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CANADA

MEDICAL RECORD

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VOL. XXIV.

OCTOBER, 1895.

No. 1.

Original Communications.

NOTES ON THREE SEPTIC CASES.

By FRANK R. ENGLAND, M.D.,

Prof. of Surgery Bishop's University, Montreal ; Surgeon Western Hospital, Montreal.

It has often been noted by medical men, that other than the acute infectious diseases occur from time to time in their practice in endemic form. The busy obstetrician knows well from experience that when his night bell once begins to ring, it seems to become animated, and little rest or sleep is he able to obtain day or night for a week or more until certain "lunar changes" come to his relief, and check for a time further increase in the population of the community.

It is also the experience of many that other diseases, such as cases of appendicitis and various septic conditions, are wont to

appear in batches. This tendency to grouping of medical cases we are apt to look upon as purely accidental, for one often has a like experience in cases of injury. A physician doing a large general practice may pass a number of years without meeting some particular accident, say dislocation of the shoulder, then a number of such cases will occur within a comparatively short time. It is not my intention to bring forward any theory or explanation of these periodic blessings and misfortunes.

I am content to recognize them, and will be satisfied to narrate briefly a group of three septic cases which came under my care about the same time during the early summer. These cases were dissimilar both in ætiology and clinical history.

Each presents some particular interest, and when studied together they are instructive. They show how septic material when introduced into the system may produce symptoms both local and constitutional entirely different.

The severity of the symptoms in a given case it would seem depends upon the quantity of poison entering the system, its virulence, and the resistance offered by the individual.

Case I.—Miss Y., aged 22 years, a well developed and healthy young woman (brunette), with a good personal and family history, received a small abrasion on the heel from wearing a tightly fitting boot. This was followed in six days by swelling, pain, tenderness and redness of the leg. The cutaneous blush was diffuse, extending 3 or 4 inches above the external malleolus, and not spreading up the limb in streaks as one sees in lymphangitis. The constitutional symptoms were slight, temp. 101, pulse 90. Rest in bed for a few days and the application of a lead and opium lotion caused the redness to disappear, but the swelling persisted, and slight tenderness could be elicited on deep pressure for some distance above the ankle.

The temperature though normal in the morning would rise two or three degrees in the evening, and the pulse was correspondingly quickened. An incision made just external to the tibia at about the middle third of the leg allowed a small quantity of pus to escape, which for a time caused the local symptoms to improve.

The evening temperature continued to rise two or three degrees above the normal. The calf of the leg feeling firmer and the limb being much larger than the other one, at the end of a

week an anæsthetic was administered, and upon cutting deeply, a surprisingly large collection of pus was found burrowing between the muscles, and extending from a couple of inches above the ankle to the popliteal space. A number of incisions were made, and connected with tubing for irrigation and thorough drainage. Recovery was rapid and complete.

Case II.—J. S., aged 28 years, of a nervous temperament, and one whose resisting powers were not great. Family history of no special interest. Four years ago he had an attack of pleurisy, from which the recovery was slow.

On April 28th, when I was sent for, he was suffering from a septic lymphangitis, following an abrasion over the shin, caused by striking the leg against a step ladder.

The superficial lymphatics running up the front and inner side of the thigh to the inguinal glands were red and extremely tender on pressure. There had been a rigor, and his temperature was 103° F., pulse 120, and much prostration.

The abrasion was about the size of a five cent piece, and its base was covered with a grayish slough; to the sore a hot antiseptic fomentation of Hg cl_2 1—2000 was applied, also a lead and opium lotion over the inflamed lymphatics.

The lymphangitis for a time seemed to be less acute, but the abrasion continued unhealthy and a little pus collected around the sloughing base. The constitutional symptoms increased in severity, the temperature reaching $104\frac{1}{2}^{\circ}$ F. on the fourth day, when, in addition to the lymphangitis, an erysipelatous inflammation appeared extending down the leg.

At the end of the second week of illness, as the erysipelas disappeared, small subcutaneous collections of pus developed. Numerous and repeated incisions from the dorsum of the foot to the original infecting focus were made; and later on, at the end of the third week, it was necessary to evacuate pus which had formed at different points in the superficial lymphatic vessels about the knee and inner side of the thigh. The highest incision was only a couple of inches below the saphenous opening.

The local and constitutional symptoms throughout were severe. The infective process spread not only downwards, involving the skin as an erysipelas, but also upwards along the lymphatics.

The patient towards the end became pale, weak and greatly emaciated, and for a time his condition was so grave as to make his recovery doubtful.

Eventually he did well, but convalescence was slow. In conclusion I may add that Dr. James Bell saw the case in consultation on the fourth day and considered it one of erysipelas. Dr. Bruère, Professor of Physiology at Bishop's College, kindly examined a specimen of pus from an inflamed lymphatic, and obtained a pure culture of the streptococcus pyogenes. He was not prepared to say that it was the specific organism of erysipelas (the streptococcus erysipelatosus).

Case III.—H. M., aged 10 years, was brought to my office on the 15th May, complaining of pain in the left ear, which had been present with varying intensity for a week. Upon examination nothing abnormal was found, and her hearing was perfect and equally acute in both ears. The mouth upon examination revealed three or four badly decayed teeth, though none seemed to be specially sensitive or painful.

Two days later while at school, at 11 o'clock in the morning, the little girl was seized with a violent rigor, lasting fully half an hour, after which the temperature rose to 104° F., and the pulse was very rapid. During the following two days the symptoms improved, and on the afternoon of the 19th the temp. and pulse were normal. The little one seemed weak, so a tonic, containing quinine and iron, was prescribed, and permission was given to allow her up on the following day. At 9 o'clock in the morning, May 20th, she was again seized with another rigor of great severity, which was followed by high fever and sweating.

May 21st. Looking weak, but temperature and pulse falling, and not much above the normal. Examination of the heart, lungs and digestive tract negative. The ears appear normal, and hearing is good; no pain has been felt in them for some days.

May 22nd. Patient passed a good day, and was thought to be convalescent until 6.30 p.m., when the third rigor occurred.

May 23rd. Ears and eyes were examined by Dr. Proudfoot, and pronounced normal; temperature 99.3, pulse 108.

May 24th. Rigor at 4.30 a.m. and a slight chill at 11 p.m.

May 25th. Patient is unable to move the right wrist joint, and it is swollen and painful; other symptoms slightly improved.

May 27th. Rigor at 8 a.m., which came on suddenly without warning, and was so violent as to alarm her parents and make them feel that she would die before medical aid could reach the house.

Recurring chills coming on without regularity, followed by high fever, sweating and prostration, together with the development of an arthritis of the wrist joint, all pointed to a pyæmic condition. From the improvement in the patient's condition, following the rigors, it would seem that the sepsis was either mild, or only a very small quantity was entering the system. Careful examination failing to reveal any infecting focus, and recollecting the earache from which the child had suffered for days before I was consulted, my attention was again directed to the carious teeth, and though no suppuration or special tenderness could be detected about the gums, it seemed not only possible but probable that they were the source of infection. My friend Dr. Hutchison saw the case, and shared in my opinion. Under an anæsthetic, the teeth were extracted, and pronounced by W. J. Giles, D.D.S., to be in a septic state ; no actual pus was noticed, but the tooth pulp was dead, and septic matter could pass directly from the pulp through the small foramen, at the extremity of the fang into the general circulation. After the teeth were extracted no more rigors occurred, the inflammation of the wrist joint slowly subsided without pus formation, and recovery was uninterrupted.

To conclude, the points of interest to be noted in the above cases are in brief as follows :—

Case I.—How from a slight abrasion septic matter may be carried by the lymphatics to the deeper structures of a limb, resulting in abundant pus formation with comparatively slight constitutional and local symptoms.

Case II.—How from a slight abrasion septic matter may, in a given case, be carried quickly along the superficial lymphatics to distant parts, setting up a septic lymphangitis, and at the same time the septic process may spread in an opposite direction in the skin, as an erysipelas. Whether the specific inflammation of the skin and the septic lymphangitis present at the same time in this case were due to the same micro-organism or not, cannot be definitely answered.

Was there in this case a mixed infection ; or would the same streptococcus multiplying in the lymphatic vessels produce a lym-

phangitis, and when present in the skin cause erysipelas? Bacteriologists differ in opinion on this question. Some consider erysipelas to be essentially a specific disease, involving the skin and mucous membranes, and due to the presence of a pathogenic organism, which is not pyogenic. Senn, in his book on the Principles of Surgery, page 370, says: "The surgeon will do well to adhere to the teachings of Fehleisen, who is positive in his assertion that the streptococcus of erysipelas never produces suppuration." He holds that when an abscess occurs during or soon after an attack of erysipelas, it is not due to the erysipelatos but to a mixed infection.

Other equally reliable authorities take a wider view, believing that the same organism may produce an erysipelas in one case, and a lymphangitis, a septicæmia, or a pyæmia in another.

This latter view is certainly rational, and is borne out by clinical experience.

Case III.—How a general septic infection of a grave nature may occur from an obscure and apparently trivial cause, and how, when the source of infection can be discovered and removed, alarming symptoms may disappear.

SUDDEN DEATH FROM A RARE CAUSE.

By ROBERT MARKS, M.D.,
Coroner for the County of Carleton, Ottawa.

TO THE MEMBERS OF MEDICAL DIVISION NO. 17 OF ONTARIO
ASSEMBLED IN OTTAWA THIS 3RD DAY OF JULY, 1895.

