes of Dr. Lerch for publication, hoping for further elucidation of the question.

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The name of this disease is derived from "bulny," which, in the language of the Mosquito Indians, means "spotted," and "piss," meaning "gray"—an appropriate name when applied to the appearance of the person affected with the disease. This peculiar affection was encountered by me throughout the northeastern part of Nicaragua, affecting every tribe inhabiting this part of the republic. Men, women and children, old and young, are affected alike with the disease. The country inhabited by the Mosquito Indians consists of open savannas, rolling grassy plains, which, from the borders of the Caribbean Sea, gradually rise to an altitude of 1000 feet within from 60 to 100 miles westward. They are abruptly terminated by a low range of hills, which, in a few miles landward, give place to lofty peaks of pretertiary basalts. Into the savannas, consisting of sands and gravels of former lagoons, a large number of rivers and creeks have cut out their channels, forming bottoms, often many miles in width. The vegetation of the country varies with the underlying geological formations. A dense

turf of grass covers the savannas, interspersed with a rather stunted growth of a rich pitch-pine crowning the elevations. The bottom and the low range of porphyry hills are covered with a dense tropical forest growth, and the eruption rocks carry a more open forest. The whole region is swept by the easterly trade winds, and the temperature does not fall below 70 deg., and does not rise above 90 deg.—certainly an equable climate. The rainfall is abundant. The Indians live along the lower river courses and on the borders of the lagoons, in villages. They are but rarely found of pure blood. To a large extent they are mixed with white and negro races, and vary accordingly in type. They live on game, fish, and, as a rule, from the product of small plantations cultivated by their women. Corn is generally a part of the diet, and is mostly eaten after fermentation. Cassava, a starchy root, is used in the same way, and banana in every shape is eaten, boiled, fried, roasted in the ashes, ripe and green. The moral state of these people is rather low; polygamy flourishes, notwithstanding the efforts of missionaries. Malaria is not unknown, though I have not had occasion to observe any of the severer types of this disease. Ringworm is frequently found, appearing on every part of the body of those affected.

One peculiarity of these tribes is noteworthy. All love the water, and there is hardly a day in the year in which all do not bathe once or twice.

Having made this introduction, now to describe the disease which has prompted this paper. Several varieties have been noticed. At least two are very distinct. Other types seem to be mixtures of the two. I have been unable to see cases of this disease at or soon after birth. From a few months, however, after birth, up to the time of death, the disease may attack any individual, strong or weak, old or young, male or female. Cases in early infancy are rare. Generally, the disease commences on the extremities, the feet and hands particularly, gradually spreading. After this the lesions are most frequent around the knees, abdomen, neck and face. There seems to be no disturbance of the general functions of the body. The lesions appear as crops of minute reddish papules, which break up and gradually disappear, leaving a discolored

spot. The pigment finally disappears, leaving behind a dirty white lesion, whitish in the centre, surrounded by a partly discolored and slightly elevated broad margin. These patches are round or oval in shape, with irregular border. The two varieties of *bulpiss* are (1) "black bulpiss," and (2) "white bulpiss." In the black variety the lesions have a greasy black color, the affected skin having the appearance of Indian paint. Here the patch gradually dries and shrivels. In the white variety the lesions are as above described, and continue dry and scaling. There are no subjective symptoms except when the disease appears. Then itching is felt after bathing and at night. It does not appear that the disease is hereditary, but it is undoubtedly contagious. It is asserted by these people that for the sake of revenge one afflicted with the disease will scrape off the scales, etc., and mix it with the food or drink of the enemy, who invariably contracts the disease therefrom. The treatment commonly employed is the red oxide of mercury in ointment, suggesting the parasitic nature of the disease.

The following cases illustrate the phases of the disease:

A., Mosquito, Indian, 16 years old, laundry boy. Father and mother Mosquitoes, both living. They, as well as the grandmother, were affected with the disease. About one year previous the first lesions appeared on the hands and feet. Starting from the outside of the great toe, the disease gradually spread over the back of foot. The skin looks dried and shrinking, but not scaly. On the hands it commenced on the outside of the thumb and gradually spread, attacking the knuckles first. Now (at time of observation) it has appeared on the knees. Some itching after bathing and at night. No other inconvenience. Organs normal. Is of good physique.

II.—Mrs. T., 30 years, mother of five children, full-blooded Mosquito Indian. Village *cruckera;* father and mother dead. Neither was affected. Noticed disease first when twelve years of age. None of children, except one, 18 years of age, has disease. Husband not affected. The eruption first appeared on the feet and hands. Itched as it came out—not since. No loss or exaggeration of sensation. Organs normal. Appearance of lesion as described under "white" variety.

III.—John M., Mosquito, 45 years old, village cruckera, has

mixed lesions. Has been affected for many years. Is now fairly covered with it. For the past six months has been suffering with fevers interruptedly. Seen first on September 16. Complained of dull headache at vertex and temporal regions. Vertigo. Liver normal, spleen normal, heart normal, slight humming sound with first beat; respiration 29, pulse 70; features drawn, expression of anguish, skin dry and hot. Saline administered. Next day patient's condition improved. Severe pain along right sciatic; head drawn backward, almost immovable. Hot application to back of neck and along spinal column. Hypodermic of opium for pain. Next morning patient delirious; loss of speech and deglutition; rigidity of muscles of neck somewhat lessened; bowels have moved freely, kidneys acting well, fever high (no thermometer). Continued treatment. Next day is better, is rational, appearance good; speech and deglutition restored. Toward night all symptoms reappear. Next morning abdomen swollen, complete paralysis of speech, deglutition and motor sensibility; head completely drawn backward, teeth tightly shut, skin moist, expression of extreme anguish; seems unconscious; chest full of moist rales; restlessness, difficulty of breathing and expression of anxiety marked. Died.

A diagnosis of cerebro-spinal meningitis was made here, but it is reported so fully because it is said that some of the symptoms are common in the course of the "bulpiss," and the first thought of the native is that he has been poisoned.

Bichloride of mercury (in 1-16 gr. doses) was tried in some cases, strychnia sulphate (in 1-60 gr. dose), Fowler's solution, etc., but without any commendable results.

CASE OF PRECOCIOUS MENSTRUATION.

By DR. C. E. CATCHINGS, Woodville, Miss.

Hoping that this will be of interest to some of my confrères, especially those making gynecology a specialty, I write the following:

The patient was a bright mulattress, aged 18 years, farm hand, and rather above the average negro intellectually. She came under my observation on December 20, 1894, in com-

pany with her mother. On interrogating the mother, I obtained the following history: When *one month old*, the daughter menstruated and continued to menstruate regularly for the next six months, at which time she stopped, and did not begin again until 3½ years afterward. At this time she menstruated again, and also developed a bad case of leucorrhœa, which has lasted up to the present time. The menstrual flow ceased again at the age of 7 years, not to return any more until she was thirteen. Then she began to be irregular, sometimes going two or three months, but this time she has gone five months, and that is why she sought medical aid. On examination, I did not find any symptoms of pregnancy whatever, I found the uterus in a badly retroflexed condition, and also a profuse leucorrhœal discharge. For the suppression I prescribed the following, though I have little faith in it:

℞ Ext. gossypii rad fl.
Ext. viburni prun fl.
Ext. ergotæ ..... aa ℥v.
Tr. opii ..... ℥i.

M. Sig.: Teaspoonful every three hours; also ordered sitz-bath for the leucorrhœa and prescribed an astringent vaginal douche. This girl was well developed at four years; is now a healthy looking woman.

HYPNOTISM—ITS RELATION TO THE MEDICAL SCIENCES.*

By DR. W. LAWRENCE STEVENSON, New Orleans, La.

To believe that hypnotism is a new or modern science is to commit a great error. Forty centuries ago it was known to the ancients, and for countless ages it has been the stock in trade of charlatans. To Dr. Mesmer, a Swiss physician, is due the honor of being the first to introduce hypnotism in a scientific manner. The weird art which he practised was called mesmerism after himself. In our own day mesmerism has been developed and christened hypnotism.

It is not worthy of you as scientific students to deny the various manifestations of hypnotism because you have never

*Abstract of two lectures delivered before the class of the Tulane Medical College, November 20 and December 6, 1894. Subjects for experiment, a hen, a rabbit and a negro.

witnessed them. It the published records of experiments are not convincing, they are at least worthy of deep thought and investigation before the skeptic can prove a negation. I am sure that there is not one who doubts that certain individuals can be peculiarly influenced by others, and led to believe certain things and commit certain acts.

The time for denying the reality of hypnotism is past, and it only remains to prove to-day by further research whether or not the art is of real value to our present therapeutical resources, to the surgeon, to the psychologist, and to the educator.

Hypnotism is not the result of any force exerted by individuals peculiarly or pre-eminently endowed with magnetic power, as is commonly supposed, but is a phenomenon of life growing out of the suggestion or the concentration of the powers of a special sense. I enter a sick chamber, to be greeted with the exclamation, "Doctor you are too late, I am dying!" I satisfy myself that the patient is not seriously ill, and in a positive tone I announce my views. Instantly, the dying man grasps a spark of hope. Assured by my positive manner, new vitality thrills through his veins. He has been saved by the suggestion of the possibility of relief. I suggest to a subject that he is sleepy, that his pupils are dilated, that his brain is fatigued. I repeat the suggestion, and rapidly he begins to think himself that he is sleepy. Continuing, I make him believe that he is asleep, and in reality he is.

No subtle fluid passes from the operator to the subject. Some people by working for themselves apparatus of a suitable sort, by gazing at the plates of a rapidly revolving mirror, or by concentrating the attention on a light, will bring on an abnormal or cataleptic condition of their nerves, which will in its turn superinduce anæsthesia.

Hypnotism has since the earliest ages attracted the attention of people from all parts of the world, and history reveals many curious customs enacted in far away lands.

The Egyptian diviners were enabled to make divinations by looking into crystals. The Persian Magi did likewise, and at the present day the Indian yogis and fakirs throw themselves into a mesmeric state by fixing the gaze. In the convents of the Greek Church, in the eleventh century, the Hesychasts

hypnotized themselves by gazing at the umbilicus. Francis I and other French kings, up to Charles X, healed by the imposition of hands.

It is questionable whether cradle-rocking, used to put children to sleep, is productive of mesmeric effects, but it is certain that these effects are produced among uncivilized people by violent whirling, or dancing movements accompanied by music, or other mental excitation. On the authority of trustworthy observers, the Aissaouas of Algeria are enabled, by means of dancing and singing, to throw themselves into a state of ecstacy, difficult to describe, in which their bodies are insensible to pain. They run knives and pointed instruments into their heads, eyes and hearts without injury to themselves. The same phenomena are witnessed in the Buddhist convents in Thibet. In Switzerland, milkmaids get better wages if they are gifted with a good voice, because it has been discovered that a cow will give one-fifth more milk if soothed during the process of milking by a pleasant melody.

It is a curious observation that when one begins to study any sleeping body it will wake up at once. There are few persons who can not be awakened from the soundest sleep by looking them intently in the eyes. Artists realize this undesired effect in their efforts to obtain sketches of sleeping persons. One can by intense thought and exercise of will power compel a person to turn his head and single him out of a crowd. The laws of the Roman Catholic church forbid spiritualism and allied science and the use of the planchette, because the people attribute to these agencies powers possessed by God alone.

Sleep is a psychological condition resulting from an auto-suggestion; hypnotism is a like condition resulting from a hetero-suggestion or suggestion created by another. The difference between natural sleep, dreams and hypnotism is one of degree only, and according to Brémand, with certain persons, natural sleep can be transformed into hypnotic sleep. Sleep produced by chloroform and morphine can likewise be converted into mesmeric sleep. Memory is remarkably developed and the faculty of clearly seeing a possible or imaginary event is wonderfully sharpened in dreams. You all know these facts and it suffices to allude to them to establish

the connection between dreams and the somnambulistic stage of hypnotism, where there is a quickening of the senses to a high degree.

I will anticipate my experiments on the subject by hypnotizing a few animals. I take a chicken and repeat upon it the experiment known as the "experimentum mirabile." I place it upon its back, and with a piece of chalk I trace a straight line which parts from the eyes. Instantly it remains immobile, fascinated, hypnotized. I place a rabbit upon its back and look into its eyes; a hypnotic state rapidly supervenes. Patient experimenters have succeeded in hypnotizing a large number of animals, as the cat, hog, serpent, alligator, etc. An Austrian law prescribes hypnotism in the army for the shoeing of the horses. It is customary in certain countries to make hens sit on a new nest by means of hypnotism. The head is placed under the wing and the fowl shaken violently for an instant. When transferred to the new nest it is unconscious of the change.

There are three stages of hypnotism, to-wit: the cataleptic, the lethargic and the somnambulistic. In the first, or cataleptic stage, the body is immobile and apparently dead, but muscular sense, vision, and especially hearing, retain their powers. In the lethargic stage there is complete immobility of the tissues. In the somnambulistic stage there is a quickening of the senses to a high degree, and a remarkable sharpening of the powers of the mind.

The surest way to affect the imagination, impose a strong will, consists in acting with lightning rapidity, without giving the person time to reflect or recover his *sang froid*. To hypnotize quickly, I follow the method of Prof. Darato. I make the subject press his hands firmly upon my own; suddenly I thrust him backward and plunge my glance into his eyes. I make him move and walk backward; I arrest his arm if he wishes to strike, his limbs if he wishes to walk. I obtain these effects by producing various paralyses. The subject is conscious of his acts and brought back to the natural state by a word; he can relate the experiences which he has submitted to. By degrees sleep deepens, and I can force upon him the falsest ideas and the most unnatural desires.

It is wrong to consider that an ignorant, insane or hysterical subject is better adapted for hypnotical experiments than the educated. Intellectual people can concentrate their attention and otherwise aid the operator more than people of unsound judgment. Under three years children can not be hypnotized, and up to eight years only with difficulty. Old age is not refractory to hypnotism, and, contrary to the popular belief, sex exerts very little influence.

How is it possible to differentiate between simulation and true hypnotism? We must remember the symptoms of hypnosis. These refer to neuro-muscular excitability, or the contraction of muscles through excitement of the nerves; to cataleptic plasticity, or the maintenance of attitudes given to the limbs in the cataleptic state; to disturbance of the circulation and respiration, and to subjective symptoms, as the development of the memory and the sharpening of the intellect. Remark the experiments: Pressure is made upon the ulnar nerve in the region of the elbow; flexion of the last two fingers results. The arm or leg is raised; the attitudes are rigidly maintained. The limbs do not tremble, as shown by tambour tracings, but fall gradually from fatigue.

Particularly suitable affections for hypno-therapeutics are, nervous and imaginary diseases, all pains which have no anatomical causes, as headaches, stomach-aches, ovarian pains, neuralgia; sleeplessness; hysterical disturbances, particularly paralysis of the extremities and aphonia; spontaneous somnambulism and uneasy dreams; disturbance of the menses; alcoholism and morphinism; neurasthenic ailments; nervous disorders of sight; perverted sexual feeling; prolonged cases of chorea; railway spinal disease; agoraphobia, or fear of open spaces; writer's cramp of central origin; relief of parturient pains; suggested sleep in vitally reduced patients; influence of suggestion on the involuntary muscular system whereby the bowels, etc., may be caused to act.

The record of Erdailes' and Elliston's works shows numerous cases in which operations of the most excruciating order, as the amputation of limbs and the removal of tumors, have been performed on the hypnotic subject. Dr. Berrillon has recorded a case of dypsomania cured by suggestion, and

Dr. Woods, of this city, has effected a cure of disease of the ear.

Can crimes be committed by hypnotism? I believe with the followers of the Nancy school that a person can be commanded to kill another or commit rape; but some subjects refuse to obey. Observe the experiment in this instance: I place a paper knife in the hands of the subject and command him to strike a bystander with all his might. (He does so.) Continuing, I can make him believe that he has committed murder, and he is seized with fright and implores me to shield him from justice.

How are cures effected by hypnotism? The general view is that suggestion is the healing agent. Most miraculous cures are referred to purely empirical suggestions in the treatment of disease. But it is not always possible for a physician to implant the suggestion of relief. Hypnotism is a means of attaining this end in spite of opposition. No patient can resist the suggestion, if only the hypnosis is deep enough.

Are the results of hypnotic experiments of a positive character? Rust has remarked that "what never does positive harm can never do positive good." You must have the testimony of hundreds of careful observers that hypnotism does positive good. You can satisfy yourself that it does positive harm. Place a frog upon its back and plunge your glance into its eyes. A hypnotic state is rapidly induced, and the poor animal, left to itself, will die in the original position after the lapse of five or six hours. Place a frog in a glass jar and hypnotize it with the eyes. At the end of a few seconds it becomes quiet and fixes its gaze upon the operator. Soon the mouth opens, the limbs radiate, and the animal expires. La Fontaine has performed these experiments on frogs and lizards and induced death in thirteen minutes. It is within the power of you all to experiment on cats and fowls. After several trials of continued hypnotism the animals lose energy and rapidly expire. Fortunately these terrible consequences of the power of the gaze are not observed in man. No record which will bear investigation has yet been made of unpleasant results, unless it has been the will of the operator to intentionally produce them. Therefore, do not hesitate to experiment, and the results may be gratifying to yourself and friends.

Two more suggestions: Often in treating irritable children you would gladly welcome any method by which they could be quieted. I offer this suggestion: Brush the fingers over the temples, so as to raise the eyes; plunge your glance into their eyes and regard them steadily for a moment. In most instances the little one is unable to withdraw from your glance and quickly forgets to cry.

Soon you will all feast on the proverbial Christmas turkey. Let me suggest a quiet way of killing it. Place the fowl upon its back and with a piece of chalk trace a straight line which parts from the eyes. Instantly it remains immobile—hypnotized. Insert a block under the neck and sever the head from the body with a sharp instrument.

A word of caution: The faculty of magnetizing, or that of influencing our fellow creaures by a stronger will, being the most beautiful and the most precious which has ever been given to man, it is necessary to regard the exercise of magnetism as an act which demands the greatest purity of intention.

THE ANNUAL REPORT OF 1895 AT THE ANNUAL COMMENCEMENT, HELD AT NEW ORLEANS, APRIL 16, 1895.

By PROF. STANFORD E. CHAILLÉ, M. D, Dean of the Medical Department, Tulane Univ., La.

MR. PRESIDENT—Since our last commencement the medical faculty has been most grievously afflicted by the death of Prof. Albert B. Miles, M. D., the youngest man in the faculty, and the member whose age, health and constitution entitled him to the longest life. Born in Alabama May 18, 1852, he died in New Orleans of typhoid fever August 5, 1894. After attending three annual sessions in our medical department, he was graduated in 1875, and was the valedictorian of his class. Thereafter he gave eighteen years (1875 to 1894) of official service to this college, ten years as a demonstrator of anatomy, seven years as professor of materia medica and therapeutics, and only his last year, when he had finally attained the summit of his ambition, as professor of surgery. During sixteen of these eighteen years he was for four years (1877 to 1881) assistant house surgeon, and for twelve years (1882 to 1894)

house surgeon of the Charity Hospital. Wifeless and childless, he bequeathed to his beloved college and to his equally loved hospital valuable legacies, thus prolonging after death the priceless services rendered these public institutions during his life.

He possessed an unusual combination of high qualities. He was tender-hearted, yet resolute; modest, yet conscious of his own worth; generous, yet prudent and just; exacting to himself, yet considerate and charitable to the frailties of others.

As surgeon and physician his merits were so conspicuous that the public united with his profession to widely proclaim his superiority and to give him a foremost place in the ranks of his profession.

As demonstrator and professor, he was a clear, forcible and admirable teacher; and, in spite of the great temptation of many and onerous engagements, he was always punctual and always well prepared. He illustrated the ideal professor, for he stood foremost, not only in professional and public estimation, but also in the esteem and love of his students.

Whether as a man, a patriotic citizen, a practitioner of surgery and medicine, a medical officer or a professor, he was distinguished for the able and faithful discharge of duty, for unusual executive ability, for remarkable tact and for the preeminent superiority of his judgment; whether it be called judgment or reason, or wisdom, this is the very highest function of the brain, the function by which man manifests his special superiority over the brute, the function in which man is likest God.

The colleague for whom we grieve exemplified these oft-quoted lines:

> "His life was gentle; and the elements
> So mixed in him that Nature might stand up
> And say to all the world, 'This was a man!' "

Yet the death of this man, so useful to and so lamented by the public, was due to a preventable disease; the public is very surely responsible for prevalence of every preventable disease, and the most discouraging fact connected with this most deplorable death was the utter unconsciousness manifested by this public of its responsibility for this, as also for many hundreds of other deaths annually. Is it wise, is it just,

to soothe the public conscience, as is usually done, by shifting this responsibility from this world to the next?

During the sixty-one years that have elapsed since the origin of our medical department, in 1834, there have been registered on its record of students 11,246 names, and 3229 students have been graduated, viz., 2969 in medicine and 260 in pharmacy.

In my annual report of 1893 attention was called to the encouraging facts that the 420 students then attending were the greatest number ever present, and that the faculty had inaugurated much more exacting regulations, which would greatly promote medical education, and thereby the welfare both of the public and of the medical profession. Attention was also called to the discouraging facts that these more exacting regulations, together with occupancy of our new building, with its additional and expensive laboratories, would greatly increase the annual expenses, and that the new regulations imposing on students an educational qualification for admission, and the expenditure of much more time and money to gain a degree, would necessarily reduce the number of students, and thereby the annual receipts. To these reasons for fewer admissions, foretold in 1893, has been added another potent cause, the national financial depression. Owing to the profitless prices for our chief Southern products, cotton and sugar, this depression has been greatly aggravated throughout the Southwest during the past year. For these reasons the 420 students of 1893 were reduced to 377 in 1894 and to 341 during the present session.

It is now believed that the number attending the next will be even fewer than at the present session, for the reason that our new and more exacting regulations have not yet been enforced against the many students who had attended one full course prior to September, 1893, but will be enforced at the next session on all medical students. There is good reason to hope that after the next session the number will again increase, and that in a few years there will be more students than ever before.

The following six evidences of progress during the past year deserve record:

The faculty has established a gymnasium, which has greatly promoted the health and the recreation of students.

The laboratory of operative surgery has received valuable additions, greatly improving its course of instruction.

The bacteriological laboratory has rendered valuable services to the sanitary officers of our city and State, and is destined to prove of still greater service to the public.

In 1885 two-thirds of our medical graduates had attended only two annual sessions; in 1896 there will not be one who has attended fewer than three sessions, and now, in 1895, there are only ten medical graduates out of seventy-four who have attended only two sessions. In justice it must be stated that even these ten have studied medicine not less than three years, although they have attended only two sessions.

Within the Charity Hospital, which in 1894 presented more than 32,000 cases of disease and injury for the study of medicine and surgery, the antiquated and defective amphitheatre, erected in 1847 conjointly by the hospital administrators and the medical faculty of our college, has been this year replaced by a model building, admirably adapted to the much more exacting needs of modern surgery, and therefore to the greatly improved instruction of medical students.

By the erection of this costly amphitheatre, seating more than 400 students, the board of administrators of the Charity Hospital has conferred a direct and invaluable benefit on the cause of medical education, especially as represented by our medical department. The last eight years have been prolific in establishing four invaluable laboratories, but this college has always possessed two other laboratories, the two that are the most indispensable. The chief of these, the unsurpassed laboratory of clinical medicine and surgery, is within and is exclusively dependent on the Charity Hospital; the second one in importance, the laboratory of practical anatomy, is directly and wholly dependent, as also is the new laboratory of operative surgery, on the Charity Hospital. Without this hospital the medical department would probably never have been founded, and on this hospital, to which the medical department has by law free access for educational purposes, has depended and will depend the reputation, prosperity and very life of our college.

The sixth and last evidence of progress will now be stated. In 1888 women were first admitted to our college, but were limited exclusively to the laboratory of practical pharmacy; in 1894 they were admitted to the full course in pharmacy on the same terms and conditions imposed on male students. Therefore, women this session have been given two laboratory courses, and, for the first time in the history of the medical department, have been admitted to the lectures of three professors, and to one woman will this day be given the degree of master of pharmacy.

It is a source of great gratification that the woman made notable in the history of our college by being the first to be admitted November 17, 1888, the first to receive a certificate of proficiency in 1890, and the first to secure this day a degree, is a modest and gentle woman, yet brave, steadfast and independent, she is a winner of bread for fatherless children. Though a most womanly woman, she is an experienced and well-trained pharmacist, and will be welcomed to the degree she so well deserves by none more cordially than by the men who are members of the professions of pharmacy and of medicine. May all the women who enter our doors prove an honor to their sex as conspicuously as she has done, who will be their first predecessor, and who is commended as an example to guide them—Mrs. Eliza Rudolf!

Among the arguments in favor of admitting women to the full course in pharmacy, there was one that aroused the warm sympathy of every member of the faculty; for it was urged that the greatest benefactor the medical department had ever had was a woman, to whose enlightened benevolence was due not only our admirable new building, with much of its valuable contents, but also the very room in which the faculty sits, and, therefore, that the members of the medical faculty should be foremost in eagerness to extend to women every privilege consistent with the welfare of the college.

Why, then, should women desiring to enter as medical students be refused admission? Students of medicine, but not of pharmacy, are forced to prosecute not less than four most important studies that can not be pursued by mixed classes of men and women without gross violation of the views usually

entertained of modesty, and of the prudent reserve between the sexes needful for self-protection. However old-fashioned or old-fogyish some women may deem these views, they were none the less inculcated chiefly by women in the minds of the present members of the faculty—by the women who were their well-beloved and honored mothers. Inquiry among the women most revered by men—among the good and wise mothers of pure and modest daughters—has thus far failed to find one who approves of such mixed classes.