As our President, Dr. Rogers, asked me to present anything of interest to this meeting that had recently come under my observation, I beg to state that in April I presented a specimen at a meeting of the Ottawa Clinical Society, at which meeting said Society was favored with the presence of members of the Ottawa Medical Society, and it seemed to be the opinion of that united meeting of Medical men of Ottawa, that a similar case was not to be found recorded in our medical standard works, or in other medical literature.

Case.—On April 14, 1895, Mrs. E. M——, mother of Mrs. E. L——, swore before me, as coroner for Carleton, that her daughter, Mrs. E. L——, had died from causes unknown to her,

her death was *so sudden* ; she was well at 4 p.m., and dead at 8 p.m. ; she was 28 years of age, married 2 years, never had been a mother, was expecting to be confined in about one month.

The corpse was in appearance that of a woman eight months pregnant. A post-mortem was made by Drs. I. G. Scott and R. P. Robinson.

The sworn testimony of Dr. Scott was as follows :—

“The body is that of a female of about 35 to 38 years of age, of medium height, and very stout ; the mucous membranes were very pale, indicating want of blood ; no external marks of violence were visible.

“On opening the skull, the brain was found normal.

“On opening the abdomen, a very large quantity of liquid blood escaped, and a very large clot of blood was found. On examining the uterus, a foetus of about eight months was present. At the upper part of the womb, two ulcerations, larger than a 10 cent piece, were found penetrating through its walls, and extending into the placenta ; several other ulcerations were present, but not penetrating ; the uterus was soft and friable.

“Death was due to internal hemorrhage from the placenta, caused by penetrating ulcers in the uterus.

“Signed, “I. G. SCOTT, M.D.”

Dr. R. P. Robinson testified at the same inquest, “that the body was that of a woman of about 35 years, apparently well nourished, having a sallow and anæmic appearance.

“The brain was normal, the womb was that of a pregnant woman within about six weeks of her confinement, and here was found the immediate cause of death. The walls of the uterus were thin, on the surface ulcerations,—two of which penetrated into the placenta, which allowed the woman’s blood to escape into the main cavity of the abdomen, where a large clot had formed in said cavity ; there was a large quantity of bloody fluid.

“The immediate cause of death was internal hemorrhage.

“Signed, “R. P. ROBINSON, M.D.”

This case being a very *rare* one, I submitted the specimen for the inspection of the members.

OTTAWA, September 26, 1895.

Selected Articles.

RADICAL CURE OF INGUINAL AND FEMORAL HERNIA.*

By WILLIAM L. RODMAN, A.M., M.D.,
LOUISVILLE, KY.

I shall not spend any of my limited time in discussing the propriety of radical cure operations, as I consider that question settled. Five years ago there was room for honest doubts, and the writer candidly admits that he shared them, as to whether herniotomy should be done except in conditions of strangulation. New methods carried out in a thoroughly aseptic way now yield results quite as good as follow other well-established and unquestioned surgical procedures. The term "radical cure" has led many surgeons to expect permanent relief in every case operated upon, a position which is unfair and not true of other operative measures in surgery.

I shall endeavor to prove that herniotomy is less dangerous than any of the major operations, and followed by lasting results which compare favorably with the best of them. What more can be reasonably asked or expected? The question, then, is not whether we should operate at all, but when to do so, and what method to choose.

At the present day surgeons are more optimistic than they have ever been, and are doing a far greater number of herniotomies than was ever known in the world's history. The limits of the operation, therefore, are becoming enlarged rather than restricted. Cases which were formerly considered inoperable and treated by mechanical means are now promptly submitted to the knife as yielding better and quicker results. Surgeons agree in the main as to the conditions requiring a radical operation.

First. An operation for the relief of a strangulated hernia should, whenever practicable, be supplemented by a radical cure.

*Read at the June meeting of the Kentucky State Medical Society, 1895.

The latter lessens rather than increases the danger, by shutting off the peritoneal cavity from a wound which may and oftentimes does become infected. When shock is great, as a result of strangulation and the measures undertaken for its relief, it is well to postpone a radical operation until a later period, when the question can be taken up *de novo* and decided upon its merits.

Second. Irreducible herniæ so generally cause pain and gastrointestinal symptoms, besides being more likely to be followed by obstruction, inflammation, and strangulation, that as a class they should be subjected to a radical cure. Another danger—rupture of the sac or bowel as the result of external violence—is a perpetual menace in such cases, and should be taken into consideration in deciding for or against a radical cure.

The writer has recently placed upon record an interesting case of this kind. The bowel was ruptured by a kick from a horse ; an artificial anus was established spontaneously, and the patient made a satisfactory recovery.

Very large and old irreducible herniæ, where there is every reason to suspect numerous and dense adhesions, should, when occurring in elderly subjects, be let alone.

The last patient I operated upon was a man thirty-five years of age, the subject of a large irreducible hernia which began in childhood. It became strangulated. The size of the hernia, the number and denseness of the adhesions necessitated a prolonged operation. He bore it well, however, and recovered without a bad symptom.

Third. Herniæ accompanied with reducible hydrocele should be subjected to a radical cure. The cases will usually be found in early childhood, but I recently saw and operated upon such a case in a young man twenty-two years of age living in Larue County. Trusses and injections had failed to cure both the hernia and hydrocele.

The three classes already mentioned, without there be good contra-indications, demand a radical cure.

We shall now consider what is to be done in a much larger and therefore more important class of cases, ordinary reducible herniæ. Here many things are to be considered. Age, occupation, position, general health, etc., are all important points. Children will of course be usually treated, and successfully so, by a suitable truss. I wish, however, to state that an impression, more or less

generally shared by the profession and by some high in authority, viz., that children under ten years of age are invariably cured by a truss, is entirely incorrect.

Recent statistics taken from the largest hernia clinic known, the London Truss Society, show that, according to Macready, more than one-third of such cases are uncured by mechanical means.

The results obtained at the Hospital for the Ruptured and Crippled in New York are no better, according to Dr. Coley, who is connected with this institution. Femoral herniæ are infrequently cured by a truss, but, as we shall see later on, give better operative results than other forms of herniæ. Girls, of course, are more likely to be cured of inguinal hernia than boys. A truss cure of either variety of hernia in either sex after thirty years of age is accidental and not to be expected. Advanced age, as a rule, is a sufficient contra-indication to a radical cure, if the hernia can be reasonably well retained by means of a truss. I wish to say, however, that herniotomies in elderly subjects do better than many believe. Occupation and position in life have, in my judgment, much to do with a decision as to whether or not we should operate. The laboring man, accustomed to lifting heavy weights and the like, and who at the same time is either unable to provide himself with suitable trusses, or fails to do so through indifference, is a proper subject for radical cure, and should always be so advised. The merchant or the professional man who takes no violent exercise, and who will as a rule appreciate the necessity of wearing a truss day and night, may properly decline a radical cure as long as his hernia is perfectly retained by mechanical means. If, however, he be fond of athletics, bicycling, shooting, and such out-door sports, he will act wisely in my opinion should he choose a radical operation.

Hernia unfits one for entrance into a public service, as the army and navy, and, wishing to do so, the trifling risk of a radical cure may be properly advised. Of all general contra-indications to operative measures in hernia, none are more potent than damaged kidneys. To examine the urine in every case before operating is an imperative duty.

Having briefly outlined the indications for operation, we now turn to the methods to be chosen. It is needless to say that a description of all the methods would be impracticable in a short

paper. The three operations having the greatest popularity at the present time are in the order named. (1) Bassini's ; (2) Halsted's ; (3) Macewen's.

Bassini's method is by far the most generally practised, though it has been somewhat modified by different surgeons. His operation for inguinal hernia is done as follows : An incision is made parallel to and one-half inch above Poupart's ligament, and should extend from the external abdominal ring to near the anterior superior spinous process of the ilium. It should embrace the tissues down to the aponeurosis of the external oblique muscle. After freeing the sac and cord from the external ring, a grooved director is inserted into the inguinal canal, and the aponeurosis of the external oblique divided well up to and beyond the internal ring. The edges of the aponeurosis are dissected away from the tissues beneath in a direction above and below, above as far as the rectus, below to the deep shelving of Poupart's ligament. This having been done and the edges held up with forceps, it now becomes necessary to isolate by a blunt dissection the sac and cord *en masse* from the surrounding tissues, then to separate them one from the other. The ease with which this step of the operation is done varies in different cases. When the cord has been carefully separated from the sac, it should be held out of the way by a hook, or better, by a loop of gauze. The sac should then be ligated high up, so as to bring it when amputated flush with the peritoneum. Buried interrupted sutures, usually four or five in number, are now introduced. They include the internal oblique transversalis muscle and fascia, and in some cases the rectus above, which are sewn to the deep shelving of Poupart's ligament below. In this step of his operation Bassini uses silk, but in this country kangaroo tendon is preferred, owing to the brilliant results secured by Dr. W. B. Coley, of New York, who in using it in one hundred and eighty cases secured primary union in one hundred and seventy-four of them. It certainly buries better than silk, silk-worm gut, and silver wire, and, besides, is a sufficiently abiding material, requiring ninety days for its complete resorption, as shown by the experiments of Ballance and Edmunds. The next step of the operation is to place the cord in its new position and to suture the severed end of the aponeurosis of the external oblique over it with a continued suture of kangaroo tendon, being

careful of course not to constrict the cord. It only remains to suture the skin; no drainage should be made.

In suturing the internal oblique and transversalis to the shelving of Poupart's ligament, it would not be difficult to injure the femoral vein. To remember this is the best guarantee against accident.

Dr. Dawbarn, of New York City, makes quite a material modification of Bassini's operation in transplanting the testicle from the scrotum to a point just inside the internal ring behind the peritoneum. It is quite easily done, so he tells me, and I must say that theoretically it seems to me most worthy of a fair trial. I mean to follow his method in my next case. The cord is gently wrapped around the testicle, and it is transferred to its new position. Some have suggested transplanting the testis to the abdominal cavity, but experiments on the lower animals have shown that the organ soon atrophies, due, so it is said, to the digestive action of the peritoneal fluid. The problem has ever been to get rid of the testicle and cord as factors in causing a recurrence of the hernia. It is well known that castration was frequently practised in early operations for the radical cure of hernia, and was carried on to such an extent that it was positively forbidden by the State. If the testicle can be transplanted and its functions preserved, it is certainly a "consummation most devoutly to be wished."

Halsted's Operation. This is preferred by many to the method of Bassini. The two operations differ only in two essential features; the chief difference is in the fact that Halsted removes the veins of the cord where they are in the least enlarged, which will be, according to a recent statement of his, in seventy-five per cent. of all cases. In the last few days he has cautioned surgeons against the too free incision of the veins on account of the atrophy of the testicle which results in a certain percentage of cases. The next material difference consists in the cord being placed superficial to the aponeurosis of the external oblique muscle, and being covered only by the skin and cellular tissue. The suturing is done with buried silver wire. It remains to be seen whether he will have better success with the wire suture than Schedo, Banks, Ball, and others, who have given it up on account of the trouble which it caused. It seems to me that the chief objection to Halsted's operation is that he does not construct a new oblique canal for the

cord. Still, his operation has given the most satisfactory results in his own hands, and is thought by McBurney and others to be the best we have.

Macewen's Operation, for a time the most popular of all, and even yet having its advocates, consists in invaginating the sac, plaiting it into folds, and anchoring it at the internal ring, making a living stopper, as it is called. The conjoined tendon is then sewed to Poupart's ligament. The fault of this operation, as I see it, is that catgut, which is used as suture material, is not sufficiently abiding even when chromotized to insure union between muscular and tendinous structures. Substitute for the gut kangaroo tendon, and I believe that a step will have been gained.

We now come to the kernel of the subject, the danger and ultimate results of radical cure operations. Considering statistics made during the last five years only, we find an astonishingly small fatality following this operation. Bassini reports five hundred and sixty successive cases of his operation without a death; Marcy did over two hundred with no mortality; Macewen eighty-one without death; and Coley did two hundred with one death, and this due to double pneumonia on the eighth day, the result of ether.

Think of it, one thousand and forty-one radical cure operations with one death! The mortality of amputating the distal phalanx of the little finger would be as great.

To go back a little further, when asepsis was not usually so well understood and secured as now, and we find the mortality to have been rather less than one per cent. in over three thousand cases reported in Marcy's magnificent work on hernia, published in 1892. These cases were collected from the practice of forty-three different surgeons all over the world. Further, nearly all the deaths were accidental and in no way due to the wound.

Surely no one is justified in advising against an operation the mortality of which is at most one per cent., when the risks of an ordinary reducible hernia are certainly several times as great.

Do radical operations cure sufficiently often to justify the patient in assuming the slight danger, loss of time, and expense incident thereto? Bassini reported 560 cases with 15 relapses, less than 3 per cent. Halsted 180 cases with 3 relapses, 1.6 per cent. Marcy reported 133 cases of his own which have been kept under observation, one-third of them for ten years, with 6 relapses,

or about 4.5 per cent. Coley has recently reported his results in 160 Bassini operations, and there has not been a single relapse as yet, and only six cases were untraced.

You may say that I have selected the statistics of those who have had the best results up to date. True; as I believe in having constantly before us the highest standards in order that we may either reach or come so near to them as not to be ashamed of our own results.

My experience with radical cure operations has been rather limited, as I only began doing them twenty-eight months ago. My records show that out of thirteen radical cures all promptly recovered. Each case has been carefully followed, and there has been no relapse up to the present time. Of the series, ten were inguinal and three femoral herniæ. I prefer Bassini's method, now that I understand it. My first operations were done after Kocher's plan.

Only a few words as to femoral herniæ. Practically all should be operated upon, as trusses do little good, and radical cure operations are even more uniformly successful than in inguinal herniæ. High ligation of the sac is perhaps all that is necessary, as it has not been shown that sewing up the saphenous opening improves the chances of a radical cure. This is what we might expect from an anatomical standpoint. The radical cure of hernia by injections should hardly be dignified by mention of it. Still we must admit that cures are sometimes obtained by injecting hernial sacs with various substances. This plan of treatment is now happily largely relegated to quacks and empirics. That it is uncertain, painful, most dangerous and unscientific none will deny.—*American Practitioner and News*, September, 1895.

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.,

Associate Professor of Medicine and Neurology University of Bishops College,
Physician Western Hospital.

TREATMENT OF TYPHOID FEVER BY GUAIACOL.

A. P. HULL, M.D.,

MONTGOMERY, PA., in Therapeutic Gazette, August, 1895.

He treats typhoid fever with guaiacol internally and externally, and occasionally $\frac{1}{10}$ gr. calomel three or four times daily until slight purgation occurs, washing out the bowel with large douches of warm soapy water, or if the fever is high, cool water. Guaiacol is given in $\frac{1}{2}$ to $1\frac{1}{2}$ drop doses every two hours, according to the tolerance of the patient for the drug.

The temperature was controlled by the external application of guaiacol and cold sponging. The external application of guaiacol will lower the temperature in about thirty minutes, and is preferable to the cold bath, as it is equally efficacious and can be applied where the latter is not practicable. The effects will last from three to four hours, but the amount should be small at first (from 5 to 10 drops), and gradually increased, as it is liable to give the patient a chill. The largest dose used at any one time was 20 drops. As in the case of any other drug, one person may require more than another, but patients become susceptible to its influence and the effects are greater with each application.

Outside of the chills, which occurred with the larger applications, I observed no deleterious effects from its use. The chills can be avoided by a careful application of the drug, the temperature not being reduced below 100° F. The drug was applied over the abdomen, which was first washed with soap and water, and dried.

The guaiacol was then slowly dropped on the parts, carefully rubbed in, and covered with oiled silk.

The shortest duration of any one of the nineteen cases treated was fourteen days, the longest twenty-four, and the average between nineteen and twenty days.

That typhoid fever is caused by a specific germ—the bacillus typhosus—is now admitted, though their presence is sometimes hard to prove. The activity and life of this bacillus end at the latter part of the second week from the initial symptoms of the disease; but about this time the necrotic and sloughing process of the mucous membrane and Peyer's glands takes place, leaving what is equivalent to an open wound in the intestinal tract.

From this time on the symptoms are kept up by putrefactive bacteria, especially the bacillus coli communis, which becomes virulent during the later stages of the disease.

We cannot put each one of the open wounds in an aseptic condition, as a surgeon would do, but we can, I think, make the intestinal tract less habitable for micro-organisms, and the clinical history of these cases seems to me to prove the antifermentative action of guaiacol and other antiseptics in the intestines.

The phenol group undoubtedly occupy the first rank as germ destroyers and germ poison neutralizers outside of the body, and during absorption, as they are never found free in the blood, and combine with albuminous substances, especially with the most reactive of these, the toxic albumins, the products of microbic life, forming compounds, probably non-toxic. They undergo rapid oxidation in the system, and can be found in the urine. They, therefore, would not only destroy the disease germ in the intestinal tract, but would affect a rapid elimination of the toxic albumins from the system.

From my observations in these cases the following conclusions seem justified:

1. That the antiseptic treatment of typhoid fever is a rational treatment.

2. That guaiacol is a safe remedy in typhoid fever, and prevents the toxin poisoning of the later stages due to the bacillus coli communis and other putrefactive germs in the intestine.

3. That guaiacol will lower the temperature in typhoid fever, when applied externally, and, with ordinary care, can be used with safety.

4. That typhoid patients do better by keeping the bowels acting up to a certain point, rather than checking them, and will derive comfort and benefit from daily douching of the large intestine with warm or cool water.

SYMPTOMS OF RHEUMATISM IN THE ANKLES,
WHICH POINT TO CANCER OF UTERUS.

In the *Charlotte Medical Journal*, September number, Dr. Engel draws attention to a symptom the import of which has not generally been recognized. In the cases he has met with, the patients, who were females, about the climacteric period complained of a painful affection of the feet, in which there was a constant and annoying sensation of tingling and pain, which was felt mainly in and about the ankles and resembled acute rheumatism; the joint was slightly swollen; no other evidence of disturbed sensation or motion existed, and no other symptoms other than some malaise and a mild hæmorrhoidal condition were present.

Such cases would most likely be treated for rheumatism, but certainly would not be benefited in the least by such treatment, no matter how long continued, for he states that, in his experience, these symptoms, where there is loss of weight and the least impression of a cachexia, generally indicate cancer of the uterus, especially where the bladder, rectum and broad ligaments are matted together and the neoplasm extends in a posterior direction, when these symptoms in the feet are among the earliest. Hence recognition of their bearing becomes important, as the serious malady they point to might be earlier recognized, and by radical operative interference life be saved.

THE MEANING AND IMPORT OF CASTS IN THE
URINE WITHOUT ALBUMIN.

By Dr. LUDWIG BREMER,
OF ST. LOUIS.