If, then, the study of certain branches by a mixed class be so objectionable, why not give women separate instruction? Omitting other reasons, because separate instruction would double the labor of teachers, would necessitate additional accommodation in both college and hospital, and would impose a burden of expense and trouble so great that the faculty is neither able nor willing to incur this burden.

In the meantime, the following facts merit consideration: Our college was founded and is maintained by men for men; its greatest benefactor, though a woman, bestowed her gift for the benefit of the sons, and not the daughters, of women; nearly all of the many American medical colleges are, like ours, exclusively for men, but there are not less than five medical colleges, not for men, but, as is worthy of note, exclusively for women; every reputable woman now has the right to gain a medical education in these colleges, and thereafter to practice medicine without hindrance or even discouragement from our medical faculty, and finally, it is manifest in this matter that women now have all the rights that men have.

Beginning my connection with the Medical Department as a student forty-four years ago, I completed, March 20, 1895, the thirty-seventh year of my official service, and am about to complete my tenth year as dean. Hence, this is deemed a fit occasion to summarize briefly some of the chief contributions of the medical faculty during the last decade to the progress of medical education. Justice demands some introductory statements. This decade is coincident with the adoption of the medical department by the Tulane University, to whose administrators the medical faculty owes much encouragement and aid, and other conditions have been more favorable to the last

than to preceding decades. Further, Prof. Richardson and Prof. Logan each served during four, and Prof. Miles during nine of these years, hence any credit due the present faculty is also merited by these three deceased colleagues; and to no man, dead or living, is as much credit due as to my beloved and honored predecessor in the deanship, Prof. T. G. Richardson, M. D.

In my first annual report of 1886 the many reforms needed were indicated, and all of these have been accomplished except two, of which one will soon be adopted, and the other is not in the control of the faculty. Students to be admitted must now give evidence of preparatory education; the annual session has been lengthened; attendance on at least three annual sessions, instead of two, is indispensable to graduation; the corps of instructors has been greatly increased, thus improving the teaching of former studies and adding four new courses (minor surgery, physical diagnosis, dermatology and diseases of children) to our curriculum; hygiene and medical jurisprudence have been added; the four new laboratories of chemistry, pharmacy, microscopy with bacteriology and operative surgery, have given us four more studies, making a total addition of ten new courses to our curriculum in the last decade; the four new laboratories would have been impossible without a new building, and this inestimable improvement has been achieved through the enlightened benevolence of the wife of Professor Richardson, whereby not only have four laboratories been added, but our old laboratory of practical anatomy and all of our accommodations have been greatly improved; finally greater attainments are now demanded for graduation, and in order to promote this much desired end, members of the faculty have made, for the good of the medical profession and of the public, the unusual sacrifice of supporting that which could not have been effected without their aid—the enactment of the law of 1894, which deprives our diploma of its former right as a license to practise, and transfers this right wholly to the State Medical Examining Board.

From 1834 to 1885 the medical faculty, having often fewer, never had more than two paid instructors and three employés, *i. e.*, a total pay roll of from two to five persons. Gradually

increasing this number since 1885, the faculty now has fifteen paid instructors and six employés, *i. e.*, a total pay roll of twenty-one persons, all paid out of the annual receipts, to the very great improvement of our educational resources. Comparing annual expenses with the session of 1884-85, these were doubled in 1892-93, and nearly quadrupled in the last two sessions, *i. e.*, since occupancy of our new building with its additional expensive laboratories. Further, while the faculty has paid for the above and other improvements out of ordinary current expenses, yet $10,618 have been specially appropriated since 1887 for exceptional improvements. Expenses have increased very disproportionately to receipts, so disproportionately that during the last ten years of comparative prosperity the emoluments of a professor have never equaled those of their predecessors during some years before the war, nor the salaries now paid in some American medical colleges.

Impartial consideration of the facts submitted will justify the claim that no previous faculty has a comparable record, showing such numerous and great additions to our educational resources, showing such large annual expenditures voluntarily assumed, showing such large sums of money—which the faculty could have distributed to its members as their predecessors had always done—appropriated unselfishly to improving the educational advantages of the Medical Department.

It also deserves record in behalf of the faculty of 1885 to 1895 that, although many thousands of dollars have been annually received and disbursed, and although very grave educational and financial responsibilities were imposed on the faculty in connection with the erection and outfit of the new building, yet all obligations have been so fully discharged that there has never been even a murmur of financial or other mismanagement.

In conclusion, the records of the Medical Department prove that in educational development greater progress has been made in the last decade than in all of the preceding fifty-one years' existence of our college, and it remains for the future first to perfect the measures adopted, and thereafter to march still further forward.

Graduates of 1895: In behalf of the faculty you are cordially congratulated on the attainment of the degree that you have so long, so industriously and so anxiously labored for; you are reminded that you have now accomplished only the first stage in the difficult ascent to the summits of knowledge and that your future repute and success depend on much longer and more arduous labor, and you are most heartily thanked for your unsurpassed good conduct, whereby you have gained the lasting gratitude of all members of the faculty, and their earnest desire to contribute in the future, as in the past, to your welfare. I now extend to you the official farewell of the faculty, warmly sympathizing with the glad welcome home which awaits you, and confidently indulging the hope that you will enter professional life with the well trained minds, the skilful hands and the brave, yet tender, hearts which will render your lives a satisfaction to yourselves, an honor to this institution, and a blessing to the people.

Mr. President: You are respectfully requested now to confer degrees upon eighty-eight graduates. The seventy-four whose names will first be called are entitled to the degree of doctor of medicine, and the fourteen who will be last named are entitled to the degree of master of pharmacy. * *

At the conclusion of Professor Chaillé's address, Professor Wm. Preston Johnston, President of the University, conferred degrees upon the eighty-eight graduates, whose names are recorded in the annual catalogue of 1895.

NÆVUS.*

BY ISADORE DYER, PH. B., M. D.,

PROFESSOR OF DERMATOLOGY IN THE NEW ORLEANS POLYCLINIC; LECTURER AND CLINICAL INSTRUCTOR OF DERMATOLOGY, MEDICAL DEPARTMENT TULANE UNIVERSITY; DERMATOLOGIST TO CHARITY HOSPITAL, ETC., NEW ORLEANS, LA.

Strictly defined, a nævus is a congenital alteration of the skin, in which there is a localized increase in the amount of pigment deposit. There may be, concomitantly, hypertrophy of other elements of the skin, as the vascular and the connective tissues, the nerves or even the lymphatics.

In its limited definition, nævus pigmentosus is the term

* Paper read before the Mississippi State Medical Association on April 12, 1895.

applied to the existing lesion, which consists in a simply exaggerated pigment supply, appearing as the ordinary mole. These are generally quite small, in color brown or black, and are found in all locations, but with a predilection for the face, neck and back. When simple, smooth and soft, this form is known as "nævus spilus." Where the hypertrophy extends to the papillary part of the corium, and the mole is warty and rough in appearance, the name of "nævus verrucosus" is applied. When there is additionally an excess of fat cells and the growth is large and dependant, the variety is styled "nævus lipomatodes." On any of these there may be a hypertrichiasis, or overgrowth of hair, forming the hairy mole, or "nævus pilosus."

While correctly only congenital, nævi of these types may develop *de novo* after birth. Either congenital or acquired, however, they may grow from the start and develop considerably. They may grow from time to time, with intermissions of inactivity, years even being required in the final development.

The presence of nævi is in most instances of small pathologic significance. The hairy moles and those of the warty or papillary character are objectionable for cosmetic reasons, and demand treatment. These, of course, are particularly undesirable on the face.

Melanotic cancer may be ushered in by a nævus, but this is uncommon enough to warrant only passing mention.

Among the angiomata, classed in dermatology with the neoplasms, there is one variety separated as the vascular nævus. To this variety the names of nævus vascularis, nævus sanguineus, or birth-mark, are applied. This form of birth-mark must be included with the nævi, and in reality it is properly that particular kind of nævus to which the term "mother's mark" is given. Vascular nævi may be present at birth, or may only develop several weeks or months after birth.

The term angioma is applied to tumors of embryologic rudimentary vessels which develop into blood vessels.

The vascular nævus may involve the capillaries, the smaller venous or arterial terminal branches.

The capillary nævus is distinctly cutaneous, and in size is as small as a pin's head, or varies to the size of the palm, or even larger, involving large areas of the body.

This is the form of vascular nævus most commonly met with. It is usually only slightly elevated, or level with the surface of the skin. It is often seen as a tiny red spot with radiating lines made by the capillaries, the "nævus araneus." The more diffuse variety, assuming irregular shapes, often startling in their resemblance to familiar objects, is known as the "port wine" mark or "strawberry" mark. These occur in many instances as family marks, appearing in several successive generations. The entire side of the face may be involved. I have seen one case in which the entire lower lip and chin were involved. Vascular nævi often begin indistinctly and spread gradually to cover large surfaces. On the other hand nævi, present at birth, may within a few months entirely disappear spontaneously.

The venous nævus is apt to be more elevated than the capillary. It is smooth, with protuberant surface, often lobulated, soft and compressible. Here, thin walled veins and small arteries are connected directly by small sinuses, without the intermediary capillaries, all bound together with delicate connective tissue. Pulsation is not infrequently present, and many of the venous nævi are erectile. In size, the venous nævi vary from the size of a large pea to a hazelnut, or even an orange. This kind of nævus may ulcerate shortly after birth, and undergo a spontaneous cure. Last year a child was brought to me in the midst of this process. The growth was located over the right loin, in size about an inch and a half in diameter, but fully half an inch in depth. It was ulcerating freely, and came away in sloughs. In two weeks' time there was only a smooth, red scar about half an inch in diameter to mark the site of the growth. The child was 23 months old, had the nævus since birth, but it began ulcerating only one week before it was brought to me. In this same child there was a small venous nævus in the line of the eyebrow, just over the internal angle of the right eye. In size, it was as large as a small hazelnut. The mother was naturally distressed at the location. With the history of the other lesion, however, I advised non-interference, and had the gratification of seeing the gradual disappearance of the growth, which finally could scarcely be noticed one year later.

Another variety of nævus has been separated in which the distribution of the lesions along the course of one or more of the

superficial nerve branches has led to the opinion that there is some nerve influence at fault as the etiologic factor.

To the lesions occurring in this way the term *nævus unius lateris*, or *nævus neuroticus* is applied. Some attempts have been made to show the association of *nævus unius lateris* with previous neurotic influence, as injury at or near the site of the lesions, shock, etc. It is certain, however, that there is a distinct difference in the arrangement of the lesions of the variety under discussion and ordinary nævi. In the case whose photograph I show you there is a distinct arrangement in herpetiform groups, as if a spray of pigment had been thrown on the one side of the face, in groups arranged along the course of the submaxillary branch of the trifacial nerve. The distribution to the right half of the face, the sharply defined termination of the groups at the mental line, and the tendency of the patient to the formation of pigment lesions, evidenced by the extensive freckling, all argue for a reflex factor.

The lesion is like the ordinary *nævus pigmentosus*, and presents two varieties, the flat mole, deep brown or black in color, and the verrucose or warty mole.

The necessity for treatment of nævi must depend much upon the character, the location, the size and importance of the lesion. Simple pigmentary moles are of little serious importance, and for pathologic reasons need not be removed. When, however, the presence of one or more of these produces discomfort, or disfigurement, the removal is desirable. Hairy moles are often unsightly, and, occurring on the nose, or prominently on the face, are objects of mortification, if not concern, to the individual so afflicted.

With vascular growths, however, it is quite different; the disfigurement only adds to the possibility of the further development, and the danger of accidental hæmorrhage, from the casual breaking or spontaneous rupture of the tumor, demands attention.

In any instance, then, whether from cosmetic or pathologic indications, there are methods of treatment of nævi which are employed. The first observation is that to cure the lesion removal is necessary. The removal of pigmentary nævi should be attended with as little inconvenience or pain as is possible. The pigment is usually found in the rete Malpighii, but may exist as

deeply as in the corium. Agents employed must be directed accordingly. Acids, nitric or carbolic, may be used. Bichloride of mercury in collodion, grs. v-x to the oz.ss., pyrozone and sodium ethylate, act similarly by actually destroying the outer layers of the skin. Where the growth is large and permits, excision is advisable. With the papillary moles, or the warty moles, the curette, followed by the actual cautery, the Pacquelin, or the galvano-cautery, is the best treatment. Ordinarily, however, electrolysis serves the purpose. To the negative pole of a galvanic battery a small steel needle is attached, either in a needle holder or with an insulated wire. I use for this purpose a fine jeweler's broach. The positive pole carries the sponge, which is customarily held in the patient's hand. The needle is introduced beneath the pigmented mole and the current is gradually increased until the lesion blisters. It requires about 8 or 10 milliamperes, or, if cells with switchboard are used, about 12 to 20 cells. Where the moles are hairy, a blunted broach or needle is desirable. The hairs are removed first by electrolysis, and then the mole. The needle here should be gently introduced into the hair follicle, care being used not to pierce the follicle, the hair shaft serving as a guise. The current is gradually applied until there is frothing at the orifice of the follicle, when the hair is ready to come away. If there is resistance on the part of the hair, the operation is not complete. Not more than 3 to 5 milliamperes are needed in this operation, one serving oftentimes. The negative pole, of course, must be used here.

In the treatment of vascular nævi, electrolysis is likewise of service, but more particularly in superficial capillary varieties, when these are limited in area. The treatment of the vascular nævus is aimed at the absorption and atrophy of the blood vessels or at the destruction of them. Astringent applications, causing contraction, as the liquid plumbi subacetatis, may serve in the insignificant, superficial varieties. It is applied saturated on cloths. Collodion, alone or with ergot or tannin, and traumaticin are used to produce contraction. Mechanical compression may serve, especially over the bony parts. A piece of wood or metal is firmly bound over the nævus, or held in place with adhesive plaster. Puncturing or slitting small telangietic nævi often suffices. This is done either with a

scalpel or with an ordinary needle. In large patches, linear scarification is done with a fine and sharp scalpel, or with a scarifier. Multiple puncture with several needles in a cork or a piece of wood is employed at times. The indications, however, are met in most cases by the agent which will produce a plugging of the vessels, by setting up an inflammation; by caustics or the actual cautery, destroying the lesion; finally, by actual removal with the knife, the ligature, or by other method. Where it is thought advisable to resort to a complete removal by operative methods, care should be taken to ascertain the existence or absence of the hæmorrhagic tendency in the patient. Where there are no such contra-indications, the knife is permissible. A free incision should be made, to allow for even union, and deep stitches must be taken, after all the larger vessels have been tied. It is often well to use the cautery for the smaller and intangible vessels. There are two methods for using the ligature. First of all, it is a good plan in smaller nævi to circumscribe the growth with a single or double silk ligature, drawing tightly and tying on opposite side of the growth, when the double ligature is used. If larger nævi, the ligation is applied at a point a little remote from the growth. An incision is made above the vein, or small artery, and a cat-gut ligature is applied, the wound closed. In either instance the growth begins to pale after several days. In superficial nævi the whole patch grows bluish in color. Here and there a spot grows white where the area has been absorbed, and finally, in the successful cases, the whole patch likewise grows whiter and whiter. Often it is advisable to ligate a few days or weeks before the excision, especially in the deep-seated lesions. When the cautery is employed several methods may be followed. A fine platinum needle may be attached to the galvano-cautery, raised to a red heat, and several introductions made. Multiple punctures more or less deep can be likewise made with the same instrument. Linear cauterization may as well be employed with the needle or small platinum knife. The Pacquelin cautery will serve the same purpose.

Caustics act as the cautery does, by producing an eschar, and finally a slough. With caustics, however, the slough is apt to be more extensive than with the cautery. When this method is decided upon, care must be exercised with the agent used.

DR. DYER'S CASE OF NÆVUS UNIUS LATERIS.

Freshly prepared ethylate of sodium, pyrozone, chloride of zinc in solution, nitric acid, the acid nitrate of mercury are among the caustics employed. All of these act in much the same way, producing actual destruction, followed by crusting, and a more or less superficial scar, which gradually fades.

Vaccination serves in locations where an irregular scar is no objection. The slight bleeding need not be stopped, except by a temporary compress. The injection of pure carbolic acid or the tincture of iodine is followed quite often by gratifying results. Little scarring remains, plugging of the vessels is rapidly obtained, and the operation is less painful and of shorter duration than with other methods. The injection of a 1 per cent. solution of chloride of zinc is used for the same purpose. The perchloride of iron may be used by injection, or, as is frequently indicated in the more elevated growths, silk threads, saturated with the perchloride solution, are passed in several directions through the nævus.

Except in small nævi, the treatment is never highly satisfactory, and the methods employed may have to be changed several times before the whole of the growth is removed. It is always well to impress upon the patient the necessity of perseverance in the matter. Dr. Geo. H. Fox reported the successful removal of an extensive nævus of the face by electrolysis, but it required nearly two years to accomplish this (*Jour. of Cut. and Gen. Urin. Dis.*, May, 1894).

It requires a goodly amount of moral and physical courage on the part of the patient to submit to the pain of the operation, which is repeated at each sitting, when electrolysis is used. This method, however, promises most from the cosmetic standpoint, as it leaves but little evidence of the procedure. Most times, too, the treatment is demanded for purely cosmetic reasons. The diagnosis of nævus presents no difficulties, and the prognosis is always a favorable one, except where the possibility of a degeneration and a slough may endanger life on account of a proximate blood vessel of importance.

Notwithstanding the multitude of methods in vogue, the treatment of nævus is still far from satisfactory, and the field is yet large enough to admit of acceptable suggestions.

Correspondence.

A CASE OF SUPERFŒTATION.

Editor N. O. Medical and Surgical Journal:

Complying with your request I will try to send you a short report of the case of superfœtation.

On the 12th of July, 1892, Mrs. M. gave birth to two well developed, healthy infants. When the second one was expelled there came an enormous quantity of liquor amnii and blood, together with the after-birth. On disposing of the after-birth, I discovered what I had not noticed before—a dead fœtus, which was very well preserved and pressed flat, and which appeared to be about a three and a half or four months' fœtus.

Its flattened condition I attributed to the position it occupied in utero, which I suppose must have been between the other two.

This fœtus had an independent placenta; the two living infants had a common placenta.

I thought the case one of triplets, and that one of them had, from want of nutrition or some other cause, lost its life.

DR. J. T. FOUTS.

Mount Lebanon, La.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

ACETANILID VERSUS QUININE TO ABORT CHILLS AND FEVER; AND ACETANILID AS A DUSTING POWDER.

BY BENJAMIN H. BRODNAX, M. D., OF BRODNAX, LA.

Read February 13, 1895, by Dr. Oscar H. Allis.

In 1890 I first used acetanilid in a case of catarrhal fever with convulsions, in an infant nine months old, with astonishing amelioration of all grave symptoms in fifteen minutes.

My next trial of the drug was in intermittent fever in a family of three small children. The doses ranged from two to three grains, and when the time for the chills arrived the children were asleep and perspiring. I have employed the drug quite extensively, but it is especially in chills and fever that I desire to emphasize its great merit. My mode of using it is as follows:

If there is time before the chill I give from one and a half to two grains of calomel in quarter-grain doses a half hour apart. Then, whether the bowels have acted or not, I give according to the age from two to six grains of acetanilid twenty minutes or half an hour before the expected chill. Gentle perspiration, with sweet and natural sleep, usually promptly followed the administration of the drug, from which the patient wakens entirely relieved and ready to go about in half an hour.

When there is not time before the chill to administer the calomel, it may be deferred until afterward; but the acetanilid may be given immediately before or during any stage of the chill or fever, with the happy result of promptly inducing sleep and gentle perspiration. Should the desired effect of the drug—viz., sleep and perspiration—not follow its administration within a half hour, a second dose of equal amount should be given.

The after-treatment consists of an acid tonic, viz.:

℞ Acid nitro-muriatici dil.....f℥j.
Ferri sulphatis.....gr. lxxx,—M.

This should stand for twenty-four hours. S. Ten drops in watere three or four times a day.

On Friday, October 19, I was called to see a young man who had "dumb" chills, with vomiting and severe gastric disturbances, for six days, the attack coming on daily at 1 o'clock and lasting until midnight. When I arrived, at 7 o'clock in the evening, he was vomiting thick, glairy mucus, and was unable to retain anything on his stomach. I immediately administered hypodermatically one quarter of a grain of morphine and gave six grains of acetanilid dry upon the tongue. He had one slight attack of vomiting soon after, but a little later fell into a sweet and a refreshing sleep, from which he did not waken until 7 o'clock, the next morning. As the next chill was expected at 1 o'clock he was ordered to take six grains of acetanilid twenty minutes before. No chill followed, and none have taken place since. The after-treatment with the "acid tonic" was pursued, as is always my custom.

I have now treated several hundred case of chills with

acetanilid, and without quinine, and report my success in the hope that others will be induced to give it a trial.

Acetanilid and boric acid, in equal parts, as a dusting powder, I have used extensively in ulcers, burns, etc. I find the powder especially serviceable in the excoriation of infants and fleshy people; with it I dust the funis of the new-born babe, while over the vulva of the mother I place a little cotton previously well dusted with the powder. Made into a paste with glycerine, I have used it in a vaginal tampon to allay uterine pain.

In the case of a female, sixty-one years of age, almost crazed with the itching from a pustular eruption that covered the lower part of the abdomen, vulva, and anus, the powder well dusted over the affected parts, after first moistening the parts with dilute carbolic acid, was followed by six hours of consecutive sleep. She was wakened by a return of the itching, and, rising, washed the parts and reapplied the dilute carbolic acid and powder, with immediate return to sleep. A great improvement was observed the next day, and in a few days the parts were well. Previous to the application of the powder she had not slept well for several nights even with the aid of morphine.

Internally I have used it to correct foul breath; also in dysentery and diarrhœa. When taken on the tongue and held in the mouth a few moments before swallowing, it has the effect of allaying the distressing thirst that accompanies fever.

DISCUSSION.

Dr. J. M. Anders—The paper which has just been read reports certain clinical facts of lively interest based upon personal observation. It seems strange at this thme that any one would assume to have obtained better results from the use of acetanilid in malarial intermittents than from the use of quinine. Unfortunately, Dr. Brodnax does not offer any experimental facts upon which to base an opinion of the mode of action of the acetanilid. The well-known antiseptic action of the drug is the only explanation I can offer. I believe that Dr. Brodnax is a careful and reliable observer, and do not question the fact that cases of chills and fever were cured after even single doses of acetanilid. Although we have entered upon days of scientific therapeutics, I do not think that the days of rational empiricism have entirely passed away. We know that quinine cures chills and fever. Since that discovery nothing has been brought forward that will supplant quinine in the treatment of that disease. It is not impossible that such a remedy may be found; it may be that Dr. Broadnax has found it in acetanilid. I have met with cases of malarial intermit-

tents in persons in whom there is an unpleasant idiosyncrasy against quinine. Now, in such cases a better substitute for quinine than those we have at present would be welcomed and of great advantage.

The question whether or not there are objections to the use of acetanilid might be asked. The statement has been made that acute dilatation of the heart sometimes occurs in intermittents. Now, it is known that acetanilid is a cardiac depressant, and in toxic doses has produced death by paralysis of the heart. While I do not consider this a bar to the use of acetanilid in the doses prescribed by Dr. Brodnax, I think that this influence makes it necessary to guard the heart during the time of its administration. If subsequent experience supports those observations the profession and members of the society should give a vote of thanks to Dr. Brodnax for a new remedy for malaria, and one which promises to rank as a specific.

Dr. J. A. Cantrell—My experience with acetanilid in the treatment of disease has been in two hundred cases, or more, of skin eruption, especially intertrigo and eczema. I believe it to be the antiseptic that we are looking for in the place of iodoform. It does not have any irritating qualities that iodoform has, and, in fact, a great many cases of iodoform irritation have been cured by it. In very moist cases of skin diseases it acts as a drying powder and also as an astringent. In other cases, like zoster, it acts well, dries up the eruption, and apparently it acts as a stop to the disease; at least, it seemed at the time as if acetanilid has produced this action.

Dr. G. G. Davis—Nobody would be more glad than myself for a satisfactory substitute for the foul-smelling iodoform. Combinations have been brought forward of boric acid and other substances with iodoform. The mixture of boric acid I prefer to the pure iodoform. The boric acid breaks up the lumps which the iodoform contains and makes it a more manageable substance as a dusting powder. I have also used acetanilid by itself, but have been unable to persuade myself that it is the equal of iodoform for surgical purposes.

Dr. Edward Martin—I have used acetanilid in about a thousand cases of suppurating wounds, and my experience is, in these cases, that it is superior to iodoform. It is less toxic, for one thing. It is very common among surgeons to observe in slowly healing wounds dressed daily with iodoform certain nervous symptoms, headache, and so on, indicating iodoform poisoning. This is not seen in cases dressed with acetanilid; the wounds keep perfectly dry, there is no pus, and, of course, no odor, and the dressings keep as clean as with iodoform. I shall continue to use it in place of iodoform.

Dr. Davis—I think that the direction of surgical progress as regards the application of powdered antiseptic substances in recent wounds is on the decline, and I have no doubt that both the iodoform and the acetanilid will be eventually much less used than at present. Dr. Halsted, of Baltimore, makes an application of silver leaf take its place. Of course, drying powders will always be used in the treatment of suppurating wounds.

CORRECTION.

On page 679 of the JOURNAL for March, 1895, a mistake was made in connection with Janet's method of treating gonorrhœa. It was stated that a solution of permanganate of potash, 1 to 100, was used. In his "Précis des maladies blenorrhagiques," Dr. Charles Andry, a pupil of Janet, states that Janet begins with a solution of 1 to 6000, and never uses a stronger solution than 1 to 800.

INHALATIONS IN PHTHISIS.