A person who constantly or periodically passes urine containing casts, even without albumin, or perhaps with albumin in chemically demonstrable quantity, is not in good health. Such a person has a damaged constitution; his kidneys are, to say the least, vulnerable, and he is prone to contract and to succumb to other

diseases. The irritative process which gives rise to the formation of casts may not amount to an actual state of inflammation, and there may not be the recognized signs of fully developed kidney-disease, and yet the subjective symptoms may be very pronounced. These symptoms are often unaccountable to the attending physician because sufficient importance is not attached to the presence of casts in the urine of such persons. In a number of cases periodic, intermittent albuminuria is the feature, and the albumin is in evidence only when a nerve storm of unusual severity has set in. Such patients may be considered to have vulnerable kidneys. For a long time such patients may not present any albuminuria, the casts only being demonstrable, or even these may disappear, and the urine be absolutely normal, yet there is a dormant pathological condition which may be aggravated into activity. The diagnosis of vulnerable kidney may be doubted by other physicians. Aside from examinations which are based on chemical analysis exclusively, there are several reasons why the search for casts may be negative: first, microscopical incompetency; second, the kidney trouble may have become latent and the casts may be really absent; third, insufficient instrumental equipment,—the centrifuge should always be used; fourth, the examiner, even if he find casts, may not attach any importance to them if unaccompanied by albuminuria. Among other reasons why the presence of casts in the urine is alleged to be compatible with perfect health is the finding of them in the urine of athletes after great muscular exertion. The athletes presenting this condition were certainly damaged men. The symptoms produced by this vulnerable kidney range over the neuroses, particularly neurasthenia, inexplicable gastro-intestinal manifestations, and grippe symptoms, megrim, and other forms of periodic headache.—*Medical Review.*

GUAIACOL AS A LOCAL ANÆSTHETIC.

At a recent meeting of the *Académie de Médecine*, a report of which appears in the *Mercredi Médical* for July 31st, M. Championnière related the case of a druggist who had burned his hand during a manipulation. He had at once applied a solution of guaiacol, and immediate relief had followed. This fact had led the author to make a trial of this agent to produce local anæsthesia with interstitial injections of a one-in-ten or a one-in-twenty solution.

A Pravaz syringeful of a one-in-ten solution could easily be injected without causing toxic symptoms. The first trials had been made in dental surgery, and the results had been very satisfactory. In general surgery no extensive operations had been performed, but ablation of lupus of the scalp had been done after injections of guaiacol, and the patients had felt no pain. The action of guaiacol, said M. Championnière, was more slowly produced, and subsided more gradually than that of cocaine. Its application to small abscesses had also given favorable results. It could be introduced into the system in rather large doses, without causing any inconvenience; it was perfectly tolerated, and the only symptom that had been observed was a slight local sphacelus near the gums. Three-quarters of a grain of guaiacol in a one-in-twenty solution seemed to be sufficient; it was probable, however, that as much as fifteen grains could be injected without danger.

M. Magitot did not share M. Championnière's opinion regarding the value of guaiacol as a local anæsthetic. M. Ferrand stated that he had frequently employed guaiacol, not by subcutaneous injections, but by thermic applications, and he had found, as a result of these applications with scarcely more than a cubic centimetre of the drug, a rather marked hypothermia and a veritable syncope. These applications had then, he said, produced a valuable anæsthesia, but at the same time symptoms that could not exist without danger. M. Laborde thought that guaiacol was an anæsthetic as well as a hypothermic, and even a very active antithermic. It was, he said, essentially a vaso-constrictor, and, for this reason, dangerous.

M. Ferrand said that he had seen accidents produced with a cubic centimetre of guaiacol. He had employed only from three-quarters of a gram to a gram and a half. With regard to the eschars, they had not been numerous and had always been very limited. He thought the foregoing facts were very interesting and encouraging, and that investigations in regard to this subject should be continued.—*N. Y. Med. Journal.*

Dr. F. J. Smith, Somerville, Mass., in *Medical Record*, states that almost instant relief is given in hay fever by the application of the following ointment on cotton with a tooth pick:—

R. Mentholis, grs. xx; Olei amygdulcis, ʒii; Acidi Carbolici, ʒx; Cocain hydrochlor, grs vi; Ung. zinci oxidi, ʒ ss.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, April 19th, 1895.

G. P. GIRDWOOD, M.D., PRESIDENT, IN THE CHAIR.

CYSTIC FIBROMA OF THE RIGHT ILIAC FOSSA.

Dr. J. G. Adami exhibited the specimen, which he described as follows :

The tumor, a fibro-sarcoma lymphangiectodes (areolar fibro-sarcoma) of the fascia over the iliacus muscle, is the size of a grape fruit—roughly after hardening $4\frac{1}{2} \times 3 \times 2\frac{1}{2}$ —possesses a well defined and fairly thick capsule, and upon section presents numerous cavities of various sizes, so that on first removal it had in part a honey-combed appearance. When fresh, these cavities were in the main filled with a straw-colored, thin, transparent fluid. This has become coagulated in the process of hardening, and is recognizable as a yellow gelatinous substance. In some of the cavities there was more or less shrunken white clot; added to this, the cut surface was mottled, and presented darker areas of various sizes where there had been hemorrhage into the tissue of the tumor.

The stroma in between these cavities and hemorrhages had a white fibrous appearance, and was fairly firm. Examined microscopically, the tumor showed itself to be a fibro-sarcoma lymphangiectodes. The capsule was formed of well-developed old fibrous tissue of a laminated type. This merged insensibly into more fasciculated and more cellular fibrous tissue, the strands of which were in part so cellular as only to be so described as fibro-sarcoma, or indeed as spindle-celled sarcoma. In other regions there was mucoid infiltration, in others, following probably upon the hemorrhages, the tissues were disorganized and necrosed. The numerous spaces filled with fluid and white thrombi were clearly dilated lymph channels; they possessed well-defined edges and a distinct lining of flattened endothelium.

We have, therefore, to deal with an aberrant fibroma—aberrant

in position and in structure. It closely resembles in every appearance the fibroma lymphangiectodes of the uterus, and I should like to ask Dr. Gardner if there is the slightest possibility of this being a transplanted pedunculated sub-serous uterine fibroma. Dr. Wm. Gardner said that the tumor had grown very gradually and slowly. He had seen the patient six years before, and the tumor had not increased very materially in that time. It lay in the right iliac fossa with the iliac vessels on the inner side, and was intimately connected with the iliacus muscle, some strands of which were adherent to the mass. The general health of the patient had been unaffected, the only symptoms were those due to pressure upon the anterior crural and genito-crural nerves. The recovery after operation was uneventful.

MYXO-SARCOMA OF THE OVARY.

Dr. C. F. Martin, after exhibiting the specimen, described it as a large, heavy, irregularly oval encapsulated tumor weighing 13 lbs. 5½ oz. In length it measured 28 cm. The circumference was roughly about 85 cm. The tumor was of fairly firm consistence, though certain areas were softened through degenerative changes.

The surface of the growth was of a reddish drab color, intermingled with patches of a darker, more bluish tint, these latter corresponding to the degenerated portions. Large veins traversed the growth, some being thrombosed, while on the more convex edge of the tumor were two catgut sutures, surrounding evidently the pedicle. Numerous masses of thin fibrous tissue were hanging in shreds from the mass, where apparently adhesions had existed to surrounding tissues and organs. Section through the greatest diameter of the tumor showed its widest portion to be of extreme density, except for the presence of several cystic dilatations of various sizes up to those having a diameter of 8 cm. and 7 cm. These latter were of two varieties,—the one smooth walled and more longitudinal in shape, while the other showed rough, ragged masses adhering loosely to the walls, the remains of a previous degeneration, *i.e.*, portions of tumor mass had undergone degenerative softening and partial absorption, leaving behind at the time of removal these ragged wall cysts. The tumor then being a myxo-sarcoma was interesting for several reasons: Firstly, inasmuch as sarcomata

of the ovary were by no means common ; in second place, its size was certainly unusual, though occasionally sarcomata, as large as an adult head, were placed on record.

Dr. Wm. Gardner said that the history in this case was very vague. The patient first noticed the tumor four years ago, but in all probability it had been present before that. Examination before the operation showed an exceeding degree of density and immobility of the tumor, the hardness being such that it suggested the presence of bone, as the speaker had occasionally noted in dermoid cysts. Vaginal examination showed the mass to be wedged in the pelvis. He had approached the operation with uncertainty, thinking that the tumor would be adherent to the parietes ; but this was not the case, and except for omental adhesions and a corona of intestines along the upper part, there had been no attachment to work through. The pedicle was small and easily managed, and apart from stripping the peritoneum off, a small portion of the adherent intestine, the removal had been accomplished without injury to any part. The other ovary was also found diseased ; it was about the size of a pullet's egg, and was dense. Recovery had been absolutely without any drawbacks.

LATE RECURRENCE OF MAMMARY CANCER.

Dr. F. J. Shepherd reported the following case :—

I was called to see a woman, *æt.* 45, mother of six children, on November 7, 1888, and found that she was suffering from a tumor, the size of a small egg, situated in the lower zone of the left breast. This was quite movable—nipple slightly retracted, but the glands in the axilla were enlarged. Patient first noticed the growth nine months before, when it was quite small. It had never been painful. The operation of removal of the breast was performed on November 8, 1888. The breast and considerable portion of skin was removed and fascia over great pectoral, the glands of axilla and tissue about them were freely removed. The patient's wound healed by first intention, and she was about in ten days. Was not consulted again until January, 1895, when she came to me for a small, hard, movable lump, two inches about the middle of clavicle, noticed a few months before. This was tender and occasionally painful. A few days later removed this secondary growth, and, as Dr. Adami will tell you, it was carcinomatous. This case

shows conclusively that the three years limit is not sufficient to declare a person free from the danger of recurrence, and also shows that good results in comparatively advanced cases can be obtained without the very severe operations recommended by surgeons during the last year or two. Here was a case that went nearly six years without any sign of recurrence ; and when recurrence did occur, it was in the cervical glands, not at the site of the operation at all. Another case of breast carcinoma, on which I operated in September, 1890, had no recurrence until September, 1894, then it was not at the site of the operation, but in the retro-sternal glands ; here again the axillary glands were involved, and the contents of the axilla freely removed.