Dr. M. A. Dunn, of Montgomery, Grant parish, La., writes as follows on the above subject:

℞ Thymic acid ..... grs. viii.
Oil peppermint .....
Oil eucalyptol ..... aa ʒij.
Beechmund creosote ..... ʒ v.
Chloroform ..... ℥xiii.
Alcohol ..... ʒij.
Mix.

Breathe freely through nose and mouth. Of course the usual tonic and dietetic regimen is to be kept up.

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DR. H. W. BLANC. DR. WILL H. WOODS.

Editorial Articles.

SOME PRACTICAL APPLICATIONS OF HÆMOSCOPY.

The blood has always been recognized as a fluid of the utmost importance to life, by the savage as well as the scientist. Its association with all of the vital phenomena is so intimate and wonderful that we can excuse semi-barbarous people for regarding it with awe. Studied very closely at all times with the aid of the apparatus that each period furnished, the blood always yielded fruitful results, yet always baffled those who endeavored to sound its deepest mysteries. The present century, with its vastly improved armamentarium for clinical and physiological research, has added something to our knowledge of the blood, and yet it has scarcely done more than to disturb the previous complacent belief that we knew all, or nearly all, about it that was worth knowing.

The old-time humoral pathology had its day. Cellular pathology is still a potent factor in physiology and pathology, but its once predominant position has been disturbed by the modern revival of what used to be apologetically referred to as humoral pathology. Hayem, in his great work (*Du Sang et*

de ses Alterations Anatomiques), says: "*L'Avenir appartient à l' hématologie.*" That future has become the present, and hæmatology shares the attention of scientists in common with bacteriology and cellular pathology. Virchow's contribution to science has secured for him a place in medical history that it is given to but few men to attain. His teachings have done their work; they have advanced all branches of medicine greatly, and now that the leaven has acted as much as was in its power, it is time to develop some other branch or branches of the many-sided science of medicine. Pasteur gave us bacteriology, and the army of workers in the special fields of work have built almost as many different sciences as there are specialties. Beneath them all there is a connecting link that makes them members of one family, and that link is the blood.

For a long time the medical world was content to feel that it knew all about the formed elements of the blood. In 1878, Hayem announced the discovery of a third corpuscle, to which he gave the name of *hematoblast*. Four years after, Bizzozero described the same corpuscles and called them *blood-platelets*. The honor of first calling attention to these little structures certainly belongs to the French histologtst, and not to the Italian. The complacency of the medical world was as much disturbed as that of the physicists when it was conclusively shown a few months ago that the atmosphere constantly contained a gas, called *argon*, besides nitrogen, oxygen and carbon dioxide, that had eluded the search of the most careful chemists.

Hayem claimed for the hematoblasts that they constituted a veritable anatomical element of normal blood, were true cells, and played a very important part in the coagulation of the blood, particularly in the formation of the white clot. Histologists, as Hayem says, have not hastened to adopt his views, and one American observer, Dr. R. L. Watkins, of New York, has gone to the length of denying the normal character of the third corpuscle, and claims it to be pathognomonic of the tubercular diathesis. In the *International Medical Annual* for 1895, Dr. Watkins summarizes his views concerning the third corpuscle. He regards it as the very first indication of tuberculosis in any form, even when all the usual symptoms are absent; and without it, tuberculosis is impossible. It appears

long before the cough, and is always, according to Dr. Watkins, the forerunner of tuberculosis, and forms the material on which the tubercle-bacilli feed.

If Dr. Watkins' statement be correct, and the hematoblasts are not merely the detritus of broken down red blood corpuscles, hæmoscopy offers an invaluable aid in the detection of the tubercular tendency at the very time when such detection could be of service. A case of incipient consumption can be cured—not very easily, perhaps, still it can be cured; we can not say as much when the disease is far advanced. If Dr. Watkins' statements should be confirmed by future investigations, then the practitioner has a most valuable aid in detecting the tendency to tuberculosis at precisely the period when treatment can be relied on to do some good.

At present it is a routine practice in the Johns Hopkins Hospital and some other hospitals to make a microscopical examination of the blood of patients suffering from fever. In many cases, the examination reveals the presence of Laveran's plasmodium, and the malarial nature of the fever is no longer in doubt. Patrick Manson, while in the Orient, habitually examined the blood for the filaria-embryos. Examination of sputum for tubercle-bacilli has become as common as taking temperatures. The typhoid bacillus, the bacillus of glanders and the tubercle-bacillus can sometimes be found in the blood. The ability to find the organisms in diseased blood is just now confined to a select few; but hæmoscopy will go through all the stages of growth of new things applicable to a wide field in medicine: first revealed, then cultivated by a few, and finally disseminated among the vast body of the profession. The day is not so very distant when every modern practitioner will be competent to perform as routine work the experiments and investigations now confined to a few laboratories. Specialties may multiply, but the advanced general practitioner will always be in demand, because he will advance with the specialists and, compared with the general practitioners of two generations ago, he will be a bundle of specialties guided by a broad general knowledge.

A recent addition to hæmological literature is an article by Dr. Louis Bremer, of St. Louis, Mo., who has evolved a

method of dignosticating diabetes mellitus from an examination of the blood (*Centr. f. a. med. Wissen*, No. 49, 1894). In staining blood he employs a method which he calls "normal coloring method." He makes two solutions from a 1 to 200 watery solution of eosin and a saturated watery solution of methyl blue. They are mixed in watch-crystals in such proportion that in one there is a distinct preponderance of the red color of the eosin and in the other a piece of letter paper dipped into it must show a pure blue color. The cover glasses containing the dried blood are heated, according to Ehrlich's method, for two hours at a temperature of from 240 to 250 deg. F. The cover glasses are first immersed for three minutes in the first solution, and then for the same period in the second; the specimens are then dried and mounted in balsams. Blood thus prepared has the following characteristics: all of the red blood corpuscles acquire a brownish-red hue, which grows fainter as the central depression is approached. The intensity of the tint varies from a clear reddish-brown to a very deep chestnut color, according to the individual. The coloring of the hæmatoblasts (blood platelets) also varies, according to the individual and pathological condition, from a violet blue to a pure blue, though they are always more or less basophile. The nuclei of the leucocytes are colored pure blue; all of the e–granules are violet-red. The granules of the eosinophile cells appear bright red. The nuclei of the medium and large lymphocytes are feebly basophile, though the cell-bodies are usually stained a marked blue. The nuclei of smallest lymphocytes stain an intense blue, while the cell-body is faintly blue.

One great advantage claimed for this method is that the plasma itself takes on certain colors according to its chemical properties. The variations in the color reactions of the different elements of the blood have great diagnostic value. In diabetes and glycosuria there is a more or less complete loss of power of absorbing eosin on the part of the red blood-corpuscles. In all of the cases examined by Dr. Bremer this loss of staining power occurred with such force and certainty that he was repeatedly enabled to diagnose the presence of sugar in the urine by an examination of the blood. In such prepar-

ations the red blood-corpuscles either remain entirely unstained, or else they acquire a light yellow or green tint; only rarely is there a narrow red circumferential zone. The blood-plasma also remains uncolored, or becomes faintly red at the most. At the same time there are certain changes in the behavior of the granules, the lymphocytes and the products of the retrograde metamorphosis of the blood-corpuscles, namely, the hematoblasts.

In diabetic or glycosuric blood there is an enormous overloading of the blood-plasma with white spheroidal bodies, which are found in normal blood in moderate numbers and of small size. They are erroneously called albuminoid corpuscles, and elementary corpuscles. They are not stained by any of the known staining reagents. They seem to be necrotic bodies, arising from disintegrating red blood-corpuscles, leucocytes and lymphocytes. Their number is so great in diabetic blood that the plasma looks granulated; the number varies in proportion to the severity of the disease.

Of course, the above method of diagnosticating diabetes does not put away the simpler way of testing the urine for sugar. It does add, though, an interesting feature to our clinical examinations, which has a present undoubted value, which may prepare the way for future great revelations in normal and pathological micro-chemistry of the blood.

THE STATE MEDICAL SOCIETY.

The approaching meeting of the State Society gives greater promise of success as the time for it draws near. In our brief notice of the meeting in our last issue, we barely mentioned the splendid volume of Transactions for our meeting in 1894. The volume had just been issued, and there had not been time to examine it critically. A closer acquaintance with it discloses its full value, and causes a feeling of justifiable pride in the valuable scientific work done at our last meeting. Every annual volume records an improvement upon its predecessor. If we may judge from the list of papers already promised for our next meeting, our next volume will even surpass the last one, which

reflects great credit upon the society. We take pleasure in reproducing the preliminary programme for our coming meeting, which, however, is subject to considerable modification.

PRELIMINARY PROGRAMME OF THE LOUISIANA STATE MEDICAL SOCIETY AT ITS SIXTEENTH ANNUAL SESSION, HELD AT NEW ORLEANS, LA., MAY 7–9, 1895.

FIRST DAY.

Morning. 8:30 to 9:30 A. M.: Clinic at Charity Hospital. By Prof. E. S. Lewis—Abdominal section; 9:30 to 10:30 11 A. M.: Formal opening at Richardson Memorial Building, Canal street. 1. Call to order; 2. Prayer; 3. Reading of minutes of last meeting; 4. Report of chairman of committee of arrangements; 5. Registration of members; 6. Proposals for membership; 7. Reports of officers and committees. (a) report of recording secretary, (b) report of corresponding secretary, (c) report of treasurer, (d) reports of committees on organization, necrology, medical legislation, publication, judiciary committee, State library.

Afternoon Session: 1. Call to order; 2. Reports of special committees; report of chairman committee on collective investigation of the Continued Fevers of Louisiana, Dr. P. E. Archinard; 3. Discussion of the report; 4. Reports of chairmen of sections; 5. Reading of papers, discussions.

Evening Session: 1. Call to order; 2. Reports of chairmen of sections; 3. Reading of papers, discussions.

SECOND DAY.

Morning: 8.30 to 9.30. Clinic at Charity Hospital; by A. M.: Clinic at Charity Hospital. By Prof. J. B. Elliott. Prof. E. Souchon, Anesthesia.

Morning Session: 11 A. M. 1. Call to order; 2. Reading of minutes of previous day; 3. Reading of communications; 4. Formation of nominating committee; 5. Reports of chairmen of sections; 6. Reading of papers; discussions.

Afternoon Session: 1. Call to order; 2. Report of committee on nomination; 3. New business; 4. Reading of papers.

Evening Session: 1. Call to order; 2. Annual address by the president, Dr. R. Matas; 3. Annual oration by Hon. Chas.

F. Buck; 4. Memorial address by Dr. G. Devron; 5. Demonstration to the profession in the surgical amphitheatre of wounds caused by modern rifles, by Dr. Powell, U. S. A.

THIRD DAY.

Morning Session: 1. Call to order; 2. Reading of minutes of previous day; 3. Reading of communications; 4. New business; 5. Unfinished business; 6. Selection of delegates; 7. Reading of papers.

Afternoon Session: 1. Call to order; 2. New business, resolutions; 3. Unfinished business; 4. Reading of papers; 5. Introduction of officers; 6. Announcement of committees; 7. Adjournment.

Night: Annual banquet.

Book Reviews and Notices.

Diagnosis, Differential Diagnosis and Treatment of Diseases of the Eye. By A. E. Adams, M. D., Instructor in Diseases of the Eye in the Post-Graduate Medical College; Assistant Surgeon to Manhattan Eye and Ear Hospital, New York; Ophthalmic Surgeon to St. Luke's Hospital; Fellow of the New York Academy of Medicine, etc. New York: G. P. Putnam's Sons. New Orleans: Armand Hawkins & Co.

Every physician who does not live within reach of a specialist is at times called very suddenly to attend perhaps serious eye troubles, and under such circumstances he has not the time to wade through pages of discussions with which our text-books on the eye are so replete, to find out what he should do in any particular case. Just such a need this little book is intended to fill. It presents in a very concise form the most universally accepted ideas and should prove very serviceable both to physicians and students.

The author in his preface very modestly calls attention to the nomenclature as a weak point, but says in order to retain his original idea—simplicity—he could not write as it for a specialist.

WILL H. WOODS, M. D.

Obstetric Surgery. By Egbert H. Grandin, M. D., Obstetric Surgeon to the New York Maternity Hospital, Gynecologist to the French Hospital, etc.; and George W. Jarman, M. D., Obstetric Surgeon to the New York Maternity Hospital, Gynecologist to the Cancer Hospital, etc.; with eighty-five (85) illustrations in the fifteen full-page photographic plates. Royal octavo, 220 pages. Extra cloth, $2.50, net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry street.

The introductory chapter deals with obstetric asepsis and and antisepsis. That section of the chapter which treats of "Asepsis of the lying-in woman" merits severe criticism, and in our opinion, condemnation. To prepare the vagina one is told that a "new tooth brush should be inserted into the canal and this should be scrubbed with soap and water." It is about time that more common sense and less absurdity—not to say dangerous absurdity—should enter into the make-up of surgical cleanliness. One must have very little regard for the delicate epithelial lining of the mucous membrane of the vagina who would scrub it with a *tooth brush*. One must have a very faint idea of how much raw surface such treatment would cause. The chapters on artificial abortion and version are rather poor. We are told that the "prone lithotomy position will render version least difficult." One is instructed to remove his patient from her bed to a table. He would be a very poor obstetrician who could not practise podalic or any other version, while his patient remained in her bed. The book contains many impracticable suggestions. There are several photographic views of operations on the manikin. As photographs they are good. On the whole we are sorry to say the book does not fill a long-felt want. MICHINARD.

Detachable Diet List. Compiled by Jerome B. Thomas, M. M. Philadelphia: W. B. Saunder, 1895.

In this period of ceaseless activity, in all branches of human thought, the modest art of nursing keeps pace with the progress of the time.

Dr. Thomas' collection of diet lists, which commends itself for its simplicity, cleaniness and usefulness, is the most recent addition to the literature of that art. The collection contains a set of ten carefully compiled diet lists and a very useful sick-room dietary. The ten lists include all conditions that a physician commonly meets with in daily practice.

The busy practitioner who has little time to formulate

systems of diet will find these systems of diet of considerable aid in the treatment of diseases in which diet plays a part. The nurse, also, by a careful study of these lists will derive valuable information, especially as to what articles of diet are included in the milk, light or full diets.

One of these lists accompanying the physician's orders insures the successful nursing of the patient, saves time and money, and sometimes may avoid serious harm.

The list for diabetes is especially well written, and the one for fevers contains the all-important but most neglected rule that all solids foods be avoided until the temperature has remained normal for several days. Were physician careful to insist upon this requirement in the treatment of fevers, the sale of quinine would materially decrease and the demand for Dr. Thomas' book would proportionably increase. DELAUP.

The Principles of Bacteriology: A Practical Manual for Students and Physicians. By A. C. Abbott, M. D., First Assistant, Laboratory of Hygiene, Univ. of Penn. 94 illustrations. Second edition, enlarged and thoroughly revised 1894. Philadelphia: Lea Bros. & Co. New Orleans: Armand Hawkins & Co.

Bacteriology has grown from an interesting subject of speculation among a few to an absorbing one of every day practical value to all physicians. A large part of modern medical practice is built upon this, the newest of the medical sciences. A knowledge of bacteriology is an essential requisite in the equipment of the modern physician or surgeon. Our literature is well supplied with text-books on bacteriology, varying from Bull's "Essentials," or Frothingham's "Laboratory Guide," on the one hand, to Sternberg's encyclopedic "Manual of Bacteriology," on the other. For him who wishes to study bacteriology to its minutest extremes, Sternberg's work is indispensable; but there are but few men who do that, and they are generally teachers of bacteriology. There is a vastly larger class of men who must learn something of the subject, and yet who do not intend to devote their lives to it. These men require an intelligent conception of bacteriology in its relation to hygiene and disease. Dr. Abbott's book is intended for such men. It is the work of a man who has learned the wants of these seekers after knowledge; it is not encyclopedic, it is not superficial. It is admirably suited to the wants of intelligent students and physicians, and it deserves a continuance of the popularity that it has earned among the profession. A. McS.

The International Medical Annual and Practitioner's Index. A work of reference for medical practitioners. 1895. New York: E. B. Treat. $2.75.

This standard work is now in the thirteenth year of its existence. The list of thirty-eight editors and contributors contains many names well known in this country and Great Britain. The present issue is larger than any of its predecessors, which was rendered necessary by the vast amount of literature that appeared in 1894. As usual, the "Annual" gives, in alphabetical order, a *résumé* of the progress made in every branch of medicine during the past year. In addition, there are forty-five original articles, and a long chapter on new remedies. At the end of each article, there is a synopsis of the previous treatment on the disease under discussion; this enables a busy physician to take a quick but a comprehensive view of recent standard treatment as practised by men of established ability.

The present issue of Treat's "Annual" continues and sustains an excellent history of the annual progress of practical therapeutics.

Such a book is always of great assistance to a busy physician who can not sift the great mass of periodical literature; and the increasing favor in which Treat's "Annual" is held testifies to the adequate manner in which the work of condensing and abstracting valuable matter is done. A. Mc S.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

I. SUPRA-PUBIC SECTION FOR VESICAL CALCULUS.
II. VAGINAL HYSTERECTOMY FOR CHRONIC UTERINE INVERSION PRODUCED BY SUBMUCOUS FIBROID.*

BY DR. W. R. JACKSON, MOBILE, ALA.
Demonstrator of Anatomy, Lecturer on Minor Surgery and Assistant in Laboratory of Operative Surgery of Medical College of Alabama.

I. Supra-pubic cystotomy, as is well known, was first performed by Franco, in 1561, and with several improvements and modifications is to-day considered by some of the best surgeons the ideal operation in all cases for stone, large or small, in young and old. In this operation no important blood vessels are cut; the ejaculatory duct is not permanently damaged by being severed; no eschar is left in the prostate gland to produce subsequent vesical irritation—all these conditions are liable to occur in perineal section.

Distention of the bladder with air or liquids, and of the rectum with a colpeurynter renders the pre-vesical space (cavum Retzii) more accessible. Trendelenburg's position, with the pelvis elevated 15 inches, is of great value in all supra-pubic intra-vesical operations. In this position the abdominal viscera no longer press upon the bladder and prevent its easy distention.

When the bladder can not be distended, for fear of rupt-

* Read before Alabama State Medical Association, April 18, 1895.

ure, or can not be elevated by the rectal bag, because of adhesions, the Trendelenburg operation—*i. e.*, transverse incision through the skin, recti and pyramidalis muscles, should be practised.

Trendelenburg's operation (transverse incision through the abdominal wall) has two advantages over the vertical incision, viz.: (1) It affords more space to manipulate the bladder; (2) there is less liability of injury to the peritoneum, because the knife cuts below and parallel with its lowest fold. This operation (the transverse incision) is contra-indicated in double inguinal hernia. The vertical incision is best in children and in cases of foreign bodies in the bladder. The transverse incision is especially indicated where there is to be much manipulation of the lower segment of the bladder, as in prostatectomies, curetting of tubercular deposits, removal of tumors near the *bas fond*, ureteral catherization, and in traumatic or spontaneous rupture of the bladder.

This operation is liable to leave a weak point in the abdominal wall, thereby causing subsequent ventral hernia; this, however, can be avoided by accurate and proper suturing of the cut ends of the muscles.

Lawson Tait distends neither bladder nor rectum; he simply pulls up the bladder wall and incises it.

Bennett and Davy, of London, cut down upon the point of a sound introduced into the bladder without distending either bladder or rectum.

Suturing the vesical wall with cat-gut is recommended when the bladder walls are healthy, but if septic cystitis is present, or the vesical walls are thick and fragile, or there is a tendency to hæmorrhage, suturing must give way to the drainage tube.

Kummell advocates immediate vesical suture after removal of tumors of the bladder, three tiers of cat-gut sutures being applied, one each for the mucous membrane, muscular structure, and the fibrous sheath. Most authors who use immediate vesical suture do not include the mucous membrane; the abdominal incision, as a rule, is packed with iodoform gauze until primary union of the bladder wall results, then the opening is closed with stitches (previously passed but not tied);

this is done for fear primary union might not take place in the vesical walls; if it does not take place, and the abdominal incision is closed at the same time the bladder incision is, urinary infiltration and phlegmonous inflammation would be very likely to result.

Supra-pubic should be used, instead of perineal cystotomy, under the following circumstances: (1) Very large vesical calculus; (2) encysted vesical calculus; (3) vesical calculus with urethral stricture; (4) vesical calculus with ankylosed hip-joint; (5) vesical calculus with enlarged prostate gland; (6) in removal of tumors from the bladder; (7) vesical calculus of any size in children under ten years age, because of the high position of the bladder in the pelvis; (8) tuberculosis of the bladder; (9) chronic cystitis in senile and debilitated patients where rest to the bladder and drainage are desirable.

Phlegmonous inflammation and necrosis of the edges of the wound and the prevesical space frequently occur as a complication of supra-pubic cystotomy, especially if septic cystitis is present with debility. "The adipose and loose connective tissue in the prevesical space, which constitutes a considerable part of the supra-pubic route into the bladder, is exceedingly susceptible to infection with pathogenic microbes."

Vidal, in 1852, performed the operation of supra-pubic cystotomy at two sittings to prevent inflammation and urinary infiltration. Senn's method of performing the operation in "two stages" was introduced and practised by himself in 1893. His first stage consists in cutting down in the median line to the vesical wall under anæsthesia, and then dissecting out an oval (vertical) area of prevesical fat, two inches long and one inch wide; the wound is then packed with iodoform gauze and let alone for five days, when it has become covered with a layer of active granulations. The second stage consists in making an incision through the vesical wall after thorough cocainization of the granulations.

"These granulations have closed the connective tissue channels and have shut out from the wound the balance of the prevesical space, furnishing an almost absolute protection against infection. The septic urine is harmless to the granulations, and thus the dangers of the operation are minimized."

Case—.—A small boy, aged 6 years, had been suffering 4 years with symptoms of stone in the bladder. Frequent and painful micturition was a most prominent and constant symptom. There was slight hæmaturia and but little cystitis. On introduction of a small metallic catheter, a stone was easily detected, but on account of spasm of the bladder and irritability of the patient, no definite information as to the size of the stone could be obtained without an anæsthetic. The patient being debilitated and anæmic, he was put upon preparatory treatment. At the end of four weeks, the patient was anæsthetized with chloroform. The bladder was washed out with boric acid solution, and 5 ounces injected into the bladder, and the same amount was used to distend the rectal bag. The supra-pubic region was disinfected, and the bladder exposed in the usual manner by a vertical incision; the prevesical fat was abundant and traversed by numerous large veins which were necessarily cut, but the hæmorrhage soon ceased. A tenaculum was hooked into the upper part of the bladder and an incision large enough for the index finger was made through the bladder wall; the stone was found to be so large that the incision had to be increased to over two inches in length, and then it was with some difficulty that the stone, weighing 920 grains, was extracted with a pair of small forceps. The bladder was then irrigated with boric acid solution, a large rubber drainage tube was inserted, and three sutures made in the upper part of the cut through the whole thickness of the abdominal wall; the abdomen was well greased with vaseline, iodoform was dusted over the cut and around the tube, iodoform gauze and cotton placed over this, all of which were well secured by a wide binder. Patient was made to lie on first one side and then the other; the dressing was changed as often as it was soiled, about twice daily. The drainage tube was removed on the second day because it seemed to irritate the margin of the wound. Irrigation through the wound and per urethram was performed two or three times. On the fifth day the stitches were removed, showing primary union had taken place in the sutured portion. On the seventh day after the operation patient began to micturate through the natural channel. On the tenth day the opening was completely closed by granulations;

on the fourteenth day the patient was discharged, and has not had any trouble since, now over four months ago. The temperature was never higher than 99½ degrees F. The first three days after the operation the diet was exclusively milk, but the appetite was good throughout. I think if primary vesical suture had been used in this case, union by the first intention, no doubt, would have readily resulted. The rapid recovery of this case was certainly most phenomenal.

II. It is stated by all authors on gynecology that inversion of the uterus is very rare, and is most often a complication of labor, and generally fatal. It is chronic inversion, caused usually by neoplasms, such as submucous fibroids, that the gynecologist has to treat.

For inversion to take place it is necessary that the cervix be large and patulous, and the fundus soft and heavy; these conditions are always present during and immediately after parturition, and also present to a certain degree when the uterus contains a fibroid.

During the growth of an intra-uterine tumor the uterus increases in size, as in pregnancy, and endeavors to expel the growth, which, by its pedicle, drags down the fundus until inversion is completed, and even the upper portion of the vagina may be so prolapsed that both tumor and uterus will lie outside the vaginal canal; generally, however, the inverted uterus remains within the vagina.

The vagina above, and even the cervix of an inverted uterus, may contain a loop of intestine besides the Fallopian tubes, but when the cervix contracts the intestine is pushed up out of the way, and strangulation and gangrene of the uterus *may* result. Cases are recorded of spontaneous cure either by sloughing of the fundus or reduction of the uterus itself.

Atlee reports a case of several years' standing, in which long-continued and persistent efforts at coition on the part of the husband reduced the inversion after all other treatment had failed.

Death may be caused by sepsis, peritonitis, or exhaustion from continuous loss of blood.

The treatment of inversion is by taxis, which is always successful in obstetrical cases, but in chronic cases taxis often

fails; then elastic pressure by Braun's colpeurynter must be tried, and if not successful Thomas' operation of opening the abdomen and dilating the cervix from above, and then reducing by taxis, may be tried. Brown, of Baltimore, recommends making an incision through the fundus, and through the opening he dilates the cervix and reduces by taxis. When all these methods fail, it becomes necessary to remove the uterus *in toto*, either by the supra-pubic or vaginal method. In chronic inversion, where the uterus is hard and contracted to its normal size, and the patient has passed the menopause, it is by far better to perform hysterectomy than to torture the patient by the various methods of reduction and be met, in most cases, by a failure, and finally have to resort to vaginal hysterectomy.

Case —.—A negro woman, aged 50 years, had presented symptoms of uterine polypus for over four years, and was treated by her family physician occasionally during this time; finally the polypus produced complete inversion of the uterus and prolapsus of the upper portion of the vagina, the tumor and uterus being entirely outside the vaginal canal. This condition, according to the patient's own statement, had existed over three months without any treatment.

When I first saw the patient, about two weeks ago, a large fibroid, about three inches in diameter, and the inverted uterus were hanging by a large pedicle, which, upon examination, proved to be the prolapsed upper portion of the vagina, containing the broad ligaments and Fallopian tubes. The tumor and uterus were inflamed, ulcerated and granular, and around the pedicle in the lower portion of the vagina, was an abundance of pus and muco-pus. The patient was anæmic, weak, and had septic fever.

Knowing the patient could not tolerate efforts at reduction, and that it would be impossible to reduce the inversion even by extreme measures, it was decided, then and there, to remove the uterus *in toto* by vaginal hysterectomy, inasmuch as the uterus had long since ceased to perform its physiological functions. The vaginal walls, tumor, and uterus were thoroughly cleansed and then irrigated with bichloride of mercury solution, one to one thousand. The vagina, about 1½ inches above the cervix, was thoroughly cocainized, and then trans-

fixed by double ligature, and tied off in lateral halves; a circular incision throughthe vaginal walls was made, and the Fallopian tubes, uterine and ovarian arteries were exposed, tied and severed. The vaginal stump was stitched with two rows of sutures and dusted with alumnol, and the remaining portion of the vagina was packed with iodoform gauze, and a T bandage applied. On the second day the stump was re-dressed, as well as daily thereafter. Very little purulent discharge occurred, the temperature never exceeded 102, and now I consider the patient out of danger.

I here show you the inverted uterus with fibroid attached; a whalebone filiform is here passed through each Fallopian tube, coming out at the severed end near the cervix.

CLINICAL REPORT OF A CASE OF LARGE VESICAL CALCULUS —SUPRA-PUBIC CYSTOTOMY.*

By Dr. W. E. PARKER, New Orleans, La.

Mr. President and Gentlemen: In presenting the report of this case to you I do not do so with the expectation of adding anything new on the subject of supra-pubic cystotomy, but because it presented a number of conditions that were interesting to me. The history of the case, briefly, is as follows:

Frank B., white, male, age 24, native of Italy. Has been in America eighteen months and in Louisiana for the past ten months. Farmer by occupation. Family history good. Previous history: Has had this trouble for fourteen years, before which time his health was good. His attention was first directed to it by difficulty in urination and pain before and immediately after it. This gradually increased in severity until he was compelled to lie on his abdomen to urinate and it was necessary to do it every half hour or less. The urine was of a very foul odor. The pain gradually increased and when admitted to the Charity Hospity, July 1, it was almost impossible for him to stand for any length of time. When he came to the hospital he brought twenty-three small renal calculi that he had passed per urethram during the past year.

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*Read before the Louisiana State Medical Society, May 7, 1895.

Condition on admission: Patient was much emaciated and his condition was bad. Urinated every half hour or less during day and night; urine full of pus. When a sound was introduced it struck a stone as it passed over the prostate and was not easily pushed into the bladder.

Preparatory treatment: Patient was put to bed and bladder washed twice daily with a 5 per cent. solution of boracic acid. The day before operation was given ℥ss magnes. sulph., and parts shaved and scrubbed and then bandaged with an antiseptic dressing. Morning of operation was given an enema; morning of operation pulse was 120.

Operation, July 5: After the usual preparations the bladder was washed out with a 5 per cent. boracic acid solution. The rectal bag was then introduced and distended with water, and the bladder was then distended again with boracic acid solution, its capacity being about five ounces. An incision was then made above the pubes and the bladder opened without difficulty; but my difficulties were then to begin. I found a very large stone that was adherent. Seeing that it was necessary to have more room, I enlarged the wound to about three inches and was compelled to peel the peritoneum from the bladder before enlarging the bladder wound.

After getting the stone free I partially crushed it before removing it, as even with the large wound I could not take it out whole. The bladder was then stitched to the skin with four sutures, one at each angle and one on each side. The wound was dressed after a soft catheter had been placed in the bladder and the patient was sent to the ward.

AFTER-TREATMENT AND REMARKS.

The operation, including anæsthesia, lasted about three-quarters of an hour. It was necessary to give him digitalis twice hypodermatically on account of his weakened condition. The fragments of the stone were not weighed, but the large piece weighed ℥iv ℥vii ℈ii (2380). For two and a half weeks the bladder was irrigated twice daily with the boracic acid solution. For the first week the dressings became soaked with urine, although most of the urine drained through the siphon. During the third week the wound was dressed once daily and

subsequently not so often. The catheter was removed August 7 and the granulations touched with nitrate of silver. From this time the bladder was washed through the penis. Cystitis almost well and patient allowed to walk around August 12. He steadily improved and was discharged September 24. The day after operation his temperature went to 100 deg., but never went above 99 deg. after that time. In the early part of November he returned and showed me a small hernia beneath the incision. This case interested me.

(1) On account of the size of the stone. It was almost as large as a man's fist. (2) The passage of the renal calculi when there was such a large stone in the bladder. (3) The violence of the cystitis and the good results from supra-pubic cystotomy and prolonged drainage. (4) The fact that the stone was adherent to the bladder wall increased the difficulty of removal and caused rather a free hæmorrhage from the bladder. (5) I do not believe that this stone could have been removed with so little risk to the patient by crushing or the perineal operations. I am under special obligations to Dr. L. G. Lebœuf for assisting me during this operation, and to Dr. J. M. Parrott, then interne in charge of the service, for assistance during the operation, the excellent way in which he conducted the after treatment, and for the notes from which this history was written. In conclusion I would say that I believe that the supra-pubic cystotomy is the best of the cutting operations because (1) it is simpler and, I believe, safer for the patient. (2) No important structures are divided. (3) No complicated instruments are necessary. (4) There is more room to work in and you can see what you are doing.

I omitted to state that at the time of his discharge he urinated but twice during the day, and when he came to see me in November he stated that he was perfectly well and had gained about twenty pounds. He looked like another man.

KOCH'S TUBERCULIN IN THE TREATMENT OF LUPUS VULGARIS.*

By Dr. JNO. N. THOMAS, Port Eads, La.

In view of the fact that Koch's tuberculin has been tried only once in the State of Louisiana in the treatment of lupus, and thinking that the report of a case might prove interesting to the society, I beg to submit the following:

In 1893, while on a visit to Spanish Honduras for the State Board of Health, I saw the patient, and upon examination found an angry looking ulcer over the upper portion of the sternum. I had previously met the patient a year before on shipboard at the Port Eads Quarantine Inspection Station, on his way to New Orleans for treatment, and on that occasion I diagnosed the case epithelioma. As over a year had elapsed and the disease had made but little progress, epithelioma was eliminated and a diagnosis of lupus made, with the recommendation that he try Koch's tuberculin in the treatment. From the patient I learned that Dr. J. E. Austin, surgeon of the Puerto Cortez & San Pedro Railroad, had made the same diagnosis and had also prescribed Koch's tuberculin. Upon my return to New Orleans I procured from New York about a half ounce of the tuberculin and sent it to Mr. A.

Dr. Austin at once took charge of the patient, and to him I am indebted for the following interesting and instructive clinical history, and by whose permission these notes are published.

Diagnosis: Lupus Vulgaris. W. E. A., aged 37; married; merchant. Previous history: Malaria, alcoholic and venereal excesses. Family history good; no tuberculosis on either side. Present condition: general health for past three months poor; anæmic in appearance; weight 134 pounds; tongue pale and coated; appetite poor; heart normal; pulse 86; insomnia for past six weeks; nausea and faintness after eating; bowels normal; urine normal. History: First noticed the lupus during April, 1891. A small "white lump" appeared in the median line over the upper portion of the stern-

*Read before the Louisiana State Medical Society, May 9, 1895.

um, which after a time broke down and ulcerated. He consulted several physicians in New Orleans, who burned it with nitric acid and other caustics. The disease did not improve under treatment, and extended until it now presents the following appearance: Lupus is roughly triangular in shape, 3¼x4 inches; base is upward, extending into the supra-sternal notch. Typical lupus cicatricial tissue in the centre of the triangle, while at the periphery the nodules are distinct, red and angry looking. Over the left sterno-clavicular articulation are two small ulcers, and here the cicatrices are adherent to the bone. In all other situations they are freely movable. Ulcers are discharging a small quantity of pus. Temp. 99 deg., pulse 86. July 18, 1893, 10 A. M., hypodermic injection of 1 cc. of diluted Koch's lymph.

Formula used: Original fluid (Koch) ½cc. sol. acid carb., ½ per cent. 50 cc. 2 P. M., temperature 99 deg, pulse 84; feels slight pain and tenderness in the lupus. 5 P. M., no change in the temperatnre or pulse. 9 P. M., same. Slight nausea and vomiting.

July 19, 9:30 A. M.—Complains of slight headache. Injected 1¼ cc. 2:30 P. M.—T. 99 deg., P. 84. 10 P. M.—T. 101, P. 108. Lupus red and angry-looking, with free discharge from the ulcers.

July 20, 9 A. M.—Temp. 98, P. 92. Injected 2 cc. 10 P. M.—Temp. 102 deg., P. 108. Headache, pains in back and limbs. Nausea and vomiting.

July 21, 9 A. M.—Temp. 101¼ deg., P. 100. As constitutional symptoms continue, no injection. 10 P. M.—Temp. 100 deg., pulse 98. Ulcers discharging copiously.

July 22, 9 A. M.—Temp. 99, P. 98. Still feels bad. Severe headache. Bright red areola around the ulcer. No injection.

July 23—Temp. 98, P. 80. Feels well One more nodule of lupus tissue visible. Injection 2 cc.

July 23, 10 P. M.—Temp. 102 deg., pulse 106. Usual constitutional symptoms of reaction.

July 24 and 25—No injection, as reaction still continues. Ulcers becoming glazed, while the lupus tissue is swollen and infiltrated.

July 26—Temperature and pulse normal. Injected 2¼ cc. 10 P. M.—Reaction severe. Temp. 103, P. 118; slightly delirious.

July 27—Same condition. Mind clear. Feels bad. Nausea persistent.

July 28, 29, 30 and 31—As the reaction subsided patient felt very weak, so no injection given. Lupus much improved. Ulcers completely incrusted and nearly healed.

Aug. 2, 11 P. M.—Injected 2 cc. at night in order to have the reaction in the daytime, as the patient gets no sleep the day of the injection.

Aug. 3, 9 A. M.—Temp. 103, P. 110. Violent pains in the legs. Usual nausea, vomiting, headache, etc. Lupus steadily improving.

Aug. 4 and 5—No injection.

Aug, 6, 10 P. M.—Injected 2 cc.

Aug. 7, 9 A. M.—Temp. 102, pulse 106.

Aug. 8—Temperature normal. No injection, as he feels weak. Lupus healing rapidly. Tissue becoming s mooth and of a uniform red. Nodules have entirely disappeared.

Aug. 9, 10 P. M.—Injec ed 2 cc.

Aug. 10, 9 A. M.—Temp. 100 deg., P. 94. Very little constitutional disturbance. Ulcers entirely healed.

Aug. 11—No injection.

Aug. 12—Injected 2 cc.

Aug. 13—Injected 3 cc.

Aug. 16—Smooth red scar occupies the former seat of the lupus. Slight puckering at the edges, due to the contraction of cicatricial tissue.

Patient discharged cured and sent for a month's rest in the pine woods before resuming business. April, 1895—No return of the disease.

[Note.—Since the above was written, Dr. Austin has informed Dr. Thomas that he has cured two other cases of lupus with tuberculin.]

AN INTERESTING CASE OF PUERPERAL TETANUS.*

BY JNO. N. THOMAS, M. D., PORT EADS, LA.

Mr. President and Gentleman of the Louisiana State Medical Society: On April 14, 1894, I was summoned to the bedside of Mrs. E. M., for the purpose of attending her in child-birth. The patient was 22 years of age and a primapara.

Previous history: Nervous temperament; has never been seriously ill, but has had intermittent malarial fever.

Family history: Good; no hereditary taint on either side.

Present condition: General health very good; weight about 145 pounds; heart, lungs, kidneys and liver normal; has had some insomnia last months of pregnancy; bowels slightly constipated.

Upon digital examination I found the cervix sufficiently dilated to easily touch the descending fœtus, and a head presentation of the first position was made out without difficulty. Having not been previously prepared I at once ordered the bed and surroundings made ready for the parturient state, had the patient to take a warm water enema to unload the bowels, after which she was given a hot sterilized carbolized vaginal douche, the external genitals bathed in the same solution and she was placed in bed. From this time the labor progressed favorably and within two hours a healthy male child, weighing ten pounds, was delivered. Within fifteen minutes after the birth of the child, the placenta was expelled *intact* after Crédé's method. There was very little hæmorrhage and the clots expelled were few. The uterus firmly contracted immediately after the expulsion of the placenta and remained so.

After giving instructions to the nurse about bathing the infant, and personally dressing the cord and seeing particularly that all vernix caseosa had been washed from around the eyes, I again had all of the linen of the bed and patient changed, and the patient was given another douche of warm sterilized, carbolized water, and her genitals, legs, etc., washed and cleansed of all the blood. After this she was given five grains of quinine and I bade her good-night.

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* Read before the Louisiana State Medical Society, May 8, 1895.

Upon calling the next morning I found that the patient had had a good night and was free from any pain or nervous disturbance. The vaginal douches, similar to the above, were ordered twice daily, one in the morning and one in the evening, and fifteen grains of the sulphate of quinine, in doses of five grains each, were given daily. This procedure and treatment were continued for ten days, during which the patient was given a bountiful supply of light and easily digestible food.

To digress a little from the main subject, I beg to say that it is my custom to give all of my lying-in patients fifteen grains of quinine a day for ten succeeding days after delivery. I do so not only because I believe in the prophylactic virtues of the drug to prevent putrefactive change in the blood, but on general principles. Here, in the extreme South, there are few whose systems are not more or less impressed with the malarial poison, and if it happens to be in the parturient woman the remedy administered as a prophylactic will certainly abort an attack of malarial fever. Whether or not it has any effect on the prevention of septicæmia I am not prepared to say positively, but I am inclined to think it does, for during an experience of nine years, in which I have used quinine in every case of the parturient woman that I have attended except one, I have never had but one case of septicæmia, and most unfortunately that case was the one in which I failed to give the qninine and which was not given in deference to the wishes of the patient.

On the eleventh day after delivery, the patient having had no unfavorable symptoms, but, on the contrary, was making a rapid recovery, asked that she be allowed to sit up, which permission was readily granted. Up to this time the lochial discharge had run its usual course in normal conditions, and believing the patient now all right, I gave her instructions as to the further conduct of her case, and told her to send for me if necessary.

On the sixteenth day I was again called, and when I visited the patient I found her complaining of neuralgic pains in the region of the neck and jaws. Thinking the matter trivial, I prescribed an anodyne. Upon calling the next day I found the trouble not only not relieved, but a great deal more aggravated.

The patient was very nervous and complained of stiffness and pain about the jaws.

My suspicion as to the nature of the trouble was now aroused, and the patient was ordered to bed, with injunctions to the nurse to keep strict quiet and to allow no one in the room. Blankets were tacked over the curtains at the windows, and the room made comparatively dark. During the day there were several paroxysms, and by the following morning the jaws were firmly locked. Trismus was complete. She now had the most violent paroxysms, during which every muscle in the body seemed tonically contracted. While the spasm lasted, the pain was excruciating and intense, as evidenced by the moaning and groaning of the sufferer. The paroxysms lasted from a few seconds to two minutes, and they would be brought on by the slightest noise or touch or draft of air. During the first nine days of the disease there was an average of ten or twelve paroxysms in the twenty-four hours, after which they began to decrease in frequency and severity. About the third day after the attack opisthotonos set in and continued for nearly three weeks, during which time the body was rigidly curved, only the heels and occiput touching the bed. When she was moved the whole body turned as though it were a stiffened piece of steel. The attacks were as frequent at night as during the day, and throughout the disease her mind was perfectly clear. She always understood everything said, and would endeavor to answer questions through her clenched teeth. For the first ten days her temperature was high, but no record was kept, for the reason that any disturbance was almost sure to provoke a violent paroxysm. Profuse sweating was a prominent symptom for two weeks or more. The bowels, at first, were constipated, but after a free purgative they were not again disturbed by medication, an enema being used to relieve the lower bowel when necessary. An interesting feature of the case was that for over two weeks and during the continuance of the gravest symptoms, the patient kept her eyes tightly closed, not even opening them to take food or drink. My armamentarium did not contain eserine, the drug so successfully used in the treatment of traumatic tetanus by Dr. Geo. H. Lee, of Galveston, and later used

with wonderful success in the treatment of tetanus in horses by Dr. Heitzmann, of New Orleans. Nor did it contain the antitoxin to the toxin of tetanus successfully used by Tizzoni, Cattani, Swartz, Cossali and others.

The treatment, other than maintaining the strictest quietude, in a dark room, and a rigid regimen of liquid feeding, consisted in the giving of fifteen-grain doses of chloral hydrate and twenty-grain doses of the bromide of potash every two or three hours until the patient was thoroughly under the influence of the medicines, and then as often as necessary to continue this effect. In addition to this, when the paroxysms became more frequent or the patient seemed to be suffering, a twenty-drop dose of Battley's sedative was given with excellent results. The Battley was invariably given at bedtime and repeated during the night if the conditions warranted it. No other medicines were given.

The local application of ice to the spine was tried and abandoned early in the attack, owing to the discomfort it gave the patient. Counter irritation over the spinal cord by means of mustard was continued throughout the attack. Whether it did any good or not I can not say, but it was comforting to the patient, and she imagined it did her good. I have yet to meet the layman who does not believe in the virtue of rubbing.

My chief reliance was in the free use of cloral hydrate and the bromide of potash, recognizing the value of both drugs as anti-spasmodics, and knowing their action on the centres at the base of the brain and upon the spinal cord, and in lessening reflex irritability of the cord. Opium in the form of Battley's sedative was given most effectively for its hypnotic effect. For three weeks the patient was kept continually under the influence of these drugs and partially so for an additional three weeks.

Up to the fourteenth day of the disease she was fed through a small tube which was introduced into the mouth through an opening made by the previous extraction of a lower bicuspid tooth. From the fourteenth to the twenty-fifth day the point of a small spoon could be inserted between the teeth, from which she took nourishment, which consisted of milk, beef tea, Ducro's Elixir and liquid peptonoids.

It was fully six weeks from the inception of the attack before the patient was able to masticate even the softest food, and during the last two weeks of her illness, when she could slightly open her jaws, her tongue was several times badly lacerated owing to a sudden and slight recurrence of the paroxysms. As soon as the diagnosis was made out to be puerperal tetanus the infant was taken from the breast and the secretion of milk quickly stopped by a few inunctions of camphor salve.

Now as to the cause of the disease in this patient I am unable to say positively. Although called in the books puerperal tetanus, I am inclined to believe that all of these traumatisms of the childbed are simply and purely traumatic tetanus. Though this was a simple and uncomplicated case of labor, I believe that there must have been some slight laceration that was at the bottom of the trouble. That the laceration was slight I believe, for I have not been able to detect it since convalescence, and the fact that there has been no leucorrhœa or any uterine pain or disturbance, direct or reflex, is silent evidence that nature has done her work of repair. It is to be hoped that some specific will soon be found for this terrible disease. From the recent successes with eserine it appears to be a most excellent remedy. Chloral and opium seemed to have given good results in this case, but I am not inclined to attribute the cure to either or both combined. The patient made a slow and tedious recovery, it being fully six weeks before she was able to walk around, but under the use of tonics she gradually strengthened and gained flesh. In a little over three months after attack, or about a month and a half after convalescence set in, the menstrual flow was re-established and she again promptly conceived and is now almost ready for another delivery.

THE ACCIDENTAL INTRUSION OF A FOREIGN BODY IN THE MALE URETHRA.

BY DR. E. U. BOURG, LABADIEVILLE, LA.

This rare if not unique case occurred to a man about forty-five years of age, a rice planter by occupation, and generally known to be honest and truthful, and, though illiterate is a man of much good sense.

Last summer, he was out in his field mowing rice with several of his employés, and as usual at meal times mounted his horse for home. Just as he attained the seat in the saddle, he felt a peculiar sensation at the end of his penis, and naturally made pressure on the part to relieve irritation, but the disagreeable feeling continued, and as he was near home concluded to reach there before making an ocular inspection.

Upon examination, he detected in the fossa navicularis a mature rice seed, in its hull. He became alarmed, tried energetically to express the offending body, but failed. He then consulted a neighboring physician, who also made vain efforts to relieve his patient. At about noon he appeared at my office in a very excited condition of mind, and explaining his case, begged for relief.

I found the seed now lodged about an inch back of the fossa. Having no urethral forceps, I used an ordinary forceps with long and narrow blades and succeeded fairly in engaging the conical end of the seed, but when pressure was made preparatory to extracting, the seed slipped and was now beyond the reach of any instrument in my office.

The patient's disappointment was very distressing, and in fact he manifested symptoms almost of terror. I quieted his fears and assured him that the knife could always reach the object. I then advised him to go home and retain his urine beyond the usual time, and then grasp the end of his penis and distend the urethra as much as possible and let the urine gush out suddenly. About three hours after the patient appeared with a smiling face and assured me that the seed was out of the urethra, but he could not remove it from the head of the penis. It seems that the seed had actually been projected from the urethra, but was caught or partially enveloped in an outstretched fold of mucus membrane, and it was with considerable difficulty I succeeded in unraveling it; the anxiety of the patient was such that he repeatedly asked me to cut the membrane, so afraid he was the seed would spring back in the urethra.

Two interesting questions are suggested in this case, how did the seed find entrance there? and why was it so hard to push or pull forward?

If a mature rice seed be examined with a magnifying lens, it will be found armed with dense, stiff hairs planted obliquely from base to summit. In this case the seed slipped in, stalk end first, and therefore could easily slide backward, but any forward movement was prevented by a dense mass of strong bristles, set exactly at that angle which most stoutly resisted any forward progress.

REPORT OF THE STATE BOARD OF MEDICAL EXAMINERS TO THE LOUISIANA STATE MEDICAL SOCIETY.*

T. S. KENNEDY, M. D., PRESIDENT, NEW ORLEANS, LA.

Professor of Diseases of Children New Orleans Polyclinic; Member of Board of Experts Louisiana State Board of Health: Consulting Physician to the Eye, Ear, Nose and Throat Hospital; Member Charity Hospital Visiting Staff.

NEW ORLEANS, LA., May 7, 1895.

Mr. President and Fellows of the Association:

It will be an interesting surprise to many of you to learn that during her territorial period and after her entrance into the sisterhood of States, Louisiana had medical laws and medical examining boards from time to time, covering periods of time more or less extended, and all striving for the same end —higher medical education.

These laws were wise, stringent and as satisfactory in anguage as the profession could possibly desire. Their failure to accomplish their purpose has been variously explained. Some believed that the fault rested with Boards of Medical Examiners, who were accused of not conscientiously performing their duties. Others charged that the profession at large were criminally apathetic and failed to support the boards, while others again thought that the community had not yet been educated to an appreciation of the necessity for these laws and hence public sentiment was not in accord with the movement.

Before entering upon a review of our present law I shall devote a few words to the act of 1882, which it replaced.

Section third of that act reads thus: "That the provisions of this act shall not apply to persons who have been practising

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* Read before the Louisiana State Medical Society, May 7, 1895.

medicine or surgery in this State without diplomas for the period of five years prior to the passage of this act."

This clause of the act gives to any person, however ignorant or unworthy, who has been in actual practice for five years and without a diploma, all the privileges of a regularly graduated physician, and places the community at the mercy of charlatans too incompetent to obtain a diploma, thereby giving to these parties the stamp of approval of the State.

We all know that those who framed that law were actuated by the sincerest motives, and they explain their action by telling us that it was the very best legislation obtainable at that time. Of course they hoped it would be a stepping stone to something better. But the result has been most unfortunate, for the act has rendered us powerless to rid the State of these medical vampires.

In spite of the failure of preceding laws, the burning desire of thinking members of the medical profession for higher education resulted in the enactment of the medical law of 1894, whereby it is hoped much good will be accomplished.

A cardinal provision of Sec. 3 of this law confers upon the Louisiana State Medical Society the powor of furnishing to the Governor a list of names chosen from its ranks, wherefrom its own board shall be selected.

At a special meeting of this society held on the night of the 31st of July, 1894, you will remember that the balloting, which was preceded by a rather fiery discussion, resulted in a list being sent to the Governor.

From that list Governor Foster appointed the following gentlemen to compose the board on the part of the Louisiana State Medical Society: T. Y. Aby, M. D.; A. F. Barrow, M. D.; F. J. Kearney, M. D.; H. S. Cocram, M. D., and T. S. Kennedy, M. D.

The board held its organization meeting on the 31st of August, 1894, and elected the following officers: President, T. S. Kennedy, M. D.; vice president, T. Y. Aby, M. D.; secretary, H. S. Cocram, M. D.

The law requires that tenure of office be decided either by lot or agreement among the members. It was decided by lot, as follows: The two years' term fell to Dr. Kearney, three

years' term to Dr. Kennedy, four years' term to Dr. Cocram, five years' term to Dr. Aby and the six years' term to Dr. Barrow.

The law exacts that at least two regular meetings shall be held yearly in the city of New Orleans. The board decided to hold its first meeting on Monday, December 3, 1894.

Our board encountered its first obstacle in the failure of the Board of Health to publish the official list of registered physicians for 1894, as required by the statute.