A CASE OF TRAUMATIC TETANUS WITH RECOVERY.

Dr. J. C. Cameron read a paper on this subject. A boy, aged 13, cut his knee on the 11th June, by falling on a lump of hard clay ; the wound was healed by the 22nd. On the 25th, symptoms of mild tetanus appeared by stiffness in the neck, passing to back and chest and jaws ; on the 29th the whole body was rigid. The treatment was chloral 60 to 90 grs. daily for 1st two weeks and opium as required to relieve pain and alcohol. Treatment ceased Aug. 7th. Dr. Cameron called attention to the large amount of chloral, opium and alcohol which was given without producing toxic effects ; and to the fact that no routine treatment can be followed, but the symptomatic indications must be met.

Dr. Shepherd had never seen a good result from the treatment of tetanus, and he had tried chloral, opium, early amputation, etc. He asked about the condition of the wound at the time it set in, and if there could possibly have been any other wound.

The President related the history of a case, in which the patient had injured the ball of her little toe by slipping upon a garden rake. The wound healed completely, but some time afterward great pain set in with stiffness of the jaws, etc. Within a week there was complete opisthotonos. He had used Battley's solution, and had pushed it. The patient recovered, and was alive to-day.

Dr. McConnell mentioned a case of a similar nature. A patient of Dr. Perrigo, who had been left in his care, had been thrown out of her carriage and received severe bruises and cuts on the face ; a great deal of dust had got into the wounds. Mild tetanus

followed. Chloral was the remedy chiefly used. In about three months she had recovered. He thought that in these cases where recovery followed under ordinary symptomatic treatment it was explained more by an attenuated form of the Bacillus or good normal resisting power on the part of the patient.

Stated Meeting, May 3rd, 1895.

G. P. GIRDWOOD, M.D., PRESIDENT, IN THE CHAIR.

DISCUSSION ON ERYSIPELAS.

Dr. HINGSTON, on introducing the subject, spoke as follows: My present duties are not at all difficult; I take as much as I choose to take and leave as much as I choose to leave. So many gentlemen are named to present the question in its various aspects before you, and to take part in the discussion, that I think I shall best consult the interests of the Society by saying as little as possible at this stage. First, what is erysipelas? It is a disease known to most of us,—in fact, to the whole of us; a disease met with often, and particularly in hospitals; an inflammatory affection of the outer surface of the skin, characterized by all the usual signs of inflammation, yet with something more. In reading the subject in some of the recent text-books and periodicals, I have been rather interested to learn that very little was known or written upon the subject until the eighteenth century. Yet when I turn to Wiseman, the father of English surgery, I find a very able paper upon the subject; and in turning to the father of French surgery, Paré, who lived in the time of Queen Elizabeth, I find two important chapters devoted to the subject, in which Paré quotes the ancients—Galen and others—as having written on the subject.

A word as to the origin of the disease. Although the inflammation is seemingly of the skin, it does not arise in the skin, but in the lymphatics of the skin. Some authors go further, and confine it to the leucocytes in the lymphatics of the skin. This is a nicety which must be left to bacteriologists to establish or to destroy. Another and most important question is: is the disease specific? or is erysipelas a mere ordinary inflammation? Some contend that it is an ordinary inflammation, modified by such circumstances as atmosphere, constitution and the surroundings of the sufferer. The opinion now, however, is general, that erysipelas is a specific disease differing from ordinary inflammation in having a material organism

or germ which is proper to it. Fehleisen claims to have discovered a microbe, a streptococcus, as it is called, in every case of erysipelas. He found by experiment he could convey the disease to animals; and from man to man. It is now established that, in erysipelas, there is a morbid specific inflammation, and that the streptococcus is always present or is in some way connected with this morbid action. Another feature of interest: the streptococcus is not usually found over the whole erysipelatous blush. As the erysipelas progresses, the streptococcus disappears. The microbe is found in largest numbers at the margins, and in large numbers beyond the inflammatory zone; indeed, these are met with in greater numbers in tissue not yet seemingly invaded, than in parts over which the disease has passed. The streptococci are sometimes met with in such large numbers that leucocytes are found to have disappeared altogether, while the ground that has been traversed by the disease is often as free from the streptococcus as is the prairie free from grass where fire has recently passed. Another question is: how does the microbe enter the body? Most authors agree that the disease enters where there has been created some solution of continuity, some traumatism, some bruise or scratch in the skin; others believe the disease to be purely idiopathic, occurring independently of all traumatism; while not a few are of opinion that erysipelas may occur sometimes in one way, sometimes in another. Another question is as to its contagiousness. One would suppose that question to have been solved long ago; but it is not solved yet. Most men believe that the disease is contagious; some, however, maintain, and even recently, it is not contagious; still larger numbers believe that it is not contagious under ordinary, but only under exceptional, circumstances. Well, for myself, I should say, from a clinical aspect, I should be sorry to place a patient, upon whom I had operated in the immediate neighborhood of a case of erysipelas; not that I believe that the disease is as contagious as some suppose, or that extension to a healthy wound necessarily follows proximity.

How does erysipelas spread? It is believed to spread along the lymphatics, and by the minute capillaries, and by the very small veins. It travels where the lymphatics are most numerous. For instance, a patient suffers from erysipelas of the face, it is often secondary, the disease reaches the upper lip, that it jumps quickly to below the jaw, not frequently attacking the parts between.

There is another form of erysipelas, called phlegmonous erysipelas. Is it the same disease? Here also there is difference of opinion. Some contend it is the same disease; but favored by certain circumstances, either in the condition of the patient, in the atmospheric state, or in the patient's surroundings, the disease goes on to the formation of pus. Some contend that phlegmonous erysipelas has a coccus entirely different: a something superadded, a something unlike the streptococcus which caused the disease in the first instance. Then as to the gravity of the two diseases or of this modification of the same disease: the one—that is, the form limited to the true skin—has a tendency to recovery, while of the phlegmonous variety its course is uncertain, sometimes prolonged, and not infrequently disastrous. Some contend that the streptococcus, finding itself in an unyielding skin, behaves itself with becoming modesty, but that when it gets below the skin into the loose connective tissue, it comports itself in a very different manner; but that notwithstanding a marked difference in feature, it is essentially the same disease caused by the same micro-organism. That I can say—speaking from a surgical point of view—phlegmonous erysipelas, especially in the neighborhood of the joints, is a disease of which I have very considerable dread, and this dread is increased if the subject of the disease is not clearly and unmistakably free from all taint of a tuberculous character. At the present time I have, under my care, a case of phlegmonous erysipelas, beginning in the neighborhood of the ankle joint, gradually attacking its synovial membranes, and leading to amputation of the ankle, then of the knee, and later of the elbow. Erysipelas is not confined to the skin; it invades the mucous membrane. In the face, it travels up and attacks the eye. It enters the nostril, there giving great trouble. You know the disposition the skin bears to the nostril; it goes in to meet mucous membrane, the reverse of what occurs at the lip. It is there where erysipelas gives much trouble. It is said to attack the mucous membrane of the female vagina, and I am glad that another gentleman is to take up that portion of the question. I should like it established whether the streptococcus of erysipelas has really any relationship or affinity to the gonococcus or other micro-organism which so frequently causes trouble in the tubes—inducing that pyosalpinx of females which gives the gynecologist so much trouble. There is one other circumstance connected with

erysipelas which I have recognized : I have seen erysipelas, in more than one instance, limit the spread of epithelioma, causing it to remain stationary for months, and even years. In one case, still under observation, more than five and twenty years have elapsed since epithelioma first appeared, and in time, erysipelas has again and again arrested malignant action for months, and, in some instances, for a couple of years. The signs by which erysipelas are recognized from ordinary inflammation are so familiar to us all that I think it unnecessary to allude to them.

ON THE BACTERIOLOGY OF ERYSIPELAS.

Dr. ADAMI—That the disease erysipelas is due to the presence and active growth within the subcutaneous lymph spaces of one special form of micro-organism—a chain coccus or streptococcus—is now generally accepted.* But while we find a very characteristic disease induced by the presence of one special form of micro-organism, it by no means follows that that microbe is specific in the narrowest sense. It by no means follows that that microbe causes a cutaneous disorder alone, and does not have ill effects in other tissues of the body. Indeed, what I wish to point out now is that the tendency of modern bacteriological work is to look upon erysipelas not as a disease *sui generis*, but as one manifestation of the pathogenic action of a germ that is very widely diffused, a germ capable of inducing processes differing in appearance according to the organ affected ; the tendency is in short to regard the streptococcus of erysipelas in the same light as we regard the bacillus found in lupus. If Robert Koch had not made investigations into the bacteriology of lupus at the same time that he made his classic studies into tuberculosis of the lungs, of lymphatic glands (scrofula), of bones and joints, and if some other observer had independently discovered the tubercle bacillus in cases of lupus, without recognizing the alliance of the disease to tubercu-

* I would have said universally if it were not that late cases of erysipelas had been described in which the cluster or staphylococci alone have been found. The difficulty of accepting such cases as authentic is two-fold : (1) It is easy to fail in obtaining cultures of streptococci from perfectly typical cases of the disease—thus the absence of chain growths in the culture media does not necessarily imply their absence within the tissues. (2) The ordinary pyococci may be looked upon as normal, or at least not unusual inhabitants of the surface of the skin—thus the presence of growths of these in material gained from a cutaneous lesion does not necessarily imply that they are the cause of the lesion.

losis as it shows itself in other organs, it is quite possible that many would regard the bacillus of lupus as a different species from the *B. tuberculosis*. It would not be difficult to point out differences between the two forms in the rate of growth, in pathogenic properties, and so on, quite as distinct—or indistinct—as the differences that have been drawn between the streptococcus pyogenes and the streptococcus erysipelatis. When, however, we find that the chain coccus obtained from a case of purulent peritonitis will induce a typical erysipelas in the rabbit's ear, and that cultures obtained from an erysipelatos patient will, when inoculated into a series of rabbits, cause in some true cutaneous erysipelas, in others erysipelas associated with cellulitis, in others the formation of abscesses and pyæmia, with foci of suppuration in various organs it is difficult to arrive at the conclusion that there is any line of distinction sufficiently sharp to render it proper to exalt the streptococci of erysipelas and suppuration into distinct species. Add to this, that no single satisfactory characteristic has yet been established distinguishing the cultures of the cocci of one "provenance" from those of the other. All the morphological and cultural character of a series of growths from cases of erysipelas can be seen reproduced in a series of growths from cases of suppuration.