The Board of Health, when approached by us, declared that it had no money for the publication, and believed that the State printer should publish the list and look to the State for payment. This the State printer refused to do, unless he was assured that he would be paid, which assurance neither the State nor the Board of Health would give him. In this position, as far as the State was concerned, the auditor was supported by the attorney general, who declared that the duty of publication and payment was imposed by the statute on the Board of Health.

We thus found ourselves between the two horns of a dilemma, and not desiring to be tossed by either, we forced the issue by suggesting to the Board of Health, through its worthy president and its most capable attorney, to mandamus the State printer to print the list. We thus settled this much vexed question of publication, for the result has been that on April 3, 1895, Judge Rightor decided the suit in favor of the Board of Health, thereby compelling the State printer to print the list. Who shall finally pay for this publication does not concern us.

Pending this decision, we had to rely entirely on the list of 1893, of which we could obtain but one copy. This it was necessary for our secretary to keep, and the country members of the board were deprived of its use. Had we been so fortunate as to have possessed the Medical Directory of Louisiana, recently published by this association, our labors would have been very much lightened. We trust that the association will see the propriety of publishing this directory, with the understanding that it be revised annually by official correspondents of the Society in the parishes.

In spite of our being obliged to rely entirely on the list of 1893, we managed to notify all the physicians whose names did not appear on that list that they must come before the board at its first regular meeting.

Through inadvertence or ignorance of the law of 1882, many of our best and oldest physicians had failed to register. We therefore found ourselves confronted by gentlemen who, while thoroughly practical and most capable at the bedside, were, because of years of absence from lecture rooms, necessarily unfitted to pass a theoretical examination. We therefore made use of our discretionary power and framed a thoroughly practical set of questions.

At this examination, held Monday, December 3, 1894, there appeared sixteen physicians. Fourteen of these passed the examination, one failing. The sixteenth we refused to examine because he held a diploma from a fraudulent institution.

The one who failed was a graduate of a reputable college in a sister State, and with a view to show the nature of the examination and to give you the benefit of some of his answers, I make a few quotations.

Question. What is meant by increased vocal resonance?

Answer. Where the heart action is much "retard."

Q. What are the nerves of special sense?

A. Facial omohyard, thyrohyard.

Q. What is the difference between dysmenorrhœa and amenorrhœa?

A. Dysmenorrhœa is where is menses is scant. Amenorrhœa is painful menstruation and very scant.

Q. What part does the pancreatic secretion play in the process of digestion?

A. After the food "leave" the stomach it then takes it up.

Q. Give test for albumen and sugar in the urine.

A. Boil a portion of urine and if it becomes cloudy on top of test tube signification of albumen—or may add some nitrate of silver. Boil as above and sugar will settle.

Q. Explain the difference between excretory and secretory glands.

A. Excretory glands is much larger and their function is greater.

Our next was a special meeting, held at the earnest solicitation of our esteemed vice president, Dr. Aby, in Monroe,

La., December 15, 1894. This was done for the sake of those doctors who could not make it convenient to come to New Orleans. For the same reasons which obtained at our first examination we made this also a practical set of questions and fifty-two doctors passed creditably. As the time approached for our next examination the personnel of the applicants had materially changed. The veterans had been in a large measure eliminated, and we found that we would have to deal with fairly recent graduates and gentlemen fresh from the green-room. We, therefore, made our examination more exacting.

And just here let us say that this will be the policy of the board. As we go on from year to year the examinations will become more rigid, thus eventually raising the medical standard to that point which will deserve the approbation of the professional body at large and guarantee to the public a corps of medical men in whose capacity it can place the utmost confidence.

At this examination, held in New Orleans, Monday, April 15, 1895, there appeared sixty-six physicians, sixty-four white and two colored. Of this number six white and one colored failed. Many of Tulane's sons handed in truly brilliant papers, and other colleges were most creditably represented. The colored graduate from the Medical Department of the New Orleans University passed an unusually clever examination.

To relieve the tedium of this report, which I regret to say is by no means over, I will again demonstrate the necessity for Examining Boards by reading a few quotations from the papers of some who failed to pass:

Q. Give distribution of the fifth pair of cranial nerves?
A. It divides in three divisions.
Q. What diseases specially favor post-partum hæmorrhage?
A. Poor condition of the blood or yellow eclamsia.
Q. Give the branches of the thoracic aorta ?
A. The main branches are the internal carodic.
Q. What is the difference between a drastic and a hydragogue purgative? (a) Give example and dose of each.
A. Drastic purgative is a drug that acts only upon the intestines, while a hydragogue purgative acts on both the intestines and liver. Drastic—Eliterium, 1-45 of a grain. Hydragogue—Bichloride of mercury, 1-32 of a grain.

Q. Describe the mechanism of the changes the air and blood undergo in respiration.

A. Air is excreted.

Q. What are the principal functions of the sympathetic system of nerves?

A. They supply sympathy and feeling.

Q. What gaseous bodies form ammonia?

A. Ammonium carbonate and watery vapor.

Q. What do you understand to be the office of the vaso-motor nerves, and where do they originate?

A. They originate from modula oblongatar, and the office is when they receive the impression.

Q. How is milk peptonized?

A. Milk first boiled and skimmed, then cooled, then put your pepsin in.

Q. What is cocaine? (a) Give therapeutical applications and treatment for cocaine poisoning?

A. Cocaine is the alkaloid of nux vomica. Is given in neurotic affections, such as headache, also as tonics neurosis. Poisoning is treated by evacuate the stomach.

Q. By what agency is the characteristic secretion of a glandular organ formed?

A. Kyles and kymes.

These answers, remember, are those of men holding diplomas of reputable colleges and sent forth by them charged with the protection of the lives of our citizens. With such examples of ignorance can any one doubt for a moment the crying necessity for State medical examining boards?

In the case of the midwives the board was again compelled to use its discretionary powers and make the examinations oral. This was necessary, because most of these women were unable to write. To have refused them an oral examination would have been very bad policy on our part. They are held in high esteem throughout the State by those who employ them and to antagonize them would have made many enemies for the medical law. We have examined and passed thirty midwives. We believe that after this law has been firmly established it will be well to exact of these women a written examination. But there must be discretion and tact used in handling this subject and to make haste slowly here is the part of wisdom.

It is gratifying to be able to state that the street fakir is fast becoming extinct; the City Hall, understanding that the law forbids such practices, has ceased to issue permits.

The quack is more difficult to handle, and this brings us to a consideration of our present law. When the board applied itself to the enforcement of the statute, it was confronted by the sweeping character of Secs. 12 and 13. These sections, literally enforced, would abolish Turkish baths, massage, the sale of mineral waters and patent medicines and the ministration of manicures, chiropodists, complexion artists and all the thousand luxuries to which the public has become accustomed and which it will not be denied.

If it be the sense of this association that these sections of the law must be carried out strictly according to the letter, the board will endeavor to do so, but it will not be responsible for the consequences.

Turning aside from these less serious offenders, let us suppose that the board has found a flagrant violator of the law. Although armed with conclusive evidence against him, we can not control the instrumentalities by which the law is to be put into execution. However clearly this board may prove the violation of the statute; however numerous, trustworthy and positive the witnesses who give their testimony; however urgent the board that the grand juries perform their duty in finding true bills against those who defy the law, if those grand juries prefer to let local influence, personal friendship, or other unworthy motives control their action, the board is powerless to have an indictment found. And even with a true bill found, if a district attorney, from similar motives, declines to prosecute, the board has no means of compulsion against him.

All that the board can do is to indicate the offender, detail the circumstances of the offence, present the names of the witnesses and urge the district attorney to perform his duty—its power stops there. The enforcement of the law is in hands which the board can not control.

And herein lies the chief defect in the law, one which if not remedied will make of the statute a "Brutem fulmen," soon to be disregarded at pleasure by those against whom it is directed.

To remedy this evil we would recommend that the statute be so amended as to abolish the criminal feature, and to substitute in lieu thereof provisions giving to the board the right to

sue in its own name, to enjoin persons who come within the prohibitions, to recover a civil penalty, and to employ either district attorneys or private counsel at their discretion. An in-n ction would be as beneficial as a conviction because the power to imprison for contempt or a violation of the writ is thoroughly effective. The civil penalty could be made payable to the board, so that the expense of the injunction would be borne by the offender. This method would also minimize, if it did not entirely remove, the local influence which frequently protects these quacks in the practice of their unlawful calling.

This difficulty is neither hypothetical nor inconsequential. A case has already arisen in one of the country parishes where, by the refusal of a grand jury to act, and by the indifference of a district attorney, the board has been balked in its endeavor to have an offender prosecuted.

The board had done all it could do, but the officers of the law failed to render their assistance, which is essential to the execution of the law. Had we possessed the power to proceed by civil process, an injunction would long since have checked the violation of the statute.

Before closing we wish to impress upon our professional brothers a fact of paramount importance—namely, that the detection of violators and the enforcement of this law depend largely upon their individual assistance. It is absolutely essential that you help us. Each member of the profession, and of this association especially, should constitute himself an active adjunct to the board, and should promptly report all violations of the statute coming within his knowledge.

Thanking you for the close attention you have accorded me, I desire, before making my bow to you, to extend a word of praise to the members of our board, each one of whom has conscientiously performed his duty.

HYPERTROPHIED TESTICLE (CHRONIC ORCHITIS)—WHAT A SLIGHT INJURY WILL SOMETIMES DO.

By Dr. W. L. PATTEN, Milltown, Ga.

I submit a case that has been of great interest to me, and I think will be of some interest to the medical profession generally.

January 2, 1895, Mr. D., age 38 years, consulted me, giving the following history, viz.: "About one year ago, as I was getting out of a buggy, I fell on the wheel, hurting my right testicle. I paid but little attention to it at the time, as the pain was only slight. But after this, every two or three months it would swell up, get very red and quite painful. The symptoms would disappear in about ten days under domestic remedies until about three months ago I had an attack that would not yield to the remedies ordinarily used, hence I consulted a physician; was benefited, but not cured."

On examination, I found right testicle enlarged, hard, some pain on pressure, but not very much.

I prescribed:

℞ Tr. Opii ..... ℥i
Tr. Arnicæ ..... ℥iii
Liq. Plumbi Ac ..... ℥iv
M. Sig.—Bathe parts frequently.

Heard no more from him till March 2, just two months after first consultation. He sent for me, and on my arrival I found him in bed greatly, emaciated, suffering excruciating pain in scrotum and lower part of abdomen, with constipation, loss of appetite, etc. The testicle about three times the normal size; very hard, greatly inflamed, great pain, even to the touch, and spermatic cord large and hard. He said he had been in this condition for some weeks, suffering intensely. I gave a light calomel purge, applied hot fomentations to the parts and morphine to relieve pain. I saw him two days later with some improvement in general symptoms, but no reduction in size of testicle.

I used hot applications, astringent washes, etc., with tonic treatment for some time. He gradually grew worse; morphine failed to relieve pain. I aspirated, thinking possibly I had made an error in diagnosis, but found no fluid. I temporized along with him till death seemed imminent from pain and exhaustion.

I had advised an operation for several days, but was refused.

He sent for me on the 23d, saying he would submit to anything I thought best, for he could live no longer in his present condition.

On the same day, assisted by Dr. J. V. Tally, I removed the diseased testicle, the other one not being affected.

The operation was performed as hurriedly as possible on account of his extreme debility, fearing trouble from the anæsthetic, chloroform.

The testicle was tough, hard and hypertrophied. Nothing malignant about it as I could discover.

He made good recovery, suffered but little pain after operation. In fact, said had he known it would have given him such immediate relief he would have submitted to the operation sooner.

There is nothing new about this case. That is not the intention of the paper. It is merely to call attention to the fact that in my judgment all cases could be entirely cured by early removal of the diseased testicle, thus saving a great deal of suffering and the trouble of a very large testicle hanging down between the legs, causing pain with every step.

We occasionally have such cases to treat. Even if the attacks are not so bad as seemingly to indicate an operation, we have to treat him through an occasional acute attack, lasting from one to three weeks, finally reducing the pain and inflammation enough that he can hobble to his work, and then advising him to be careful and to use a suspensory, etc., the testicle getting larger and larger until it finally reaches an enormous size, causing great inconvenience, especially to the aged, while if operated on early would save great pain and trouble to the man, and would no more unfit him for a husband than to have a chronically enlarged testicle, sometimes the size of a fœtal head, with frequent acute attacks. He would eminently enjoy life more to have it removed.

An injury to the testicle, however slight in the beginning, sometimes produces very serious results before it is entirely cured.

While there are many other causes for enlarged testicles than direct violence, still I have had that kind to deal with mostly in my practice, and have never regretted the complete emoval when they would not yield to oth er treatment.

CASE OF MORPHINE POISONING—RECOVERY.

BY DR. D. S. HUMPHREYS, LEOTA, MISS.

On the 6th of July, 1894, I was summoned to Mollie W., a little negress, aged 11, weight sixty pounds, whose mother had given her a No. 2 capsule packed full of morphine, thinking it was quinine. The capsule was given at 8 o'clock in the morning and the amount was estimated to be six grains by comparison with an amount in a similar capsule similarly packed by the mother at my request.

I saw the little patient a few minutes after 1 o'clock, five hours after the poison had been swallowed. She was then profoundly narcotized, lying perfectly motionless, pupils tightly contracted, respirations four to the minute and sighing, pulse hard, full, regular, and 138 to the minute. The heart's action was extremely tumultuous and seemed to be the only organ about her body at work. No efforts were successful in arousing her.

Hot water with mustard and other domestic emetics had been given several hours before my arrival, but without avail. Copious draughts of coffee had also been given before I was sent for.

Owing to the great narcotism present it was decided to be folly to lose time trying to administer restoratives or antidotes by the mouth, as it was doubtful if she could be made to swallow and questionable whether any of the poison still remained in the stomach so long after its administration, so hypodermatic treatment was at once instituted as being safest and quickest.

One-thirtieth of a grain of strychnine sulph. and one-sixtieth of a grain of atropia sulph. were administered, and as soon thereafter as it could be prepared two and a half grains of permanganate of potassium were given. No consciousness of its administration was evidenced. This was at 1:20 o'clock.

2 P. M.—Respiration 8, pulse 120. Pupils tightly contracted. Permanganate of potassium repeated, causing some pain.

2:30 P. M.—Patient opened her eyes and turned over voluntarily. Respiration 12, pulse 110.

3 P. M.—Permanganate of potassium repeated, causing great pain. Patient cried out and resisted. In a few minutes she got up off the bed, walked across the room and drank a cup of water.

The plantation manager, who was present, asked her if she wanted a watermelon, and true to her racial instinct she smiled and said she did. It was brought and she devoured it with evident delight. She was still stupid and the family took turns in walking her about the yard and asking her questions to interest her.

3:30 P. M.—Respiration 15, pulse 100. Pupils still contracted. Strychnia and atropia repeated. Patient resisted their administration, but did not complain of any pain.

5 P. M.—Respiration 15, pulse 100. The same as at 3 o'clock. Pupils contracted as before. Permanganate of potassium repeated, producing great pain again.

The family were directed to give her a cup of strong black coffee, and to allow her to go to sleep, awakening her every three hours for a dose of strychnia, and in case she could not be aroused to inform me. I then left, and upon my return next morning the little girl met me at the door apparently fully recovered, but complaining of much pain and swelling at the sites of the introduction of the permanganate of potassium. Respiration 24, pulse 80.

I was very much afraid for several days there would be abscesses caused by the permanganate of potassium, but the strychnia and atropia caused no trouble at all.

However, no abscesses formed, and the patient made an uninterrupted recovery. Dr. Moor has erected a monument to his memory more lasting than marble.

NOTES ON DIPHTHERIA ANTITOXINE.

By DR. A. W. DE ROALDES, President of the Antitoxine Commission, Surgeon-in-Chief of the Eye, Ear, Nose and Throat Hospital, New Orleans, La.

Pending the publication of the complete report of the provisional Antitoxine Commission, now in preparation by the executive committee, it has appeared to me opportune to present to the readers of The Journal, in the name of the Clini-

cal and Statistical Committees, who have labored so well, a brief extract of that part of the report which deals with the clinical aspect of the subject, and possesses, therefore, a special interest for medical men. The purely executive part of the commission's labors, while indispensable, are but ancillary to the scientific part, and need not now engage our attention.

The energy and public spirit of the commission and of the attending physicians, the ready and unbounded generosity of the public and the press, have borne valuable fruit. Diphtheria, that scourge of childhood, has been largely robbed of its terrors. Physicians no longer feel very gloomy about the outcome of a serious case, and anxious parents face a grave danger with stouter hearts than before.

To the average reader, a column of statistics is never a very palatable morsel of mental pabulum. What it lacks in savor, however, it may more than make up in substance. Such statistics are these that are presented in the tables herewith. A careful analysis of the figures herein set forth will afford more gratification than a thrilling romance. As Mr. Ernest Hart, of London, well said at the meeting of the American Medical Association at Milwaukee, in 1894, "The dry figures of cholera and other statistics are far more interesting than may at first glance appear. We are all duly shocked and horrified at the sinking of an ocean steamer or a frightful railway accident; yet the loss of life in these trivial occurrences fades into insignificance beside the constant and almost unnoticed mortality from diseases that are easily preventable."

This remark, based upon the experience of many years as a sanitarian, may well serve as the basis in every country for an unremitting crusade against all communicable diseases. Here, in New Orleans, we have made a good fight; yellow fever is shut out, let us hope, forever, and now a campaign against diphtheria is engaging the attention of the profession and the public. That it is not being waged in vain is apparent from the carefully gathered statistics presented in these tables. The incontrovertible evidence afforded by these figures is the strongest possible plea for the continuance of the treatment of diphtheria by means of immunized blood serum. With a plant

of her own for the production of the serum, New Orleans would increase her fame as a medical centre, and place herself, as far as diphtheria is concerned, abreast of the most advanced communities. We already have a fully equipped bacteriological laboratory, where cultures of the diphtheria bacillus are made daily for the purpose confirming or setting aside clinical diagnoses; and now we feel that New Orleans owes it to herself, as an enlightened medical centre, to go a step farther and establish a plant for the production of not only anti-diphtheric, but also other immunizing serums that will compare favorably with simillar institutions elsewhere, and put our metropolis in a position at once to take advantage of any discovery in the line of serum-therapy, which opens a vista pregnant with brilliant results, and is well deserving of the name of "Medication of the future."

Report of Statistical Committee of Antitoxine Commission.

To the Chairman and Members of the Diphtheria Antitoxine Commission:

Gentlemen—Your committee begs to submit the following report: Very large figures (now readily available in our medical publications) from all the great centres—Paris, Vienna, Berlin, London, New York—now permit the following positive deductions:

1. When an adequate quantity of diphtheria toxine is injected into a lower animal it invariably dies, unless an adequate dose of the antitoxine is simultaneously injected, when it invariably recovers.

2. In all places, under all conditions and in cases of all degrees of severity, the use of antitoxine has never done less than reduce the prevailing rate of mortality at least one-half.

3. In uncomplicated cases (without septicema, bronchopneumonia, etc.), occurring in fairly strong subjects, in which a full dose of good serum is injected in not lesss than forty-eight hours after the attack, recovery is well nigh certain.

4. No worse effects than the occurrence of an ephemeral rash, a slight local inflammation or a trifling rise of temperature, have so far been noted.

5. All the evidence is in favor of the belief that the remedy is not only curative, but protective, prophylactic.

Turning now to the work of this commission in our own city, New Orleans, reports of one hundred cases observed by the clinicians of the commission have been submitted to us. In all cases the diagnosis has been confirmed by bacteriological examination. They represent both races and sexes, all ages, conditions and degrees of severity. The injection was made on the first to the eleventh, and even in one instance the twenty-fifth day of the disease. Notwithstanding, including all cases, those actually dying when the injection was made, those injected at a hopelessly late day of the disease, and those laboring under the gravest complications, the mortality was only 8 per cent.

The records of the Board of Health show that the rate of of mortality in 199 bacteriologically examined cases treated without antitoxine was 27.56 per cent.

In January, 1895, out of 16 cases treated without antitoxine, 6 died, 37.5 per cent.; out of 49 cases injected with antitoxine, 3 died, or only 6.12 per cent. All, of course, were bacteriologically examined.

SYNOPTICAL REVIEW OF THE TABLES.

Appendix (a) shows that the deaths from diphtheria recorded by the Board of Health from 1869 to 1894 (November 18 inclusive), were 2134.

Appendix (b) shows that from 1887 to November 18, 1894 (both inclusive), at which latter date we began to use antitoxine, the total number of diphtheria cases recorded was 2770 and the deaths 1008, a mortality of 36.39 per cent.

Appendix (c) shows that for 1894 to November 18, the recorded cases were 332 and the deaths 106, a mortality of 32.22 per cent.

Appendix (d) shows that from April, 1894, at which time the bacteriological laboratory of the Board of Health was established, the number of cases bacteriologically examined to November 18 was 168, and the deaths 37, a mortality of 22.02 per cent.; the number of cases not so examined was 164, and the deaths 69, a mortality of 42.07 per cent. The

figure 22.02 per cent., the rate in the 168 cases bacteriologically examined, affords the fairest comparison with the rate obtained in the 100 cases treated with the remedy, and is the most favorable to the opponents of antitoxine (if such there be); but even so, it shows that the use of antitoxine cut down the prevailing mortality rate to almost one-third, from 22.02 to 8 per cent.

It may be asserted without fear of contradiction that not one of the fatal cases included in this 8 per cent. mortality presented a fair test of the remedy.

Case No. 3 was not injected until the tenth day of the disease; the fauces, nares and trachea were covered with membrane and tracheotomy had been performed; there was 10 per cent of albumen in the urine, and she was very weak and prostrated; only 2 cc. of Behring' serum were injected, and the patient (practically moribund) died on the following day. White girl, three years old.

Case No. 9, white boy, four and one-half years old, was not injected till the eleventh day of the disease; was moribund at the time, as he died forty minutes later. The membrane was on the tonsils and palate.

Case No. 20, white girl, three and one-half years old, was not injected until the seventh day; two days later she was again injected, receiving 15 cc. each time; she had been intubated and there was 20 per cent. of albumen in the urine; she improved markedly; tube was removed, but broncho-pneumonia developed and she died on the second day.

Case No. 36 was a white male, 3 years old; was not injected until the twenty-fifth day, when he was suffering from severe septicemia, there being abscesses of neck, arm and leg. He died of septicemia on the forty-fifth day.

Case No. 43, white boy, three years old, was injected on the second day, but must have been practically moribund at the time, as death occurred fourteen hours later, before the serum could have had any effect.

Case No. 51, white boy, — years old, injected on the eleventh day, also died within twelve hours after, and must, therefore, have been practically moribund.

Case No. 53, white male, fourteen months old, "much

depressed," and the "whole throat" covered with membrane; was injected on the second and died on the third. The urine contained a trace of albumen.

Case No. 93, white boy, five years old, was injected on the second day of the disease. His general condition at the time was poor, and he died on the tenth day, with septicemia and scarlet fever.

Race: Ninety-six of the cases were white, 4 black. Sex: Forty-eight were males, 52 females. Age: Two were under 1 year, 24 were from 1 to 3 years old, 27 were from 3 to 5, 26 were from 5 to 10, and 21 were over 10 years old. Location of the membrane: Palate, tonsils and fauces in 97 cases, larynx 4 cases, nares 3 cases. General condition at the time of injection is described as "good" in 59 cases, "very good" in 13, "poor" in 9, "much depressed" 2, "fairly good" 4, "weak" 3, "prostrated" 3, and is not given in 6 cases.

Albumen in the urine at the time of the injection is noted in 29 cases, its presence afterward in 15 cases. Day of disease on which the injection was made was: Less than 1 day 4 cases, 1 day 24, 2 days 34, 3 days 19, 4 days 4, 5 days 3, 6 day 2, 7 days 3, 8 days 2, 9 days 2, 10 days 1, 11 days 2, and 25 days 1 case.

Amount of serum injected was from 2 cc. of Behring's on one occasion, to 25 cc. of Gibier's several times. The usual dose of B.'s was 8 cc. to 10 cc., the usual dose of G.'s from 15 to 25 cc. The number of injections: It was necessary to use more than one injection in only fourteen cases. The largest number of injections in a single case was four.

Rash following injection: Urticaria was noted four times, erythema was noted twice, scarlatiniform once, dermatitis once, redness three times, some eruption once; local effect noted twelve times altogether.

Effect on membrane: Noted as gone in 12 hours in 1 case, as gone in 24 hours in 7, gone in 48 hours in 33, gone in 3 days 2, gone in 60 hours 1, gone in 6 days 1, gone in 7 days 1, gone in 16 days 1. It is noted as increased in 12 hours in 1 case and in 48 hours in 2 cases. Effect on bacteria: They are noted as gone as early as forty-eight hours, and as late as six days after injection.

Temperature is noted as having declined in thirty-six cases after the injection. Local treatment of various kinds was employed in forty-four cases only. In forty-six cases no treatment, either general or local, was employed.

The duration of the shortest case in which recovery took place was three, and the longest thirty-two days. The average duration of all cases was 9.88 days. The committee wishes to return its thanks again to Dr. John F. Oechsner, who kindly performed the larger part of the clerical work.

T. S. Kenndy, M. D.
Henry Dickson Bruns, M. D.
Wm. Scheppegrell, M. D.

REPORT OF FIRST SERIES OF 25 CASES OF DIPHTHERIA TREATED WITH ANTITOXINE—NEW ORLEANS.

Name.	Parts Involved.	Age.	Race.	Sex.	Weight—Lbs.	Duration in days at time of injection.	Condition at Time of Injection.	Albumen in Urine. Before Inj.	Albumen in Urine. After Inj.	No. and Am't of Injections.	Rash, following Injections	Effect on Membrane.	Effect on Bacteria.	Effect on Temperature.	Effect on Pulse.	Effect on Respiration.	Effect on General Condition.	Local and Constitutional Treatment.	Total Duration (in days).	Result.	Remarks.
1. Roger Rousset	Tonsils and fauces	7 yrs.	W	M	37	3	Weak, prostrated pale.	No	No	1, 15 cc. G.	None	Ceased spreading 24 hrs after inj.	None 6 days after.	Rapid decline	Moderate decline.	Moderate decline.	Much improved 48 hrs. after.	5% sol. chlorinated soda locally.	10	Recov'y	
2. Louise Cunnela	Tonsils, uvula, fauces and palate	5 yrs.	W	F	35	3	Weak, lymphatics enlarged.	Yes	No report	1, 12 cc. Gibier's; 2, 12 cc. G.	None	Detaching 48 hrs. after.	None 5 days after.	Decline	Rapid decline	Moderate decline.	Decidedly better 48 hs. at.	5% sol. chlorinated soda locally.	8	Recov'y	
3. Bertha Dauphin	Tonsils, fauces, nares, trachea	3 yrs	W	F	...	10	Weak & prostrat'd	10% moist.	No report	1, 3 cc. Behring	[matitis							Chlorinated soda locally	11	Death	Tracheotomy.
4. Pearl Kaufman	Tonsils and pharynx	8 yrs.	W	F	58	2	Good	No	No	1, 16 cc. G.	Slight der-	Dimin. 24 hs. after		Slight decline	Decline		Much imp. 48 hrs. after	Hydrogen peroxide spray	7	Recov'y	Temp. and pulse rose slightly after inj.
5. Mamie Lehman	Tonsils	6 yrs.	W	F	60	8	Fair	Trace	Trace, 24 hrs		None	Dissap'ng in 48 hs		Gradual decline	Gradual decline		Imp'd 48 hrs. after	Hydrogen peroxide spray & tr. ferri chloride.	17	Recov'y	
6. Charles Watts	Tonsils	16 mos.	C	M	35	3		None	24 hrs. none; 3d day, 10%; 5th day, 5%; 6th day, none.	1, 18 cc. G.	Local inflammation.	Almost entirely disp'd in 48 hrs.	None in 6 days	Marked decline			Continued improvement	Sodium chloride wash	9	Recov'y	No other treatment save $NaCl_2$ wash.
7. Rosie Allen	Tonsils and uvula	12 yrs.	C	F	85	3	Good	Trace			None	Almost entirely dis. on 7th day.		Decline	Decline	Decline	Continued improvement	Hydrogen peroxide spray	10	Recov'y	
8. Flora Murphy	Tonsils	10 yrs.	W	F	64	1	Excellent	None		1, 7½ cc. B. No. 1	Erythema locally.	Gone in 48 hrs.		Decline			Continued improvement	Pyrozone spray before and 12 hrs. after inj. tr ferri chl. and quinine.	8	Recov'y	Mild case; diagnosis would have been doubtful but for bacteriological examination.
9. Adam Meyer	Tonsils and palate	4½ yrs.	W	M	40	11	Fever			1, 20 cc. G.	None							Hydrogen peroxide	11	Death	Moribund at time of injection, death 40 minutes after.
10. Jno. Bareall	Left tonsil	5 yrs.	W	M	43	3			None	1, 15 cc.	None	Gone in 3 days					Purg. & vomiting 9 hrs. after	Hydrogen peroxide spray	6	Recov'y	
11. Sullivan	Pharynx (small spots)	8 yrs	W	M		2	Good				None	Gone in 48 hrs					Always good	Hydrogen peroxide spray	10	Recov'y	
12. Maria Paychaud	Tonsils	12½ yrs.	W	F	72	1	Good	Trace		1, 8 cc. B.	None	Nearly gone 24 hrs		Rapid decline	Rapid decline	Rapid decline	None	None	5	Recov'y	No local treatment.
13. Viola E. M. Blum	Tonsils	3 yrs.	W	F	40	3	Good	Trace	None	1, 15 cc.	Urticaria	None					Improved	Hydrogen peroxide spray	12	Recov'y	
14. Francis Drawl	Tonsils, fauces, pharynx	9 yrs.	W	F	50	2	Not very bad			1, 10 cc. B. No. 2	Swollen & tender.	Nearly gone 48 hrs		Rapid decline			Improved	Bor. acid mouth wash	8	Recov'y	Inj. 5 cc. in 2 children as prophylactic; inj. 10 cc. in mother who had developed sore throat; well next day.
15. Johnson Armstrong	Tonsils	31 yrs.	W	M	160	3	Very good.	None	None	1, 25 cc. G	[ness Slight red-	Gone in 48 hrs	None in 48 hrs	Decline	Decline	Decline	Improved	Hydrogen peroxide spray	6	Recov'y	
16. Arthur Cole	Nose, pharynx and subsequently larynx.	26 yrs.	W	M	136	9	Moderately good	2% moist	2% 24 hrs. after.	1, 25 cc. 12-3 G; 2, 25 cc. 12-7.	None	None in 48 hrs	None in 48 hrs	No appreciable affect.	No appreciable		Slightly improved	Hydrogen peroxide douche	23	Recov'y	Membrane while not dissolved in 48 hrs. appeared to be checked.
17. Aline Voorhies	Tonsils and palate	9 yrs.	W	F		7	Good	Trace	Trace	1, 12½ cc. 12-14; 2, 12½ cc. 12-15; 3, 12½ cc. 12-16	None	Improved in 48 hrs					Improved	Hydrogen peroxide spray; Hydrogen peroxide injected into larynx just before intubation.	15	Recov'y	Intubated Dec. 9; tube removed Dec. 18.
18. Flora Robinson	Larynx	5 yrs.	W	F	50	2	Fine	Albumen	None	1, 12 cc 12-9; 2, 16 cc. 12-11.	None			Decline	Decline	Decline			13	Recov'y	
19. McGrath	Left tonsil and pharynx	3½ yrs.	W	F	35	8	Good				None	Imp'd in 48 hrs.					Marked improvement	Salicylic acid and lime water spray.	15	Recov'y	Serious before injection; steady improvement after.
20. Dora Harvey*	None visible	3½ yrs.	W	F	35	7	Good	20% moist	Diminished	1, 15 cc. 11-22; 2, 15 cc. 11-25	(*)							Hydrogen peroxide	21	Death	Broncho-pneumonia.
21. Tuxency	Tonsils	3 yrs.	W	M		2	Good	None	None		None								7	Recov'y	
22. Chas. Fletschinger	Palate, tonsils & fauces	17 yrs.	W	M	130	2	Good		None	1, 22 cc	Erythemia	Gone in 60 hrs	Gone in 60 hrs	Decline	Decline		Much improved	No local; phenacetine & salol internally.	6	Recov'y	No local treatment.
23. W. Pesikey	Tonsils	6 yrs.	W	M	35	1	Very good	None	None	1, 15 cc. G.	None	Gone in 3 days		Gradual decline				Hydrogen per. and iron	11	Recov'y	Malarial complication.
24. Willie Pohlman	Tonsils and uvula	2½ yrs.	W	M	20	1	Very good	None	None	1, 7½ cc. B. 1	None	Gone in 48 hrs	None in 72 hrs					None whatever	4	Recov'y	No local or constitutional treatment.
25. John	Tonsils and soft palate	24 yrs.	W	M	154	0	Good		Albumen 12 hrs. after.	1, 25 cc. G.		Gone in 48 hrs	Still present 48 hrs	None immediately after inj. (subsequent decline).	Decline		Improved	None	4	Recov'y	No local treatment.
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* Intubated Nov 21; tube removed Nov. 23; reinserted same day; allowed to remain until Nov. 28, after which laryngeal breathing was good, but developed broncho-pneumonia; albumen reappeared and not lessened by second injection.

REPORT OF SECOND SERIES OF 25 CASES OF DIPHTHERIA TREATED WITH ANTITOXINE—NEW ORLEANS.

Name.	Parts Involved.	Age.	Race.	Sex.	Weight—Lbs.	Duration in days at time of injection.	Condition at Time of Injection.	Albumen in Uurine. Before Inj.	Albumen in Uurine. After Inj.	No. and Am't of Injections.	Rash, following Injection.	Effect on Membrane.	Effect on Bacteria.	Effect on Temperature.	Effect on Pulse.	Effect on Respiration.	Effect on General Condition.	Local and Constitutional Treatment.	Total Duration (in days).	Result.	Remarks.
26. Interguglielme	Pharynx	7 yrs.	w	M	....	3	Good	....	....	1, 10 cc. Gibier's	None	....	....	....	....	....	....	None	10	Recov'y	
27. Duzac	Tonsil	8 yrs.	w	F	....	3	Good	....	....	1, 10 cc. G.	....	....	....	....	....	....	....	....	11	Recov'y	
28. Duzac	Tonsil	7 yrs.	w	M	....	2	Good	....	....	1, 12 cc. G.	Scarlatini-form	Adenitis (submaxillary) on 10th and 11th days, with fever						None	10	Recov'y	
29. Bougere	Tonsils	24 yrs.	w	F	....	1	Very good	None	None	1, 18 cc. G.	None	....	....	Rapid decline fr'm 104° to normal.	Rapid decline	Rapid decline	....	None	15	Recov'y	
30. Karst	Tonsils	4 yrs.	w	M	....	1	....	....	....	1, 15 cc. G.	....	....	....	Rapid decline	....	....	....	None	3	Recov'y	Had measles at same time.
31. Kreihst	Tonsils	23 yrs.	w	M	....	0	Good	....	....	1, 22 cc. G.	....	....	....	Fell after inj't'n	....	....	....	None	7	Recov'y	
32. Cleveland Robinson	Fauces, left	10 yrs.	w	M	60	9	Extreme emaciation and prostration	....	None	1, 25 cc. G. 2, 15 cc. G.	Urticaria	None present in 12 hrs	None in 72 hrs.	Not much, slightly lower, range ab't 1 degree	None perceptible.	....	None in 48 hours	Hydrog. Per. locally, Mercuric Bichloride internally	28	Recov'y	
33 Grace Fairfax	Pharynx, fauces, palate, tonsils	15 yrs.	w	F	110	1	Good	Trace	....	1, 22 cc. G. 2, 12 cc Roux	None	Disap'g in 48 hrs.	....	Decline	....	....	Cessation of all active symptoms in 48 hours	Bichl. spray	8	Recov'y	
34. El. Ansel	Right tonsil	6½ mos.	w	F	18	1	Good	None	....	1, 10 cc. G.	None	Disap'd in 24 hrs.	....	Decline	....	....	Improved in 48 hours	None	12	Recov'y	
35. Olive Ansel	Right tonsil	3¼ yrs.	w	F	40	2	Good	None	Trace	1, 9 cc. B-hring 2, 18 cc. G.	None	Disap'g in 48 hrs.	7 days, still present	Decline rapid	....	....	Improved in 48 hours	None	7	Recov'y	
36. Kerlec*	....	3-5	w	M	....	25	Very good	None	None	....	(*)	....	....	....	....	....	....	....	45	Death	Septicæmia.
37. Harris	Tonsils	2 yrs.	w	M	....	4	....	....	....	....	....	....	....	....	....	....	....	....	6	Recov'y	
38. Vincent Graffino	Tonsils	4 yrs.	w	M	....	0	Good	None	None	....	....	Disap'd in 48 hrs.	....	....	....	....	....	None	4	Recov'y	
39. Mothe	Tonsils	2 yrs.	w	F	....	1	Very good	None	....	....	....	....	....	....	....	....	....	None	7	Recov'y	
40. Marie Ponyol	Tonsils	2 yrs.	w	F	....	0	Very good	....	....	1, 20 cc. G.	....	....	....	....	....	....	....	None	5	Recov'y	
41. Karst	Tonsils	2 yrs.	w	M	....	1	Very good	....	....	1, 20 cc. G.	....	....	....	....	....	....	....	None	7	Recov'y	Measles also.
42 Zabetta	Tonsils	13 yrs.	w	F	....	2	Good	....	....	1, 22 cc. G.	....	....	....	Rapid decline	....	....	....	None	7	Recov'y	Measles also.
43. Jno. H. Steinlage	Tonsils and pharynx	3 yrs.	w	M	35	2	Apparently good	....	....	1, 8 cc. B.	None	....	....	....	....	....	....	None	3	Death	Fatal 14 hours after inoculation.
44. Mr. Wyman	Left tonsil	32 yrs.	w	M	....	1	Good	....	....	....	....	Incr's'd in 12 hrs; incr's'd more in 24 hrs; disap'g in 48 hrs.	....	Decline	Decline	....	12 hours after, depressed	Hyd. Peroxide	11	Recov'y	
45. Mrs. Wyman	Pharynx and tonsil	24 yrs.	w	F	....	3	Good	....	....	....	....	Incr's'g in 48 hrs.	....	Decline	Decline	....	Improved in 48 hours	Hyd. Peroxide	13	Recov'y	
46 Irene Thornton†	Pharynx, palate, tonsils	15 mos.	w	F	....	2	Depressed, high temp., frequent pulse	....	....	1, 18 cc. G. 2, 18 cc. G. 3, 15 cc. G. 4, 15 cc. G.	None	Incr's'g in 48 hrs.	Never any found.	(†)	....	....	Improved after injection	Hyd. Peroxide	....	Recov'y	In hospital January 15, 1894, but cured of diphtheria.
47. Blanche DeKame	Uvula and tonsils	10 yrs.	w	F	38	6	Good	Conspicuous trace	Trace	1, 15 cc. G.	None	....	....	Declin'g in 3 days	Declin'g in 3 days	Declin'g in 3 days	....	Hyd. Peroxide	18	Recov'y	
48. Marie Ranson	Uvula, soft palate and tonsils	4 yrs.	w	F	....	5	Good	2% moist	None	1, B. No. 2	None	Disap'g in 48 hrs.	None in 48 hrs	....	....	....	Rapid improv'mt in 48 hrs.	Hyd. Per. and lime water.	16	Recov'y	
49. Chas. R Armstrong	Tonsils	6 yrs.	w	M	44	2	Good	None	None	1, 22 cc.	None	Disap'g in 24 hrs.	....	Rapid decline	Rapid decline	Rapid decline	Improved in 24 hours	Hyd. Peroxide	6	Recov'y	
50. Sidney Debretome	Tonsils	10 mos.	w	M	....	4	Good	....	....	1, 5 cc. B. No. 2	None	Disap'd in 48 hrs.	....	....	....	....	Improved in 48 hours	Hyd. Peroxide	8	Recov'y	
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* "During 42 days, temperature ranged between 101 and 102 deg., never normal; 3 septic abscesses, neck, arm and leg. Case was inoculated 3 times, but too late; first time 25 days after the bacteriological report, the parents having always objected. Since the beginning pronounced fatal, on account of the variety of the bacilli (streptococci and staphylococci). Died of *septicæmia*, 45 days after illness (beginning)."

† "The child has not been free from fever since admission to hospital; suffering with bronchitis, otitis media, tracheitis and peritracheal abscess."

REPORT OF THIRD SERIES OF 25 CASES OF DIPHTHERIA TREATED WITH ANTITOXINE—NEW ORLEANS.

Name.	Parts Involved.	Age.	Race.	Sex.	Weight—Lbs.	Duration in days at time of injection.	Condition at Time of Injection.	Albumen in Urine. Before Inj.	Albumen in Urine. After Inj.	No. and Am't of Injections.	Rash, following Injection.	Effect on Membrane.	Effect on Bacteria.	Effect on Temperature.	Effect on Pulse.	Effect on Respiration.	Effect on General Condition.	Local and Constitutional Treatment.	Total duration (in days).	Result.	Remarks.
51. Adam Meyer	Tonsils and soft palate		W	M		11	Fever											Hydrogen peroxide spray	11	Death	Died 12 hours after inoculation; hopeless at time of inoculation.
52. Sullivan	Post. pharynx		W	M		4	Good		None		None	Diminishing in 24 hours									
53. Wyman	Whole throat	14 mos.	W	M	25	2	Much depressed	Trace	Trace									Hydrogen peroxide spray	12	Recov'y	
54. Chas. Kraus	Tonsils and uvula	3 yrs.	W	M		3	Good	5% moist		1, 8 cc. Behring No. 2.	None	Almost entirely gone in 48 hours		Decline				Hydrogen peroxide spray	3	Death	
55. Lucy Edgar	Tonsils and pharynx	26 mos.	W	F	25	2	Fairly good			1, 20 cc	Urticaria							None	9	Recov'y	
56. Nich. Noesser	Tonsils and uvula	3 yrs.	W	M	30	7	Weak	Album. and hyaline casts	Alb. present 24 hours	2, — 1, 20 cc		Diminution						Hyd. per Hyd. per. and vigorous stimulation	11 32	Recov'y Recov'y	4 abscesses formed near site of injection, prolonging case; paralysis gradually subsiding.
57. Amelia Noesser	Tonsils	5 yrs.	W	F	45	1	Good	None	None	1, 4 cc. Roux; 2, 16 cc		Disap'd in 48 hrs.		Rapid decline	Rapid decline		Improved	None	4	Recov'y	First injection 4 cc., as prophylactic disease very mild; child not confined to bed.
58. Chas. Noesser	Right tonsil	32 yrs.	W	M	152	3	Good	Trace	None	1, 16 cc		Disap'd in 24 hrs.	Disap'd in 24 hrs.	Decline	Decline		Improved	None	3	Recov'y	
59. Charlie Pohlman	Left tonsil	8 yrs.	W	M	41	2	Very good	Faint trace.	None	1, 20 cc. G		Disap'd in 24 hrs.	Disap'd in 48 hrs.	Decline				None	6	Recov'y	
60. Fr. Ricca	Tonsils	4 yrs.	W	F		2	Very good	None	None	1, 8 cc. B		Disap'd in 48 hrs.		Decline			Improved	None	18	Recov'y	Measles at same time.
61. L. Fucich	Right tonsil	4½ yrs.	W	M		2	Very weak	5% moist		1, 15 cc. G				Rapid decline	Rapid decline		Very much improved	Hyd. per. locally, bichl. mer. int	9	Recov'y	No local treatment after inoculation.
62. Evelyn Beiger	Tonsils	7½ yrs	W	F		3	Good		None	1, 20 cc. G		Diminishing in 24 hours		Decline	Decline			Hyd. peroxide	9	Recov'y	
63. Josephine Caruso	Tonsils, pharynx, uvula	5½ yrs.	W	F	40	3	Good		None	1, 15 cc. G		Diminishing in 24 hours			Decline	Decline		Hyd. peroxide	7	Recov'y	
64. Mary Tanchard	Tonsils and uvula	4 yrs.	W	F		5	Good	Excess	Trace	1, 8 cc. B.; 2, 15 cc. G		Diminishing in 24 hours		Decline	Decline			Hyd. peroxide	15	Recov'y	
65. Hilda Jorda	Tonsils and palate	6½ yrs.	W	F	40	3	Not good	Albumen			Urticaria	Diminishing in 24 hours						None	12	Recov'y	
66. Francis Ernest	Tonsils	4 yrs.	W	F		4	Good	Trace	Trace	1, 15 cc. G		Disap'd in 48 hrs.					Much improved	Hyd. peroxide	9	Recov'y	
67. Cora Augustine	None	3½ yrs.	W	F	34	3	Good			1, 25 cc. G			Still present after 48 hrs	Decline	Decline	Decline	Much improved	None	10	Recov'y	Laryngeal case, first symptom, aphonia; marked dyspnœa before inoculation, gradually subsiding.
68. Ambroise Aiple	Tonsils and larynx	4 yrs.	W	M	35	6	Good			1, 8 cc. B. No. 1 2, 20 cc G	Some erupt.	Disappeared from tonsils in 24 hrs.		Decline	Decline	Marked improvement immediate	Improved	None	14	Recov'y	Respiration oppressed and stridulous on first observation; better 12 hours after inoculation; normal 48 hours after inoculation.
69. J. Gaconomo	Pharynx	4 yrs.	W	M		1	Good	None	None	1, 8 cc. B		Disap'd in 24 hrs.						None	6	Recov'y	
70. Bouchel	Tonsils	1 yr.	W	F		1	Good					Disap'd in 48 hrs.						None	5	Recov'y	
71. Rosa Gaconomo	Tonsils	6 yrs.	W	F		1	Good					Disap'd in 48 hrs.						None	6	Recov'y	
72. Jos. Gaconomo	Left tonsil	2 yrs.	W	F		1	Good			1, 8 cc. B		Disap'd in 48 hrs.						None	6	Recov'y	
73. Louis Patrone	Tonsils and uvula	2 yrs.	W	M		1	Good			1, 20 cc. G		Disap'd in 48 hrs.		Decline	Decline		Improved	None	7	Recov'y	
74. Marietta Laroussini	Pharynx	14 yrs.	W	F	100	1	Good	2%		1, 10 cc. B									7	Recov'y	
75 Mary Russell	Tonsils	40 yrs	W	F		0	Good	Albumen	None	1, 8 cc. B								None	17	Recov'y	
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REPORT OF FOURTH SERIES OF 25 CASES OF DIPHTHERIA TREATED WITH ANTITOXINE—NEW ORLEANS.

Name.	Parts Involved.	Age.	Race.	Sex.	Weight—Lbs.	Duration in days, at time of injection.	Condition at Time of Injecton.	Albumen in Urine. Before Inj.	Albumen in Urine. After Inj.	No. and Am't of Injections.	Rash, following Injection.	Effect on Membrane.	Effect on Bacteria.	Effect on Temperature.	Effect on Pulse.	Effect on Respiration.	Effect on General Condition.	Local and Constitutional Treatment.	Total duration (in days).	Result.	Remarks.
76. Carmea Villarubia	Tonsils	16 mos.	W	F	30	2				1, 8 cc. B.		Diss'd in 48 hrs.		Immed'te decline.		Immed'te decline.		None	5	Recov'y	
77. Anna Harras	Tonsils and uvula	38 yrs.	C	F	130	1	Very good	4% moist		1, 8 cc. B. 2		Diss'd in 48 hrs.		Decline	Decline			None	6	Recov'y	
78. Deliot	Tonsils	3 yrs.	W	F		1	Good			1, 8 cc. B.								None	7	Recov'y	
79. Ant. Domingues	Tonsils	10 yrs.	W	M		5	Good			1, 8 cc. B.								None	7	Recov'y	
80. Vinc. Morphy	Tonsils	15 yrs.	W	M		2	Good			1, 8 cc. B.								None	5	Recov'y	
81. Jos. Morphy	Pharynx	4 yrs.	W	M		2	Good			1, 8 cc. B.		Diss'd in 16 days.						None	18	Recov'y	Scarlatina—Streptococci.
82. Anna Domingues	Tonsils	7½ yrs.	W	F		2	Good			1, 8 cc. B.								None	6	Recov'y	Measles.
83. Vinc. Graffiaquico	Tonsils	13 yrs.	W	M		2	Good			1, 25 cc. G.								None	17	Recov'y	
84. Guarino	Tonsils	13 yrs.	W	M		2	Good			1, 8 cc. B.								None	4	Recov'y	
85. Hanchel	Tonsils	16 mos.	W	F		3	Good			1, 8 cc. B.		Diss'd in 48 hrs.						None	9	Recov'y	
86. Pahmara	Pharynx	15 mos	W	F		3	Good	Little	Little	1, 8 cc. B.								None	15	Recov'y	Cholera infantum.
87. Clara Guoinimo	Pharynx	2 yrs.	W	F		1	Good			1, 8 cc. B.		Diss'd in 48 hrs.						None	11	Recov'y	Measles.
88. Jos. Guoinimo	Pharynx	3½ yrs.	W	F		1	Good			1, 8 cc. B.		Diss'd in 48 hrs.						None	10	Recov'y	Measles.
89. Graffanino	Tonsils	7 yrs.	W	M		2	Very good			1, 8 cc. B.		Diss'd in 48 hrs.						None	6	Recov'y	
90. Franc. Rico	Tonsils	4½ yrs.	W	F		2	Very good			1, 8 cc. B.		Diss'd in 48 hrs.						None	6	Recov'y	Measles.
91. Guarino	Tonsils	16 yrs.	W	F		2	Good			1, 20 cc. G.								None	4	Recov'y	
92. Cacamo	Tonsils and pharynx	5 yrs.	W	F		2	Good			1, 20 cc. G.		Diss'd in 48 hrs.		Decline				None	9	Recov'y	Glandular enlargement marked; late inoculation.
93. L. Roussel	Tonsils	5 yrs	W	M		2	Poor	Alb	Alb	1, 8 cc. B.								None	10	Death.	Scarlet fever and septicæmia.
94 C. Giglio	Tonsils and uvula	5 yrs	W	M	40	2	Fever—anæmia.	None	None	1, 8 cc. B. 1 2, 8 cc. B. 2		Diss'g in 48 hrs.		Decline	Decline	Decline		Labbarraque's sol. locally. [Calcined Magnesia	5	Recov'y	
95. G. Latino	Nares, tonsils and uvula	6 yrs.	W	M	45	2	Fever—anæmia.	Alb	None	1, 8 cc. B. 2				Decline	Decline			Boric acid,	7	Recov'y	
96. Lawence Larose	Tonsils	4 yrs.	W	F	30	1	Fever—anæmia	None	None	1, 8 cc. B.				Decline	Decline			Boric acid, " "	8	Recov'y	
97. Wm. Smith	Left tonsils	17 mos.	C	M		3	Fever			1, 8 cc. B.		Diss'g in 48 hrs.		Decline				Bichlo. Mer., internally	13	Recov'y	
98. Walton April	Tonsils	5½ yrs.	W	M		2	Good			1, 8 cc. B.		Diss'd in 48 hrs.		Rapid decline			Improved	Quinine and iron internl'y	15	Recov'y	
99. Olga Dufilho	Tonsils	5 yrs.	W	F	38	1	Fever—anæmia.	None	None	1, 8 cc. B.		Diss'd in 24 hrs.		Decline				Boric acid and Calcined Magnesia locally.	5	Recov'y	
100 G. H. Gardner	Palate and tonsils	40 yrs.	W	M		2	Good			1, 8 cc. B. 3		Diss'd in 6 days.		Decline				Boric acid locally	8	Recov'y	
																			216		

RESUMÉ.