Let me pass now to the clinical side of the case, and see whether this view is upheld. It is true that one meets with very numerous examples of perfectly typical cutaneous erysipelas; we may have cases of oft-recurrent facial disease which never affect more than, the skin. Nevertheless, small as has been my clinical experience as compared with that of most here present, I have for long been impressed by the series of transitional forms to be met with between the typical cutaneous disease and spreading phlegmonous suppuration—and I fancy looking backwards you must be impressed by the same fact. There are the cases that are not simply cutaneous, but are, or rapidly become, cellulocutaneous; other cases in which the erysipelatos disturbance of the skin is associated with very evident advancing deep lymphangitis; others in which, with cutaneous disturbance, there is suppuration of the nearer lymphatic glands; others of most acute phlegmonous disturbance; others of erysipelas followed rapidly by pyæmia, and the production of abscesses in the internal organs. You must all

have come across at least some of these cases. What is more, in hospital practice it is possible to observe that where once erysipelas manifests itself in a ward, there is in addition to be noticed a series of cases of genuine suppurative disease—endometritis, peritonitis, pyæmia, and so on.

Such a series showed itself last year at the Royal Victoria Hospital, beginning with a case of endometritis and peritonitis, and followed by erysipelas in one of the students who pricked his hand during the performance of the autopsy, and by a localized abscess formation in one of the resident staff. Into the fuller details of this very interesting series I doubt not that Dr. Bell will enter. I will go so far as to say that cutaneous erysipelas alone is comparatively harmless. The danger lies essentially in the possibility of its deeper extension and in the development of metastatic suppurative process.

The streptococcus pyogenes is in fact a microbe, not only capable of, but actually producing a long series of diseases ; it is among the two or three most widely distributed and most pathogenic microbes. We find it associated with suppurative disturbances of serous cavities, of cutaneous and mucous surfaces, of the interior of glandular organs, of bones and joints. Not only may it set up primary disease, but very frequently it is discovered in association with the micro-organisms of other diseases—or in the lesions forming the sequelæ of such. I need not dwell here upon its almost constant relationship to the diphtheria bacillus in the false membranes of the throat ; upon its power of inducing the grave throat complications of measles and scarlet fever ; upon its frequent presence in the pneumonic disturbances following upon diphtheria and typhoid, or upon its not uncommon association with the peritonitis following upon perforation of the appendix. These are subjects away from this evening's discussion. They are of interest, however, in connection with erysipelas, inasmuch as there is one fact which is capable to some extent of elucidating all of them. I refer to the fact that the streptococcus has frequently been found in what may be termed a saprophytic condition upon the human organism. It has been found in the saliva of healthy individuals, in the intestinal contents, in scrapings from the skin, and more especially in the dirt under the nails. In this way is to be explained the apparently spontaneous origin of some cases of erysi-

pelas and suppurative complications. So long as the mucous and cutaneous surfaces remain healthy and uninterrupted, for so long would the streptococcus appear to be perfectly harmless; lower the vitality of the defensive zone of cells, either by direct injury or erosion, or by other disease, or by exposure to chemical and thermal influence, and then it would appear that from being a saprophyte the coccus may become parasitic and pathogenic. Granted that the streptococcus happens to be present upon the skin in the immediate neighborhood of a scratch or wound, it is not necessary that the instrument inflicting the wound be infected. Granted also that the streptococcus be present upon the surface, it is possible to explain those cases of erysipelas which appear idiopathic and unassociated with any recognizable erosion or wound of surface. For as Garré proved experimentally in connection with the staphylococcus, boils and furuncles can be induced without erosion of the surface layers, and as Welch has proved, pyogenic cocci can pass down into the deeper layers of the skin passing along the hair follicles. Thus I am indulging in no unwarranted speculation when I say that lowered vitality of the exposed skin by thermal or other influences may form a condition favorable for the development of erysipelas in the absence of any wound or injury recognizable by the naked eye.

But granting all this, there is still a big gap in our knowledge of the streptococci and their action that has to be filled in. Why is it that these micro-organisms at one time induce cellulitis and genuine suppuration, at another erysipelas? That we cannot fill in with complete satisfaction to ourselves. We can only see a possible explanation. We know that, as distinguished from the staphylococci, the streptococci induce inflammations that are not of a sharply circumscribed type, but, on the contrary, tend to spread in the immediate vicinity along the lymph spaces and tracts; that erysipelas, lymphangitis, cellulitis and abscesses induced by streptococci all have this character in common; that, therefore, the difference between these processes is one of degree rather than of kind. We know also, as I have already stated, that equal quantities of the same culture inoculated into a series of rabbits will in some induce erysipelas, in others lymphangitis, cellulitis, and so on, and that therefore the reaction or extent of resistance on the part of the tissues has an important part to play.

We find also that streptococci obtained from a series of cases of erysipelas, or, on the other hand, of suppuration, vary remarkably in their pathogenic properties, and that, therefore, the virulence of these microbes is very far from being constant. Bringing all these facts together, we seem to see vaguely an explanation of the matter. But it is only vaguely; there is still much to be accomplished before the problem can be regarded as completely solved.

Lastly, I would say a few words regarding the development of the ordinary cutaneous erysipelas, a process which can be followed both in man and in the rabbit's ear. Briefly, it would appear that in the earlier stages the virus developed by the growth in the tissues leads to a congestion of the vessels accompanied by exudation and consequent swelling of the area, and that in the earlier stages this is the main reaction. The chains of cocci develop within the lymph spaces at a greater rate than they are destroyed. Eventually in the region where the cocci are present in the greatest quantities, namely, at the original focus of infection, there is much migration of leucocytes, and destruction of the microbes ensues, accompanied by a considerable amount of phagocytosis. Outside this central area of marked congestion and destruction, in the advancing zone of simple exudative swelling, the streptococci are still to be seen in fair quantities. According to Cobbett and Mel-some at the height of the erysipelatos process, they can be obtained more than one inch beyond the well defined edge of the congested area. As the process continues in a satisfactory case this outer area of exudation containing streptococci steadily diminishes, and according to these observers there is a more and more rapid response to the injury or stimulus produced by the presence of the coccus and its virus, until eventually the response on the part of the organism follows immediately upon the presence of the cocci, so that now the reddened line of demarcation corresponds perfectly with the limit of extension of the cocci. Where this is the case the process comes to an end, the exudation and diapedesis suffice to destroy the microbes, and resolution sets in. The healing and resolution of erysipelas is thus essentially a process of accustomance or habituation of the tissues of the body to the microbe and its products, a process which, to use a familiar illustration, is like that of accustomance to tobacco, not immediate, but requiring some little period of time, which, unlike this, is not permanent, but lasts only

for a few months. Thus it is that within a year an individual may again become susceptible to the disease, and recurrence may occur.

Dr. RODDICK discussed the treatment as follows: All treatment should be based on the contagious character of the disease, and probably also on its specific character, because, notwithstanding the remarks of my friend Dr. Adami, I am still inclined to think that there is something specific in the erysipelas coccus. However the latter may change during the course of the disease, I am satisfied it has some distinct character at the outset. That it is contagious, however, there can be no two opinions, and hence in the treatment of the disease the first duty of the surgeon is to isolate the patient. Notwithstanding all the antiseptic precautions taken now-a-days, no one is justified in leaving an erysipelas patient near another patient, or in treating erysipelas patients in the same ward with other patients, even though no wounds are present in either case.

The disease is generally treated constitutionally and locally. The constitutional treatment consists first of all in clearing out the bowels and getting the patient into condition for a siege. It is a good old-fashioned plan to begin your treatment with a purgative. The old-fashioned calomel purge, the strength of the dose varying with the condition of the patient, answers admirably. Then, in spite of all that is being said, I have implicit confidence in the use of iron. I think the tincture of the muriate of iron is almost a specific in the early forms of erysipelas; in the later forms it may not be so efficient. Dr. Adami may probably be able to confirm my statement that it has been found that during an attack of erysipelas the blood undergoes a considerable change: the corpuscles assume a shrunken condition, and there is an absence of hæmaglobin. Now, it is contended by many that iron has a decided effect in improving the condition of the blood corpuscles, Bell, of Edinburgh, first originated this theory, and it has since then been borne out by pathologists. Iron, then, in large doses, as much as 25 minims every four or six hours, depending on circumstances and the condition of the patient. The stomach sometimes will not bear the iron, but the addition of a little chloric ether will relieve the stomach. Sometimes you may give the iron in doses of half a drachm. Quinine also, two or three doses daily, is useful: ten grain doses may be given in some cases. Where a stimu-

lating treatment is indicated, camphor may be administered. In some cases camphor suits admirably : it relieves delirium, provided it be not pushed to that excessive stage where it might itself cause delirium. Alcoholic stimulants should be given early : it is a mistake to wait too long, and where a case is likely to be extensive I advise in the first stages to administer small doses, to be succeeded in the later stages by larger doses and of the diffusible kind of stimulants, such as champagne. You have here, then, in my opinion, all the constitutional treatment likely to be of service. I have no faith in salicylates; as a rule they are too depressive. In some cases of strong young men it may do good, but it should be closely watched. Neither have I any faith in aconite or digitalis, which we were wont to administer. The patient should also have milk and strong nutritious broths from the early stage of the disease; eggs and oysters are also to be recommended.