Report of Bacteriologically Examined Diphtheria Cases from Board of Health, April 1, 1894, to December 1, 1894.		1st 25 Antitoxine Treated Cases.	2d 25 Antitoxine Treated Cases.	3d 25 Antitoxine Treated Cases.	4th 25 Antitoxine Treated Cases.	Totals of Antitoxine-treated Cases.
AGE:						
Under 1 year	1	0	2	0	0	2
One to 3 years	41	5	6	7	6	24
Three to 5 years	45	6	5	8	8	27
Five to 10 years	72	8	6	7	5	26
Ten and up	40	6	6	3	6	21
	199	25	25	25	25	100
SEX:						
Males	106	12	13	11	12	48
Females	93	13	12	14	13	52
	199	25	25	25	25	100
RACE:						
White	167	23	25	25	23	96
Colored	32	2	0	0	2	4
	199	25	25	25	25	100
RESULT:						
Recovered	156	22	23	23	24	92
Died	43	3	2	2	1	8
	199	25	25	25	25	100
Mortality	27.56 %	12 %	8 %	8 %	4 %	4 %

Total mortality for 100 antitoxine treated cases 8 per cent.
Previous mortality (as per column 1), 27.56 per cent.

Appendix A.

DEATHS FROM DIPHTHERIA IN THE CITY OF NEW ORLEANS FROM 1869 TO 1894.

1869	19	1883	65
1870	19	1884	94
1871	14	1885	148
1872	39	1886	95
1873	46	1887	185
1874	102	1888	300
1875	69	1889	135
1876	40	1890	84
1877	35	1891	56
1878	59	1892	53
1879	64	1893	89
1880	85	1894 to November 18	106
1881	91		
1882	45		2134

Appendix B.

NUMBER OF CASES AND PERCENTAGE OF DEATHS FROM 1887 TO 1894.

	Cases.	Deaths.	Percentage of Deaths to Cases.
1887	591	185	31.30
1888	832	300	36.05
1889	344	135	39.20
1890	181	84	46.40
1891	129	56	43.40
1892	120	53	44.20
1893	241	89	36.90
1894 to November 18, inclusive	332	106	31.90
	2770	1008	309.35
Mean rate			38.66

Mortality 36.39 per cent.

Appendix C.

NUMBER OF CASES AND PERCENTAGE OF DEATHS—1894.

	Cases.	Deaths.	Per Cent. of Deaths to Cases.
January	25	13	52.
February	11	3	27.27
March	15	7	46.66
April	10	3	30.
May	36	15	41.66
June	30	7	23.33
July	32	4	12.50
August	34	10	29.41
September	28	10	35.71
October	51	20	39.21
November, to 18th inclusive	60	14	23.33
	332	106	

Mortality 32.22 per cent.

Appendix D.

TABLE OF CASES OF DIPHTHERIA—1894.

Months.	Examined (bacteriologically).			Not Examined (bacteriologically).		
	Cases.	Deaths.	Per Cent. of Deaths to Cases.	Cases.	Deaths.	Per Cent. of Deaths to Cases.
January	.....	.....	.....	25	13	52.
February	.....	.....	.....	11	3	27.27
March	.....	.....	.....	15	7	46.66
April	3	.....	0.00	7	3	42.86
May	19	6	31.63	17	9	52.94
June	21	4	14.29	9	3	33.33
July	19	1	5.26	13	3	23.08
August	22	8	36.36	12	4	33.33
September	17	6	35.30	11	4	36.36
October	36	8	22.22	15	10	66.66
November 18th inc.	31	4	12.90	29	10	34.48
	168	37		164	69	
	Mortality—22.02.			Mortality—42.07.		

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DR. H. W. BLANC. DR. WILL H. WOODS.

Editorial Articles.

THE STATE MEDICAL SOCIETY.

The sixteenth annual meeting of the Louisiana State Medical Society, held last month, was undoubtedly the most successful and brilliant in the whole history of the society. The number of papers read was very great; indeed, some felt that if more time could have been found for the discussion of the numerous valuable contributions, the meeting would have been even more interesting. The fact that lengthy discussions of valuable papers were shut out by a number of other valuable papers, makes us realize that a reproach that has for a long time been laid upon Louisiana physicians is at last being removed; we refer to the lack of interest displayed in writing up, for the benefit of of the profession in general, the many interesting cases occurring throughout the length and breadth of the State. While we must admit that a very small percentage of medical books bear the name of Louisiana writers, and, further, that the numerous bibliographical references given in many learned domestic and foreign works rarely include an article by any physician of our State, still we need not blush for

our apparent unproductiveness. The society, in 1890, having to postpone a meeting on account of the many crevasses that inundated large areas of the State and caused widespread ruin, we called attention to the many disadvantages under which the profession in our State labored. Our brethren had before emerged from the horrors of a great civil war, and addressed themselves to the new problems that confronted them with no less firmness and courage than they had shown on the battle-field. Disaster after disaster was met and conquered, and finally an important step in the medical history of Louisiana was taken when the more fortunate members of our profession met and reorganized the State Medical Society. From a feeble infancy our reconstructed society has grown to a vigorous manhood. The spirit that animated the pioneers in the reorganization of the society has been passed on to their successors, so that each year, gathering strength and inspiration from the preceding year, finds the society stronger and better. The handsome record of last year's work bears witness to the growing literary interest of our struggling, and, in many instances, overworked physicians. The volume that preserves the work of that meeting is the finest that our society has issued, and the next will, we expect, be even an advance upon its predecessor, since the meeting of 1895 was richer in material than its predecessor.

The introduction of clinics at the Charity Hospital added much to the interest of the meeting, and it is to be hoped that this instructive feature, which is introduced in many other societies, will be continued in the future.

Too much praise can not be given to the committees, which heartily entered into the spirit of the President, and insured a splendid meeting. In retiring from the presidential office, Dr. Matas had reason to congratulate the society upon the work done, and which will, we feel sure, be continued with unflagging zeal by his successor, Dr. Robert M. Littell.

The following officers were elected for the ensuing year: President, R. M. Littell, Opelousas; vice presidents: First Congressional District, P. E. Archinard, Orleans; Second Congressional District, F. W. Parham, Orleans; Third Congressional District, J. T. Abshire, Abbeville; Fourth Con-

gressional District, F. W. Thornhill, Bienville; Fifth Congressional District, A. A. Forsythe, Monroe; Sixth Congressional District, C. J. Duvic, Avoyelles; recording secretary, P. B. McCutchon, Orleans; treasurer, J. B. Elliott, Jr., Orleans; corresponding secretary, A. G. Freidrichs, Orleans; memorial orator, Joseph Jones, Orleans; orator, Judge John Clegg.

THE ORLEANS PARISH MEDICAL SOCIETY.

Last month the Orleans Parish Medical Society moved into its new quarters, at No. 163 University Place. Ordinarily, the removal of a society to a new meeting room does not excite comment, but the present instance calls for some remarks.

Like the State Medical Society, our local organization led a rather uncertain existence at first; but it grew as time wore on, and now it has installed itself in its own home, where it gives promise of great and ever-increasing usefulness. The library, which is small now, is growing rapidly, and it will not be a very long time before it will become a notable feature in the medical life of Louisiana.

The possession of independent quarters enables it to carry out a design long cherished, but, until now, impossible of fulfillment. There is always a stream of physicians from the country visiting the city, and, except in isolated cases, they have come and gone, feeling that something was wanting to make their stay in the city pleasant. There was a lack of fellowship, apparently, but it was due to the absence of means of extending courtesies, which the profession in the city desires to show their visiting brethren. The new domicile of the Parish Medical Society provides the facilities for pleasant intercourse, and the society extends to all visiting physicians a most cordial invitation to call and meet their fellow-laborers in the field of medicine.

Abstracts, Extracts and Annotations.

MEDICINE.

A NEW TREATMENT FOR TUBERCULOSIS.

For many months Dr. Paul Paquin, of St. Louis, has been experimenting with a remedy for tuberclosis. His conclusions were recently presented to the St. Louis Medical Society in a demonstrative manner. There can be little doubt that Dr. Paquin has discovered nature's own treatment of tuberculosis. It is, perhaps, not saying too much to state that he has discovered a cure for that dreaded list of maladies to which the name tubercular has been applied., He employs the serum therapy, using the serum of the horse, an animal which rarely, if ever, contracts tuberculosis. In a large number of patients in the city hospital and poor house, upon whom the new treatment was tried, a gain in weight, a diminution and cessation of expectoration, a fall in temperature and, in fact, an amelioration of all symptoms was obtained.

Dr. Paquin presented the clinical histories of twenty-two cases treated with almost uninterrupted improvement. Nearly every case had gained in weight. Cough had entirely disappeared in patients with large cavities. The serum is obtained from horses rendered strongly refractory to the germ of tuberculosis by laborious processes. A remarkable feature in the result of the treatment was that not one of the seven cases which Dr. Paquin presented to the society coughed once during the entire evening. This, too, was after exposure to a cold wind on a very bad night. Dr. Paquin did not present conclusions with regard to his experiments, but expressed the opinion that the immunized horse-serum would soon be the natural agent to prevent and treat tuberculosis. He said that it was obviously too early to reach reliable conclusions, although the results seemed sufficient to justify the hope that the serum would arrest tuberculosis.

The results obtained by Dr. Paquin were confirmed by Dr. George W. Cale, a skilled bacteriologist and able surgeon. Dr. Cale believes that, in the serum therapy, we have a remedy of the greatest importance for bone and joint tuberculosis.

The preparation of the serum is expensive, and requires minute attention to details. The filtration of the serum is a matter of the greatest importance, and in this Dr. Paquin was assisted by Dr. Given Campbell, who has discovered a method of filtration superior to any heretofore in use.

It is worthy of note that the three gentlemen whose names have been mentioned above are young men, exponents of that scientific school of medicine of which Pasteur, Koch, Kitasato, Roux and Behring are leaders. It should also be remarked that they are ethical gentlemen, who are not seeking notoriety. —*Med. Fortnightly.*

IMPERMEABILITY OF THE EPITHELIUM OF THE HEALTHY BLADDER TO MEDICAMENTS AND POISONS.

At the last meeting of the Académie des Sciences, MM. Boyer and L. Guinard made a communication (*Medical Press*) on this subject. They undertook to demonstrate that the opinion of physiologists on this subject is perfectly justified, that the epithelium of the badder possesses no absorbent power whatever when perfectly intact. The histological formation of the epithelium in question does not favor penetration, and one has only to think of the physiological *rôle* played by the bladder to be convinced of the error which those commit who believe in its absorbent power. A large number of authorities have put forth views similar to those of the authors, and these latter would not have reverted to the subject had not an opinion diametrically opposite been expressed by a distinguished surgeon (M. Bazy) before the Académie in November, 1893. The authors have demonstrated the truth of their opinion by experiment. Employing first the precedure of Cazeneuve and Lepine, they ligatured ureters and urethra in several dogs and injected into the badder by means of a fine canula chlorhydrate of strychnine. In these conditions the animals tolerated during seven to nine hours, without the least sign of poisoning, .02, .03 and .04 gramme of poison.

Wishing to operate under still more physiological conditions, they injected active solutions into the bladders of big dogs, *via* the urethra, by means of a catheter. Many animals being kept perfectly quiet, retained poisonous solutions for periods varying from eight to twenty-one hours. Metallic poisons, irritating substances, and those which give off fumes, are not tried. Alkaloids alone were used, it being considered that among these agents there exist elements so poisonous and diffusible that when introduced in strong doses into the bladder they would surely produce rapid death if absorption really took place. Under the preceding conditions twenty-three experiments were made, and in all these not the least trace of any local or general physiological disturbance was noticeable, nor any indications of absorption of the alkaloids. Of these, pilo-

carpine, atropine and eserine, cocaine, morphine, veratrine, arseniate and chlorhydrate of strychnine in toxic doses were injected.

On every possible occasion the presence of the poisons in the voided urine after the experiments was ascertained, and a control experiment was also performed.

The urine from three dogs which had retained in their bladders .10 gramme of arsenate of strychnine was collected. After concentration this urine was injected hypodermically in two instances into the dogs which furnished it, and in the third instance into several frogs, two guinea-pigs and a rabbit. All these died with classical signs of strychnine poisoning.

The authors believe that the mucous membrane of the bladder, when inflamed, permits absorption, and they found death to follow injection of the poisons named when imflammation existed.—*St Louis Med. and Surg. Journal.*

THE MICRO-CHEMIC REACTIONS OF URINARY SEDIMENTS.

While the diagnostic significance of the staining reactions of various organic substances has received recognition in both biologic and histologic research, the application of this method of differentiation is capable of extension and elaboration. The schizomycetes, for instance, present such a close resemblance one to another that it is often quite impossible to recognize a given variety from its morphologic appearance. Some can be discriminated by their behavior when exposed to certain stains and decolorizing reagents, while the identity of others is only to be established by their appearance in cultures. Histologically we know that the body and nucleus of a cell each reacts differently to stains; as do also healthy and diseased structures. Extending the application of the principle, we find that tube-casts in the urine when stained, behave diversely in accordance with their chemic constitution, amyloid casts, for instance, assuming a mahogany tint when treated with iodine, and a deep blue when treated with gentian-violet. An interesting contribution to the subject of the color-reactions of urinary sediments has recently been made from the Pathologico-Chemic Institute of the Rudolph-Stiftung in Vienna, by Grosz (*Internationale klinische Rundschau*, 1894, No. 41, p. 1465), who has studied the formed elements contained in urine stained with alizarin. To a drop of urine placed on a slide he adds a drop of a 1 per cent. solution of sodium alizarin sulphonate, and then covers, the examination being made after the lapse of about a minute.

The sediment present is stained differently according to the reaction of its constituent elements. Thus, those of acid reaction appear yellow, those of alkaline reaction violet, and those of neutral or feebly acid reaction red. In the urine from cases of acute gonorrhœa were found cylindroidal bodies of mucin, staining red, and resembling tube-casts, the likeness being increased by the presence of leucocytes and epithelial cells. Further investigation rendered it probable that these bodies (which are not visible in unstained preparations) are derived from the glandular apparatus of the urethra, and more particularly from the glands of Littré. Other long, convoluted, and hyaline cylindrical bodies, upon which are seated leukocytes and epithelial cells, and which appear in unstained preparations as structures of faint contour, are derived from the prostrate gland, of disease of which their presence is suggestive. They were also found in the urine passed after coitus. In contradistinction to these urethral and prostatic structures, renal tube-casts stain intensely yellow. The presence of casts is also associated with the absence of a mucoid ground-substance that stains red, and accompanies the other two. In some cases of disease of the posterior portion of the urethra leucocytes stained violet were observed, but the number of cases was not sufficiently large to establish the diagnostic significance of the observation. The opinion is expressed that the reaction of the epithelial cells progresses from acid to alkaline, from the surface to the deeper layers; so that the reaction of the sediment in the urine will indicate the nature and seat of the morbid process in the genito-urinary tract.—*Medical News.*

GUAIACOL TOPICALLY AS A PROPHYLACTIC AGAINST DIPHTHERIA.

Dr. S. Solis-Cohen, *in The Medical News.*

While admitting the difficulty of estimating the true value of an agent used as a preventive against an infectious disease, I desire to urge upon the profession the topical application of guaiacol as a possible—yes, a probable—prophylactic against diphtheria in the cases of attendants upon diphtheria patients, and of children and others residing in the same house with diphtheria patients.

If an excessive quantity is not used, guaiacol may be applied harmlessly, in full strength, even to the throats of children; but for children it is, I think, best to dilute it one-half or two-thirds, according to the age of the child, with olive oil or liquid petrolatum. Very sensitive throats may be previous-

ly touched or sprayed with a solution of cocaine (from 2 per cent. to 5 per cent).

The guaiacol, which should be a pure preparation, is best applied with cotton wad, and by quick motion, first to one tonsil, immediately afterward to the other tonsil, and after an interval of two or three minutes to the pharynx. Some burning or smarting is caused by each application. This, however, passes off in the course of a minute or two, or, if unexpectedly severe, may be relieved by ice or iced water, Latterly I have used as a diluent for guaiacol a 5 per cent. solution of menthol in liquid petrolatum, and the peculiar cooling effect of the inhalation of air after the use of mint seemed to be an advantage. There is no caustic or escharotic effect from pure guaiacol. Impure preparations cause an undesirable eschar more or less opalescent according to the character of the impurity. The application may be repeated daily or at longer intervals, or not at all, according to circumstances.

THE RESPIRATORY COMPLICATIONS OF VARICELLA.

Boucheron (*Thèse de Paris*, 1893) devotes an inaugural thesis to a study of the little known respiratory complications of varicella. These, with nephritis, gangrene, multiple hæmorrhages, and infectious rheumatism, go to modify the usually favorable prognosis of this disease. One of the cases will bear quotation.

A little girl was admitted to the hospital with a serious case of whooping-cough, which after a time became complicated with a broncho-pneumonia. Fifteen days later, on February 20th, the first crop of vesicles of a varicella made their appearance, and this was followed by several others. Gradually the child assumed a waxy pallor, and swelling of the face was noted, though albuminuria was not present. During the night of the 2d and 3d of March the child manifested difficulty in breathing through the nose, the nostrils being filled with crusts and discharging a sanguinolent fluid. On the 9th, symptoms of suffocation of such violence appeared that tracheotomy was discussed, but they yielded for the time to the application of a hot sponge over the larynx. Death occured from suffocation on the following day. The autopsy showed a double broncho-pneumonia. There was no œdema of the larynx, but its mucous membrane was congested, presenting points of ecchymosis, especially about the true vocal cords and upon the under surface of the epiglottis. Posteriorly, between the two arytenoids, near the vocal cords, and upon the cords them-

selves, were found small vesico-pustules analogous to those found on the skin. The erosion produced by these, however, was very superficial. Whether these vesicles are to be regarded as a true localization of a varicellous eruption upon the laryngeal mucous membrane, the author is considerably in doubt. This acident had occured about the 10th of March, while the first crop of vesicles appeared February 20th, at a time when the lungs presented lesions of broncho-pneumonia and the kidneys those of nephritis.

Bronchitis is quite frequent; it may precede, accompany, or follow the eruption (cases of Rondot, Valin, Gallard). The author considers this bronchial inflammation as a specfic manifestation of the disease, and not a simple coincidence.

Broncho-pneumonias are divided by him into two groups. In the first are the cases where broncho-pneumonia is late, and where varicella clearly seems to furnish the pulmonary lesson (case of Rogivue, Hogyes, Semtchenko). The second group contains the pneumonias which occur in the first few days, as in the case of Manouvriez, where a broncho-pneumonia appeared in the beginning, and was heralded two or three days in advance by convulsions.

Pleuro-pneumonia as a complication of varicella is illustrated by an observation of Rille, who found it in an infant of nine months, and by another of Abercrombie, who at the autopsy upon the case of gangrenous varicella found a double pneumonia with a pleural exudate upon one side.

Finally, he reports an observation of Semtchenko relative to the autopsy upon a female infant of eleven months, who succumbed to a purulent pleurisy beginning three days after the complete disappearance of a varicellous eruption.—*American Journal, Medical Sciences.*

RECOVERY FROM THE INGESTION OF ONE OUNCE OF CHLORAL HYDRATE.

At a recent meeting of the Clinical Society of London, Colenso (*Medical Press and Circular*, No. 2895, p. 454) reported the case of a very powerful woman, thirty-four years old, of large build and good condition, who deliberately took an ounce of chloral hydrate in solution, being discovered in bed unconscious eight hours later. When seen, an hour and a half after this, the patient was found to be comatose. The reflexes were abolished; the breathing was shallow and stertorus; the pupils small and sluggish; the pulse 130, small and

firm; the temperature 100.5 deg. It was only three hours later that the nature of the poison taken was discovered. Atropin was given hypodermically, and the stomach washed out with much difficulty. Strychnine and ether were injected subcutaneously, and amyl nitrate given by inhalation. When the nature of the poison was learned, enemata of strong coffee were given, and sinapisms applied to the thighs and legs. The woman was also vigorously rubbed and slapped with towels. The treatment was thus continued for several hours, the patient finally being roused. Short intermissions of ten minutes at a time were allowed for sleep, then the patient was taken from bed and made to walk about. On the following day the patient slept thirteen and a half hours of the twenty-four. Recovery ultimately ensued.—*Medical News.*

A CASE OF TUBERCULAR MENINGITIS; DIAGNOSIS BY LUMBAR PUNCTURE; RECOVERY.

The cases reported in medical literature of apparent recovery from tubercular meningitis naturally admit of doubt, for it is well known that errors of diagnosis are very common. Fürbringer, in the *Deutsche Med. Wochenschrift*, 1894, No. 36, reports a case in which the diagnosis was established beyond a doubt. The case was that of a laborer, twenty years of age, who, while in the best of health, was taken with severe headache and fever. Various symptoms pointing to the central nervous system led to a diagnosis of meningitis. In order to establish the diagnosis, Fürbringer performed paracentesis of the spinal canal at the level of the second lumbar vertebra; 60 c. c. of a slightly cloudy serous fluid escaped, in the sediment of which were found a few pus corpuscles and numerous tuburcle bacilli. Contrary to all expectation the fever subsided after the puncture, the sensorium became clear, the headaches gradually disappeared, as well as the rigidity of the extremities and of the spinal column. Convalescence was uninterrupted and the patient was discharged cured.

Although, as is acknowledged by the *St. Petersburger Med. Wochenschrift*, November 19, 1894, the therapeutic value of the lumbar puncture introduced by Quincke, after numerous trials, still admits of doubt, the method certainly is applicable, as claimed by that journal, for diagnostic purposes, and the more so that tubercular meningitis often takes the cerebro-spinal form.—*Brooklyn Medical Journal.*

A MINDLESS FROG.

At the meeting of the Association of American Anatomists in New York on Saturday, December 29, Prof. B. G. Wilder showed a frog from which, under ether, the entire cerebrum was removed on the 7th, three weeks before. It looked natural. The scar on the head was hardly visible. It can swim and jump and even balance on a cylinder while it is slowly turned, and swallow food that is placed far back in the throat. But when undisturbed it sits without motion, and presumably has no consciousness. That such a frog, while in possession of all his senses (excepting smell, the olfactory lobes being removed with the cerebrum) has no real "sense," may be seen from the behavior of a similar specimen shown the American Neurological Association in 1886. A minnow was put into the mouth. The head reached the throat and aroused the swallowing reflex; but the tail protruded from the lips and caused the frog to put up his hands to push it out. The normal frog would have decided whether the fish should go up or down. The decerebrized animal was a mere reflex machine and could make no choice between incompatible operations.—*Brooklyn Medical Journal.*

PULMONARY TUBERCULOSIS CURED BY POTASSIUM CANTHARIDINATE.

Dott. Gennaro Petteruti reports two cases in which a complete cure resulted, and a third which showed a notable improvement in nutrition and in general condition, so that for two years he believes himself cured, and reports for observation only at special request. The changes in nutrition, appetite, and urinary findings are those which have been described. As for the bacilli, the number found in the expectoration increases during the first fortnight of treatment—that is, after the first seven or eight injections—and then returns to the quantity previously found. On the discharge of the patient from the hospital still a small number are found. The solution which is used is composed of cantharidine, 2; potassium hydrate, 4; dissolved over a sand-bath, with water at 200 deg. F. and diluted with warm warter to 10,000. The commencing dose is seven drops. Besides the patients received for five to ten minutes, three times daily, an atomization of sodium benzoate in 4 per cent. solution, and two teaspoonfuls thrice

daily, during meals, guaiacol in cod-liver oil, in the proportion of one to eighty. As this mixture becomes well borne the amount of guaiacol is gradually increased to five times the original amount. To the suggestion that the sodium benzoate and guaiacol may have contributed both results, the answer is made that these remedies given alone are ineffectual. The results obtained in these cases have persisted for three years.—*Il Policlinico*, 1894, No. 22, p. 501.

SOME MEANS EMPLOYED IN THE DIAGNOSIS AND CURE OF GASTRIC AFFECTIONS.

For the diagnosis of gastric affections no better means is known than the morning test meal, which should always consist of the same food and taken at the same hour—slightly sweetened coffee (or tea) with milk, and one or two slices of bread, the quantity of liquid being always the same and not exceeding 500 grammes.

If three or four hours after ingestion there is a sensation of heat in the stomach, a feeling of exaggerated acidity, we have to deal with a hyperacid dyspepsia.

If, on the other hand, there is an abundance of gas, a sensation of heaviness and fullness and marked slowness of digestion, subacidity is the cause of the disturbance.

If pain commences after a quarter of an hour, increasing with time, there is probably irritation or inflammation of the duodenum, and in that case, gastro-duodenitis.

Finally, painful cramps and even vomiting may supervene, which in themselves characterize the disturbance occasioned in the functions of the muscular and nervous centres of the stomach.

These indications are often more useful than the direct methods of analyzing the gastric juice.

Another way of getting at the cause of the trouble is to ask the patient when the disturbance commenced. In hyperchlorhydria, the sensation of pain and burning is always experienced in three or four hours after meal.

In the real painful forms of dyspepsia—such as the gastralgia of chlorotic subjects—the painful crisis appears immediately after the ingestion of food.

The knowledge of the patient's profession and habits is another means of diagnosis.

Among the simple measures calculated to cure gastric

affections belongs decubitus on the right side during sleep, to promote the passage of food from the stomach to the duodenum.

Warm drinks diminish (according to Linossier) the secretion of the gastric juice and augment gastric contractibility. They are indicated, preferably slightly aromatized, in hyperchlorhydria, and in an indolent and dilated stomach; while very cool water (12 degrees C.; 53 degrees F.) will exert a stimulating influence upon said secretion.

As alkaline waters, in small doses, one-half to one hour before meals, likewise excite this secretion, they, too, are indicated in hypochlorhydria. They also activate the muscular movements of the stomach, resulting in a more rapid evacuation. In this case, sodium bicarbonate or alkaline water should be taken during or after meals.

Massage is also one of the best means of combating stomachal indolence, and the stasis of food in the stomach.—*Lyon Med. 1894, LXXVII, p. 475.*

SURGERY.

A CASE OF SUBCUTANEOUS SUTURE OF A FRACTURED PATELLA.

By JOHN W. KEEFE, M. D., Providence, R. I., Surgeon to Rhode Island and St. Joseph's Hospitals.

Of the many methods that have been devised for treating fractured patella, that by subcutaneous suture, described by Dr. L. A. Stimson, seems to offer the happiest results, with a minimum amount of risk.

The following case is one that came under my observation at St. Joseph's Hospital, this summer: T. A. K., male, 24 years old, student. On June 28, 1894, while playing ball, he was tripped by a small, round stone, and felt something "give way" in the left knee. He did not fall, but deliberately sat down; and after a few moments he arose, and walked about ten yards. He then felt as if something had again "given way," and was unable to walk. He was taken to his home, and later to the St. Joseph's Hospital. There was considerable swelling, due to a large amount of effusion into the knee-joint, and a transverse facture of the left patella was found at the junction of its middle and lower thirds. The leg was elevated, and bandaged to an inclined splint with ice bags to the knee. Twelve days afterwards the effusion in the

joint had disappeared to a considerable degree, leaving a separation of about a finger's breadth between the fragments.

OPERATION.

The field of operation was rendered aseptic, and the sutures and instruments sterilized by boiling ten minutes in soda solution. The patient was etherized. Four incisions, one-fourth of an inch long, were made through the skin at each corner of the patella. A strong twisted silk suture, similar to those employed in tying the pedicle of an ovarian tumor, was passed through the ligamentum patellæ, making an entrance at one, and an exit at the other lower opening. The suture was again entered at the lower opening of exit, and passed beneath the skin, by the side of the patella, through the upper opening on the same side; then transversely, through the quadriceps tendon, along the upper border of the patella, and out through opposite upper opening; then again, through latter opening, beneath the skin, and by the side of the patella, through lower first point of entrance, thus encircling the patella. By leaving a loop of the suture at each opening, one is materially aided in making traction when the ligature is tightened. The fragments may be brought together by tenacula in the hands of an assistant. The suture was drawn tightly, tied, and the ends cut short, the knot being buried in the wound of entrance. The four incisions through the skin were closed with silkworm-gut sutures. An aseptic dressing was applied, and the leg bandaged to a posterior, inclined splint.

Eight days after the operation the wounds were dressed for the first time, and the silkworm-gut sutures removed. Swelling diminished. No evidence of suppuration. An antiseptic dressing and posterior splint. Ten days later a dressing consisting of a light plaster-of-paris splint was applied, reaching four inches above and below the knee-joint. The plaster splint was removed one month from day of operation. There is at present about 45 deg. motion in the joint.

Thirty-five days from the date of operation the patient was able to walk without a cane, and to fully extend the leg. The line of fracture can be felt, but no evidence of separation of the fragments. Hot and cold douching, and massage advised. Ordinary bandage about the knee.

August 30—Elastic knee-cap worn. The range of motion was gradually increasing, and no inconvenience was felt from the silk buried suture.

Nine weeks after the operation the patient was able to flex the leg to 115 deg.

I should advocate performing the operation as soon as

practicable after the injury; aspirating the joint if necessary to enable one to approximate the fragments; but this latter procedure would seldom be found necessary. The advantages of this method of treatment are, that the fractured surfaces are maintained in perfect apposition, thereby favoring bony, rather than fibrous, union; the joint is not opened, thus preventing the possibility of joint infection; the operation is simple and readily performed, and passive motion may be commenced early, rendering even partial ankylosis of the knee-joint improbable.—*Boston Med. and Surg. Jour.*

ACUTE ASEPTIC PERITONITIS.

Hartman and Morax (*Annales de Gyn. et d'Obstétrique*, 1894, No. 3) report two cases of general peritonitis in the service of Terrier, in which they believe that they were able to positively exclude any infectious origin. The first case was that of a young girl, aged eighteen, who was suddenly attacked with abdominal pains and vomiting two hours after eating her breakfast. Forty-eight hours later she entered the hospital with a pulse of 120, constant vomiting, general abdominal pain and tympanites, but with a *normal* temperature. No gas had escaped per rectum since the attack. Cœliotomy was at once performed, and the omentum was found to be thickened, congested, and adherent to the anterior abdominal wall. On separating it eight or ten ounces of sanguinolent fluid, containing flakes of fibrin, escaped. The intestines were adherent and were covered with organized lymph. A twist in the gut was found, and freed, the adhesions being separated. The wound was then closed without irrigation or drainage. All the symptoms speedly disappeared, and the patient made a rapid recovery. A rigid bacteriological examination of the peritoneal fluid and pseudo-membranes showed an entire absence of micro-organisms. Culture experiments were negative.

In the second case, a woman, aged forty-nine, with ovarian cyst, was operated upon by Terrier for torsion of the pedicle with general peritonitis. The condition was practically the same as in the first instance, and results of the bacteriological examination were as negative as before. The writers add that while non-septic peritonitis has been discovered by Schrœder in connection with secondary changes in ovarian cysts (inflammation, torsion and rupture), it has never been carefully studied. He affirmed that peritonitis with this origin was almost invaribly cured by cœliotomy. This would seem to

show that the successful result of ovariotomies performed during attacks of acute general perionitis is due more to the mild nature of the disease than to the adoption of any special technique, including irrigation of the abdominal cavity, which was not employed in either of the cases cited.

There is nothing in the appearance of the tissues and organs seen at the operating-table by which one can distinguish the septic from the non-infectious form of inflammation. The aseptic nature of the process may be inferred form the history of the case, and is confirmed by the results of the bacteriological examination.

The prognosis in the non-infectious variety is good, but in the septic surgical interference is rarely successful by reason of the wide dissemination of infectious germs. Even though fresh inroads of micro-organisms may be prevented by cœliotomy, irrigation and drainage, it is practicaly impossible to remove entirely those which have already been distributed throughout the peritoneal cavity. [This short paper furnishes a powerful argument against the widespread practice of irrigation of the peritoneal cavity, not only in cases of general peritonitis, but after the evacuation of circumscribed purulent collections within the pelvis. The results obtained by those surgeons who simply sponge out the pelvic cavity (the patient being in Trendelenburg's posture, with the intestines carefully protected by compresses) and seldom drain, compare so favorably with those of cœliotomists who irrigate and drain in a large proportion of their cases of pelvic suppuration, that the dogmatic statements of the latter in favor of their own method can no longer be accepted without question.—H. C. C.]

EXCISION OF THE TONGUE FOR CANCER—NO RETURN AFTER THREE YEARS.

The following case, I think, may be recorded as a "cure."

T. W., *æt.* 54, from Drayton, came to me complaining of a "sore tongue." An ulcer, about the size of a sixpence, with irregular and hard edges, and having an uneven base which secreted yellowish thick pus, was seen on the right edge of the tongue, about one inch from the tip. No tooth likely to cause irritation was near, but he was a heavy smoker. The submaxillary glands were each enlarged to about the size of a walnut. He had been in poor health for three years past, and during the last two months, and since he had noticed the "sore" on the tongue he had got worse and was getting thinner.

On the 15th of June, 1891, just three years ago, chloroform was given by Dr. Hunt, and with the assistance of Dr. McDonnell, and in the presence of Dr. Roberts, I did first a tracheotomy. Chloroform was, during the rest of the operation, given through the tube, which plan left the mouth quite free for the operation and was a decided advantage.

Two small curved incisions were then made, one on each side, over the glands. These were removed and each lingual artery ligatured. The tongue was then drawn well out and the floor of the mouth divided by free cutting with scissors, and the tongue ligatured as far back as possible and removed. Iodoform in collodion was freely painted on the stump. The trachetomy tube was removed in forty-eight hours, and in ten days he was convalescent.

The following report is by Dr. Hirschfeld, Hon. Pathologist to the Brisbane Hospital, on the tongue and glands:

"A section was made through the affected portion of the tongue, and several specimens from different parts of the new growth were examined microscopically. The tumor was found to consist of epithelial cells, which with regard to their size, stood between pavement and columnar epithelium. The connective tissue stroma was, on the whole, very small, in some specimens entirely absent, while more especially toward the edge of the growing cancer, a great number of small, round bodies, recently described as sporozoa, could be observed within the epithelial cells. The well-known concentric or onion peel formation of the cancer cells was not very frequent in this case, and was found only in three places. As the result of this examination there can be no doubt as to the diagnosis: *Epithelioma.*

"With reference to the glands that had been extirpated at the same time, both were enlarged in consequence of being inflamed and infiltrated with leucocytes and round cells. One showed an induration of about the size of a large pea. The microscopical examination revealed a small quantity of epithelial cells and fairly numerous giant cells, besides a great number of round cells and leucocytes which composed chiefly the indurated portion. It becomes, therefore, manifest that in one of the affected glands the beginning of a metastasis of the original epithelioma had been found already."

Dr. Park, house-surgeon to the Towoomba Hospital, examined this patient and reports:

"T. W., a strong, healthy-looking man, has a tracheotomy scar and scars over both lingual arteries; stump of tongue puckered, no induration, and the glands present no enlargement. Deglutition is troublesome; has difficulty in dividing

food into a suitable bolus and in keeping food from accumulating between the cheek and gum. Phonation: He speaks most intelligibly, and is able to convey consonants without much difficulty; states he has improved in this respect greatly within the last eighteen months."

The duration of life in cases of cancer of the tongue when no treatment is carried out is, according to Treves, twelve to eighteen months. This man has lived twice that period of time in perfect health, and no return of the cancer can be detected. Therefore, I take it, his case may be quite fairly regarded as one of "cure" of undoubted cancer of the tongue by thorough excision.—*Australasian Medical Gazette.*

Book Reviews and Notices.

Chemistry: General, Medical and Pharmaceutical, including the Chemistry of the United States Pharmacopœia, etc. By John Attfield, F. R. S., etc. Fourteenth edition. Philadelphia: Lea Bros. & Co., [New Orleans: Armand Hawkins & Co., $2.75.]

When a book has taken a strong hold on many generations of medical students, as Attfield's Chemistry has, it is only necessary to notice the appearance of a new edition to insure a continuance of the favor it enjoys and deserves. In our notices of a previous edition of this work we gave an outline of its general arrangement, which it is not necessary to repeat here. This edition of a deservedly popular work presents the subject of chemistry to the students in a very attractive manner, being at once a systematic text-book, laboratory guide and introduction to pharmacy. A. McS.

Reactions. A selection of organic chemical preparations important to pharmacy, in regard to their behavior to commonly used reagents. By F. A. Flückiger, Ph. D., M. D. Translated, revised and enlarged by J. B. Nagelvoort, analytical chemist to the pharmaceutical-chemical laboratory of Parke, Davis & Co. Detroit: Geo. S. Davis.

A work like Flückiger's is indispensable to an analytical chemist. It is a laboratory guide and constant companion to anyone who has to deal with alkaloids. The list of drugs

embraces one hundred and fifty-two alkaloids and synthetical compounds and some of their salts. Prof. Flückiger is well known in the pharmaceutical world. His "Reactions" consists of what he modestly terms a series of unpretentious experiments. When these experiments are tested for years by a most careful analytical chemist and arranged in a form easy of reference, they constitute a valuable and trustworthy guide to those who, like Mr. Nagelvoort, are in charge of weighty responsibilities in laboratories where conscientious work is absolutely required, and where carelessness might mean death to some confiding invalid. No attempt is made to give the origin or action of the drugs discussed. The physical and chemical properties alone are given, with clear and full descriptions of the behavior of the drugs to the various reagents.

Materia Medica and Therapeutics for Physicians and Students. By John Biddle, M. D., late professor of materia medica and general therapeutics, Jefferson Medical College, Philadephia. Thirteenth edition. Revised, etc., by Clement Biddle, M. D., U. S. N., with Numerous illustrations. Philadelphia: P. Blakiston, Son & Co., 1895. [New Orleans: Armand Hawkins & Co., 194 Canal street. Price, $4.00.]

The first edition of this work was issued in 1865. Our acquaintance with it dates from the eleventh edition. It is a work of unquestioned merit, and yet it does not seem to be as widely known to the profession in this region as it deserves to be. It contains all that a complete work on materia medica should contain. It is the fruit of the labors of many years as a teacher of materia medica, which has, by means of careful editing, been kept up to the standard of modern requirements. The present edition conforms to the U. S. Pharmacopœia of 1890, and describes all of the remedies mentioned in that work. In addition to the official remedies, the book gives a description of the more important unofficial preparations that have been used with good results.

A number of appendices contain some collateral information, which is valuable, but not usually found in the main body of a work on materia medica. Brief, practical points on diet are given, also, a formulary for hypodermic medication, a posological table, a list of parasites with treatment, and a copious index of diseases and remedies.

Dr. Biddle's work takes rank with other complete works on materia medica. Its popularity rests on its worth.

A. McS.

A Text-Book of Practical Therapeutics, with Special Reference to the Application of Remedial Measures to Disease and Their Employment on a Rational Basis. By Hobart Amory Hare, M. D., B. Sc. Fourth edition, enlarged and thoroughly revised. Philadelphia: Lea Bros. & Co., 1894. [New Orleans: Armand Hawkins & Co., 194 Canal street.]

It is always a source of satisfaction to a physician to know the why and wherefore of any plan of treatment that he may adopt in any given case. The domain of empiricism grows smaller as that of rational therapeutics expands. A clinical fact is always valuable when it is known that the administration of a certain remedy is followed by the relief of certain conditions and symptoms; but the fact does not become less a fact when the physician learns why the relief is afforded. The knowledge of a pure empiricist, while valuable, is crystallized, while that of a rational therapeutic must, from its very nature, always grow and find new applications of well-established truths.

Dr. Hare's work is practical, but in its very practicalness it strives to bring out the bond of union between pathological conditions and the forces or agents that may be used to correct them. The rapid exhaustion of three editions gives evidence that those in search of rational treatment have found what they wanted. This last edition has undergone considerable revision, and contains the substance of medical practice as it existed before serum-therapy bounded to the front. This new branch of medical science is now on trial, and we do not doubt that a future edition of Hare's work will contain the gist of serum-therapy, and be a reflex of contemporaneous medical practice as its predecessors have been.

PUBLICATIONS RECEIVED.

Transactions of the American Dermatological Association, 1894.

Antisepsis and Antiseptics. By Chas. Mi ton Buchanan, M. D.

Twentieth Century Practice. Vols. I and II. Wm. Wood & Co.

A Treatise on Appendicitis. By George A. Fowler, M. D. Philadeldelphia: J. B. Lippincott & Co. [New Orleans: Geo. F. Wharton, 5 Carondelet street.]

Pathology and Treatment of Diseases of the Skin. By Dr. Moriz Kaposi. New York: Wm. Wood & Co.

A System of Surgery. Edited by Frederick S. Dennis, M. D., assisted by John S. Billings, M. D. Philadelphia: Lea Bros. & Co. Vol. I.

Nervous Disease in Early Syphilis. By G. Frank Lydston, M. D. Reprint.

Suggestive Therapeutics in Psychopathea Sexualis. By Dr. A. von Schrenck-Notzing, Munich. Philadelphia: F. A. Davis Co.

Report on Hydrophobia. By Charles W. Dulles, M. D.

Treatment of Hydrophobia. By Charles W. Dulles, M. D.

State News and Medical Items.

MARRIED.

Bailey—Woods.—On Wednesday, May 22, 1895, at the residence of the bride's cousin, Dr. Geo. K. Pratt, Rev. H. H. Waters officiating, Miss Octavia Bailey and Dr. William H. Woods were married.

Dr. Bevery W. Smith, of Franklin, La., was married to Miss Daisy Williams, of Lafourche, April 24, 1895.

Married, at Shreveport, La., April 18, 1895, Dr. J. M. Allen and Miss M. V. Hamilton.

DIED.

Dr. Henry P. Sauvé, aged 62, died last month in this city. The doctor was well known from his connection with the State Board of Health. He was quarantine officer at a number of points in Central and South America at different times.

Dr. Emeric de Nux died at Marksville, La., April 14. He had been in active practice in that town since 1869.

Dr. Robt. L. Luckett, aged 57, died in Rapides parish, April 24. He was a native of that parish, being the son of the late Dr. Leviss Luckett.

At the last annual meeting of the Louisiana State Board of Health the following officers were elected: Chief sanitary inspector, Dr. J. F. Finney; first assistant sanitary inspector, Dr. H. Hayward; second assistant sanitary inspector, Mr. T. C. Will; attorney of board, Judge F. McGloin; shipping inspector, Dr. J. Hope Lamb; chemist, Prof. A. L. Metz; bacteriologist, Dr. P. E. Archinard; coal oil inspector, Dr. P. S. Carrington; physician at Port Eads, Dr. J. N. Thomas; physician at Rigolets station, Dr. W. H. Carson; physician Atchafalaya station, Dr. Geo. H. Douglas.

The following received the degree of Doctors of Medicine at the last commencement of Tulane University: A. C. Achee, J. M. Alford, J. M. Batchelor, J. H. Beavers, A. Beckman,

H. Bergmann, R. E. Bering, U. S. Bird, C. A. Borey, J. H. Boyer, P. U. Brown, C. E. Burns, A. H. Butler, N. Caire, H. E. Cockerham, W. J. Compton, J. W. Cox, A. H. Davidson, R. M. Davis, J. R. M. Dillon, F. C. Eads, W. L. Fisher, R. S. Foster, D. B. Garland, S. J. Gates, A. J. K. Genella, H. B. Gessner, H. R. Gillam, A. Gould, E. Graves, T. H. Hanson, G. A. Hebert, R. N. Hogg, J. M. Hooks, E. L. Houston, J. M. Hubert, J. I. Hunter, J. L. Jeffress, M. W. Johnson, C. E. Kennon, L. Keplinger, A. C. King, M. L. Knight, N. C. Lanier, B. J. Lemoine, J. F. Leseale, C. H. Long, L. Mackechney, H. C. McClenahan, R. L. McNeer, A. Maestri, G. O. Marsh, J. S. Martin, S. F. Mioton, J. D. Moorhead, E. B. Nelson, O. L. Norsworthy, J. P. O'Leary, O. Pabst, J. M. Parrott, E. Paxton, J. S. Pearce, W. T. Pride, A. R. Robertson, G. Rossner, C. Sansing, E. Sauter, J. S. Sharp, F. M. T. Tankersley, C. H. Tebault, Jr., P. T. Thibodaux, P. E. Waddell, T. H. Watkins, R. S. Winn.

The State Medical Association of Mississippi, at its last meeting at Jackson, elected the following officers: President, H. H. Haralson, Forest; first vice president, M. J. Lowry, Meridian; second vice president, R. E. Howard, Durant; secretary, J. R. Tackett, Meridian; assistant secretary, C. H. Trotter, Bogue Chitto. The new Executive Committee is composed of Drs. E. S. Beadles, Water Valley; J. D. Smythe, Greenville; E. C. Coleman, Kosciusko; R. E. Jones, Crystal Springs; W. D. Sims, Meridian; F. B. Nimrock, Laurence; W. D. Eastland, Vicksburg. Committee of Arrangements: Drs. J. H. Purnell, Vicksburg; S. D. Robbins, Vicksburg; W. G. Kiger, Brunswick; H. H. Haralson, Forest; J. R. Tackett, Meridian; E. F. Crowther, Vicksburg; W. D. Eastland, Vicksburg.

Dr. T. S. Scales has resigned from the chair of surgery of the Alabama Medical College.

Dr. D. S. Wier, of Burke, La., has gone to New York to attend a session of the New York Polyclinic.

Dr. A. J. K. Genella, class of '95, Tulane University, has opened an office at 5026 Prytania street.

The *Buffalo Medical and Surgical Journal* will celebrate

its fiftieth birthday by increasing its reading pages from 64 to 80, and other improvements, to keep it abreast of the professional progress of the period.

Drs. Joseph and Ernest Savoy have located at Eunice, La.

Dr. W. J. Hunnicutt, of Rushing's Store, Miss., has moved to Poplarville, same State, where he will practice his profession.

Dr. J. P. Gunby, of Sherman, Tex., has been visiting his old home, Monroe, La., where he practiced medicine at one time.

Dr. Theo. Engelbach, Tulane class of 1894, has gone to Europe with his family for several months.

Dr. G. M. Sternberg, of the United States Army, was here last month on an inspection tour.

At the twenty-ninth annual commencement of the Medical Department of the University of Tennessee there were fifty-nine graduates. This is a smaller number than usual, owing to the adoption of a three-year course.

Dr. H. Bryant has moved from Coushatta to East Point, La.

Dr. T. H. Watkins, who has been at the Touro Infirmary, has gone to Lake Charles and formed a partnership with Dr. J. G. Martin.

Dr. J. A. Abrahams, of Mobile, Ala., has just returned from a six months course in the Post-Graduate School of New York.

Dr. J. H. Williams has moved from Caseyville to Wesson, Miss., where he will practice his profession.

Dr. J. H. Carradin, of Fayette, Miss., was in the city last month. The doctor had been in attendance at the Mississippi State Medical Meeting.

Dr. E. A. Robin, of this city, left for Europe for an extended tour to visit the principal medical centres, where he will devote his attention to the eyes.

Dr. Paxton has located at Arcola, Miss., for the practice of his profession.

In the United States every day 450 people die of consumption.

"Going to a fashionable dentist, eh?" "Yes, to get my tooth pulled. Where are you going?" "Going to a fashionable physician's to get my leg pulled."

THERAPEUTIC SERUMS.

The following is the text of the law in France relating to the preparation, sale and distribution of therapeutic serums and other analogous products, promulgated on the 25th of April last:

Article 1. Attenuated virus, therapeutic serums, modified toxines, and analogous products that may be used for the prophylaxy or therapy of contagious diseases, and injectable substances, of organic origin not defined chemically, that are applied to the treament of temporary or chronic affections, shall not be distributed gratuitously or otherwise, unless their manufacture or place of origin shall have been the object of an authorization of the government, given with the sanction of the Consulting Committee of Hygiene of France and of the Academy of Medicine. Such authorization shall be temporary and revocable. The said products shall be submited to the inspection of a commission appointed by a competent Minister.

Art. 2. These products shall be delivered to the public by a pharmacist upon medical prescription. Each bottle or receptacle shall bear the mark of its place of origin, and the date of its manufacture. In urgent cases physicians are authorized to furnish their patients with the said products. When the said products are destined to be delivered gratuitously to the poor, the vials containing these products shall bear, stamped upon the glass, the words: "Public Assistance, Free." They may then be deposited, under the control of a physician, at such public establishments as may be authorized by the administration to procure these products direct. The foregoing provisions shall not apply to Jennerian vaccine, either human or animal.

Art. 3. The sale and distribution of the substances mentioned in Art. 1 shall be regulated by and come within the provisions of Art. 423 of the Penal Code and of the law of 27th of March, 1871. Any fraud as to the nature of the said substances, knowing them to be falsified or adulterated, or any fraud or attempt at fraud in regard to the quality of the article delivered will be punishable in accordance with the provisions of Art. 423 of the Penal Code and of the law of the 27th of March, 1871.

Art. 4. Any infraction of the present law will be punished with a fine of from 16 to 1000 francs.

MORTUARY REPORT OF NEW ORLEANS.

For April, 1895.

CAUSE.	*White*	*Colored*	*Male*	*Female*	*Adults*	*Children.*	*Total*
Fever, Yellow							
" Malarial (unclassified)	1	4	1	4	2	3	5
" Intermittent		1	1		1		1
" Remittent	1	3	2	2	2	2	4
" Congestive	2		1	1	1	1	2
" Typho	3		2	1	3		3
" Typhoid or Enteric	4	1	1	4	3	2	5
" Puerperal		1		1	1		1
Influenza	4			4	4		4
Small-pox		1	1		1		1
Measles	2	1	1	2		3	3
Diphtheria	8		7	1		8	8
Whooping Cough	2			2		2	2
Meningitis	6	3	7	2	2	7	9
Pneumonia	22	39	39	22	45	16	61
Bronchitis	12	7	8	11	10	9	19
Consumption	31	37	36	32	63	5	68
Cancer	10	5	4	11	14	1	15
Congestion of Brain	2	4	1	5	4	2	6
Bright's Disease (Nephritis)	22	7	15	14	29		29
Diarrhœa (Enteritis)	18	13	19	12	13	18	31
Cholera Infantum	10	4	11	3		14	14
Dysentery		2	2		1	1	2
Debility, General	2		1	1	2		2
" Senile	5	7	4	8	12		12
" Infantile	2	2		4		4	4
All other causes	177	90	154	113	181	86	267
TOTAL	346	232	318	260	294	184	578

Still-born Children—White, ...; colored, ...; total, ...

Population of City—White, 195,000; colored, 80,000; total, 275,000.

Death Rate per 1000 per annum for month—White, 21.23; colored, 34.67; total, 25.18.

L. F. FINNEY, M. D.,
Chief Sanitary Inspector.

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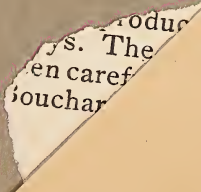

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