Of the local treatment, I think myself that notwithstanding the bacteriological origin of the disease, we can gain comparatively little by attempting to treat it as we would a septic wound, and cleanse it by antiseptics. The best thing if you want to use a liquid antiseptic is carbolic acid. It has a decidedly penetrating effect on the skin; in fact, you know that in many cases we have to watch it for fear of poisoning. I generally use it in limited cases in the proportion of one drachm to one pint with lead and spirit. Lead is also an antiseptic, so also is spirit, which opens up the pores of the skin. Where an ointment may be employed, the recently recommended preparation of ichthyol has given me admirable results. A solution also of from 2 to 4 per cent. used to wash the skin is useful. I employ it first as a lotion and afterwards as an ointment, the strength of the latter being from 40 to 60 per cent. with lanolin. Its great objection is its offensive odor—a patient in the Royal Victoria Hospital was made quite sick from the offensive odor—but thiol, recently introduced, is said to have all the properties of ichthyol without its offensiveness. Thiol, therefore, might be used. I have no personal experience of it. These ointments should be rubbed well into the skin, and some surgeons advise that fine punctures should be made so that the ointment may actually enter the infected lymphatics. Hypodermic injection of carbolic acid we tried some years ago in the General Hospital, but we were not impressed with the results—we thought the disease extended more

rapidly. It is possible that we may not have gone far enough beyond the zone of the disease—beyond the line of the lymphatics invaded by the streptococcus. The application of carbolic acid in the form of ointment has many strong advocates. Where the disease tends to extend to the cellular tissue, the old-fashioned practice of making incisions should be used ; and here you always use antiseptics as in the case of any wound. Where a wound is present, of course it should be thoroughly cleaned out and made aseptic as far as possible. The hygienic surroundings should undoubtedly be attended to : the patient should be changed not only from the region where he may cause mischief to others, but for his own sake should be again changed, as relapse is very apt to take place if he is left too long in the one place. He appears to inoculate himself. Especially during the stage of desquamation everything must be kept disinfected. I have not exhausted the subject of treatment by any means, nor do I intend to speak of the treatment of any of the varieties of erysipelas, because I think this will be better dealt with by those who are down to speak of the special forms.

As to the remarkable power of erysipelas in curing other forms of disease, there can be no doubt. We all remember about the ulcers which had been in the hospital for months and months, and how, if they happened to contract erysipelas (and did not die), the ulcer was cured. So also, old granular lids were cured by erysipelas. In new growths also it has been found useful, and the injection of the specific coccus in such cases is now a recognized therapeutic measure.

SEMI-ANNUAL MEETING OF THE COLLEGE
OF PHYSICIANS AND SURGEONS OF THE
PROVINCE OF QUEBEC.

The members assembled in the lecture room of the Laval Medical School on the 25th ult. ;—Dr. Simard in the chair. There were present : Hon. Dr. Ross, Hon. Dr. Marcil, Drs. Austin, Brosseau, Beausoleil, Bissonnette, Gauthier, Laurent, Cholette, Gibson, Morissette, Verge, Larue, Watters, Fiset (Rimouski), Godbout, MacKay, Bachand, Camirand, Parke, sen., Guay, Rinfret, Grandbois, Roddick, Campbell, McConneli, Plante, Fournier, Latraverse, Fafard, Normand, Cartier, Laberge, Rottot and Belleau, secretary.

Several important questions were considered. A notice of motion was given requiring the regular examinations for the licence to be held on the second Tuesday in June of each year. It will be discussed at the next meeting. The following is the list of those who received their licences to practise Medicine :—

E. Cyr, Maria ; J. M. Deschênes, Fraserville ; J. P. Sirois, Wolfestown ; R. de Lotbinière Harwood, Vaudreuil ; A. Cruickshank, Inverness ; H. Fiset, St. Lazare de Bellechasse ; J. C. A. Ricard, Ste. Flore ; L. E. Caron, Natish, R.I. ; P. J. L. Fiset, St. Evariste de Forsyth ; J. E. Montgomery, Philipburg ; P. T. Crispo, Sandy Bay ; L. N. Dionne, Victoriaville ; E. C. Campeau, A. Lagacé, J. A. Lasalle, of Montreal ; A. Constantineau, Rouville ; E. Gelinas, St. Thomas ; Donat Bernier, St. Henri de Lauzon ; A. J. Labrecque, Quebec ; J. G. E. A. Clarke, Hébertville, ; J. A. Dufresne, Deschambault ; A. Lacroix, St. Stanislas ; G. H. Mathison, Montreal ; J. A. Sarrasin, St. Alexandre d'Iberville ; A. Trudeau, Longueuil ; L. P. A. Rodrigue, Lachute ; M. Bélanger, St. Charles ; A. Denis, Vaudreuil ; Aaron Levy, Montreal ; J. R. O'Brien, Ottawa.

A. Blais, B.S., Berthier ; Jos. Rob. Bergeron, B.A., St. Antoine ; V. D. Desrosiers, B.L., Sandy Bay ; L. Desrochers, B.L., Lotbinière ; J. E. Giguère, B.L., Quebec ; J. E. E. Masson, B.A., Grosse Ile ; A. Sylvestre, B.S., St. Barthélémi ; F. E. R. LaRue, B. S. ; J. L. Gilbert, B.L., Pointe aux Trembles, Portneuf ; H. Tousignant, B.A., Chicoutimi ; A. Giroux, B.A., Charlesburg ; J. E. Dion, B.A., Ste. Thérèse ; J. B. Marcotte, B.A., St. George de Windsor ; M. R. Masson, B.L., Terrebonne ; Chs. St. Cyr, Chipewa Falls ; F.T. Tooke, B.A., Montreal ; H. Labrosse, B.L., and Chs. Myr. B.A., were admitted to study on presenting their diplomas.

Messrs. H. Schwartz, L. O. Gauthier, Wm. Delaney, Quebec, and Robert Law, Ottawa, were admitted to study after passing a successful examination,—4 out of 27.

In regard to benefit societies, it was proposed by Dr. S. Gauthier, seconded by Dr. Beausoleil : "That a committee, composed of the legislation committee and the mover and seconder, be authorized to study the constitutions and by-laws of the different benefit societies existing in the province of Quebec, and that this committee take measures to remove the despotic rules which these so-called philanthropic associations impose on the Medical profession ;

“That the College of Physicians and Surgeons of the Province of Quebec disapproves of the members of this College engaging themselves to these societies for Lodge practice for a salary fixed in advance ;

“That it is derogatory to their honor and to professional etiquette to engage themselves in all these cases to divulge the name, cause and nature of the diseases for which the members of these associations are treated ;

“That the Committee confer with the different executive committees of these mutual benefit associations, in order to have removed from their constitutions the clauses obliging the physician to certify—even under oath sometimes—the cause which leads to the demand for benefits to the applicant’s fellow-members, this obligation being a cause of open abuse in a great many instances, at the same time exposing the medical profession to public discredit.”—Adopted.

Dr. Beausoleil presented the report of the Reciprocity Committee at the meeting of the Canadian Medical Association, held this summer at Kingston. Delegates from the various medical associations of the Dominion met to discuss the best means for establishing general reciprocity.

The platform recommended by the Convention was: 1, A uniform programme of recommendations for admission to study ; 2, a uniform curriculum of medical subjects to be taught ; 3, a uniform method of examination and standard for the Bachelorship and degree of Doctor of Medicine for the whole Dominion.

The president was appointed to consolidate the various by-laws now in force and scattered through proceedings, and have all the existing laws printed. \$400 was granted to him for this work, and it was decided that the president should in the future be paid not less than \$300 annually. Dr. Rottot presented a resolution, the object of which was to change the present method of voting by proxy, in which it was possible for a few members to control the meeting. Although the object aimed at was approved of by many of the speakers, the motion did not seem to be the proper remedy, and it was therefore defeated.

The Credential Committee will be composed of the officers of the College, and of Drs. F. W. Campbell and T. G. Roddick.

THE
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Editorial.

The readers of the RECORD will observe that this the first number of Volume 24 appears under new auspices and in a new form. The Editor will be assisted by a competent staff of associate editors and collaborators, among whom are some whose names are familiar in literary and journalistic circles and medical literature, and who may be expected to devote their energies successfully in placing and maintaining the RECORD in an advanced position among the numerous medical journals published in America,—an ambition harbored by each worker. The CANADA MEDICAL RECORD is not a new venture in the journalistic field, as it has been published since 1872, the Editor then being Dr. F. W. Campbell, who has continued his connection with it up to the present time, and who, it will be observed, will still continue to give us the benefit of his over a quarter of a century's experience in medical journalism. Previous to his connection with the RECORD he was associated with the late Dr. Geo. E. Fenwick in publishing the *Canada Medical Journal* from 1864 to 1872. The latter was continued by Dr. Fenwick, under the name of the *Canada Medical & Surgical Journal*, which is now represented by the *Montreal Medical Journal*. During the twenty-three years of the RECORD's existence, Dr. Campbell has had associated with him at various times as assistant editors: R. A. Kennedy, M.A., M.D.; Casey A. Wood, C.M., M.D.; Geo. E. Armstrong, M.D.; A. H. Kollmyer, M.D.; James Perrigo, M.A., M.D.; James C. Cameron, M.D.; A. Laphorn Smith, B.A., M.D.; and Rollo Campbell, C.M., M.D.

In glancing over the past volumes, one is interested to note the faithful historical record of all the events of interest which have

occurred in the medical realm of this city, province, and Dominion during that period ; we notice with sadness the names and work of many whose labor is over, who were once the active and shining lights in our ranks.

One can glean the progress of Medical education, and note with satisfaction the great strides that have been made in reaching the high standard which now prevails in the general requirements of our provincial boards, and in the facilities for teaching in the various Medical schools of the Dominion, and especially in our own city, where the present hospital and teaching facilities were not dreamt of a few years ago. The pages of the RECORD have not only given us a history of the men and medical institutions of our country, but ably reflect the general progress which has been made in the various branches of Medicine and Surgery.

It will be the aim of the new management to continue this good work, and as far as possible keep our readers abreast with all that pertains to medical progress.

In this city a large amount of scientific medical work is done at the various hospitals, especially the Montreal General, Royal Victoria and Western Hospitals ; this crystallizes into papers and reports, which are presented at the meetings of the Montreal Medico-Chirurgical Society ; occasionally, papers are read by members of the Hotel Dieu staff. We will endeavor to give a condensed account of these proceedings each month, as has been done in the past. Each of the more important branches of Medicine will be placed in charge of one or more collaborators, who will give a bi-monthly or quarterly résumé of the progress made in these departments. Clinical lectures will be reported for the RECORD from time to time, and abstracts and papers from current medical journals will be given, and selected with a view of giving what is latest and most valuable to the general practitioner and what represents true scientific progress.

About a year ago the annual subscription price of the RECORD was made one dollar. We do not propose to change this, but with the increased size of the Journal and the increased expenditure such enlargement will entail, we look for a large addition to the subscription list, in order that it may be self-sustaining.

We would take this opportunity of inviting contributions to

the pages of the RECORD from its friends and subscribers ; correspondence, papers, reports of Medical meetings and items of interest to the profession, will be gladly welcomed to our columns.

MONTREAL MEDICAL SCHOOLS.

MCGILL UNIVERSITY.

The Medical Session in this University was opened on October 1st by an introductory lecture from Dr. F. G. Finley. The attendance of students was large. Principal Peterson was present. The new Principal has made a most excellent impression, and promises to be most popular among the students.

LAVAL UNIVERSITY,—MONTREAL BRANCH.

The splendid building just erected on St. Denis street, for the occupation of the Montreal Branch of Laval, was formally inaugurated on the evening of the 8th October, Abbé Proulx, vice-rector, being in the chair. The immense Convocation hall was crowded by a brilliant audience. Addresses were made by several clergymen, and by His Honor the Lieut.-Governor, the Hon. J. A. Chapleau. Dr. Rottot, Dean of the Laval Medical Faculty, gave a history of its foundation. The Archbishop occupied the seat of honor, having the Lieut.-Governor on his right, and Principal Peterson of McGill University on his left. On the platform were representatives from the McGill and Bishop's Faculties of Medicine, and other friends of the University. The various Faculties have ample accommodation in the building.

UNIVERSITY OF BISHOP'S COLLEGE.

The twenty-fifth Session of the Medical Faculty of this University opened in Montreal on the 2nd of October. There was not any formal introductory, the various Professors at once entering upon their work. The class will be the largest this School of Medicine has ever had.

Personal.

Dr. C. A. Wood (M.D. Bishop's 1877), of Chicago, formerly of Montreal, and for over ten years on the teaching staff of the Medical Faculty of Bishop's College, was in Montreal at the end of August. He came from a holiday trip in Europe by the "Parisian." Dr. Wood has for the past five years been a resident of Chicago, devoting himself entirely to ophthalmology. His success in bringing around him a large *clientèle* has been phenomenal, and to-day no man in his specialty is better known in the Western States. Dr. Wood is ophthalmic surgeon to Cook's County Hospital, and on the teaching staff of the Chicago Post Graduate School.

Dr. R. C. Blackmer (M.D. Bishop's 1884) is a successful practitioner in St. Louis, Mo., U.S. He is professor of Medical Jurisprudence in Barnes Medical College, and editor of the *General Practitioner*. During his last college session he was *locum tenens* at the Western Hospital. In an article in a recent number of his Journal, he contrasts the facilities enjoyed by students of Bishop's College at the Women's Hospital, Montreal, with those provided for students in the State of Missouri, and states they are much in advance in the former institution.

Dr. C. E. Elliott of Quebec (M.D. Bishop's 1889--Wood and Nelson Gold Medalist) is practicing in Quebec, and is rapidly taking a first place among the leading practitioners of that city. A wealthy patient of his, who recently died at a very advanced age, left him some property on the Restigouche River, valuable on account of possessing salmon privileges, which he has disposed of for a handsome sum.

Dr. Douglas D. Macrae (M.D. Bishop's 1894) has left for England. He proposes passing the best part of a year among the London and Edinburgh hospitals.

The Rev. Jabez B. Saunders (M.D. Bishop's 1885), for a short time on the teaching staff of his Alma Mater, is Pastor of the Dominion Methodist Church, Ottawa.

Dr. Geo. F. Slack (M.D. Bishop's 1873), of Farnham, has just returned from a trip to Europe. On his arrival home he received quite an ovation from his friends.

Dr. C. R. Wood, formerly of Brockville (M.D. Bishop's 1891) is at Malwa, Central India, as a medical missionary in connection with the Presbyterian Church in Canada. We are given to understand that since his arrival in India his health has greatly improved.

Dr. T. Bannerman (C.M., M.D. Bishop's 1895) has sailed for Europe, where he intends remaining a year or more.

Dr. Frederick Benoit (M.D. Bishop's 1875) has removed from Mattawa, Ont., to Montreal.

The following changes have taken place in the Faculty of Medicine of Bishop's College: Dr. James Perrigo becomes Professor of Gynæcology; Dr. Springle has resigned from the chair of Anatomy; Dr. A. Laphorn Smith has been appointed Professor of Clinical Gynæcology; Dr. England, Lecturer on Clinical Surgery; Dr. G. T. Ross, Professor of Laryngology and Rhinology.

Dr. F. W. Campbell, Dean of the Faculty of Medicine of Bishop's College, has been appointed a Deputy Surgeon General in the Canadian Militia from 21st February, 1895.

Dr. Stirling, Professor of Ophthalmology in Bishop's College, has just returned from a visit to the principal centres of Medical education in Europe.

Dr. J. Leslie Foley (M.D. Bishop's College 1880), Dermatologist to the Western Hospital, has just returned after a prolonged visit to Boston.

Dr. G. T. Ross, Professor of Laryngology and Rhinology in Bishop's College, has been appointed specialist in these diseases at the Western Hospital.

Dr. Walker (M.D. Bishop's College 1895) has been appointed House Surgeon to the Western Hospital.

J. J. Benny has been appointed Assistant to the House Surgeon at the Western Hospital.

Dr. Montgomery (B.A., M.D. Bishop's College 1894) is, we are informed, about to commence practice in St. Johns, Que.

Dr. Morrow (M.D. McGill 1892) has been appointed Lecturer on Physiology in the McGill Faculty of Medicine.

Dr. C. F. Martin (M.D. McGill) has been appointed an Assistant Physician to the Royal Victoria Hospital.

Obituary.

LOUIS PASTEUR.

M. Louis Pasteur died 28th September, at 4 P.M., in Paris, of paralysis. The disease was one of long standing and first manifested itself thirty years ago. Yet he experienced good health till 1886, when he was affected with a marked derangement of the circulatory apparatus accompanied by the usual symptoms, palpitation and insomnia. Three years ago ureamia manifested itself, and was the immediate cause of death.

Everyone knows the mere personal facts of his existence: born in 1822, the son of a soldier-tanner, a half-pay scholar at the Communal college, a tutor in the college of Besançon, a pupil in the Ecole Normale, gratifying his passion for scientific exactitude, assistant professor of chemistry at Strasburg, where he married a daughter of the rector of the college, henceforth living in Paris the laborious life of a man given over to the passion for scientific pursuit. The figure of Pasteur in his laboratory was familiar enough to many students: a man of slight build, well trimmed beard, wearing a skull cap and modestly attired, in every respect the studious savant, eager to learn and eager to teach. In his death the French nation delighted to do him such honour as is rarely given to a private man. His funeral was a *staté* function with all the pomp which the civil and military authorities could bestow, and his resting place is with the other great ones in the Cathedral of Notre Dame.

Up to a month ago the most prominent figure in the Medical world, though himself not a physician, was that of Louis Pasteur. The rare thing is, that it was a world which he created for himself. In the shiftings and changings which the time spirit has occasioned in recent years, no branch of science has suffered more or rather profited more by its working than that of Medicine. Formerly the study of disease was a thing apart from the main current of scientific thought: it was a mixture of paradoxes and surmises, and disease itself was looked upon, not so much as a manifestation of beneficent laws, as an aimless or hurtful departure from them. The most ever conceded was that Medicine

might be a pseudo-science,—that is, a mere collection of empirical rules. But now, after much clearing away of underwood, a foundation has been laid, and every worker, however humble, who observes a fact or disproves an untruth long believed in, has the assurance that his little piece will be tested and tried, and, if found real, that it will receive its place for the upbuilding of a great work. The days are all gone when Medicine consisted of shreds and patches of old learning, imperfect observation, hasty conclusions and foolish reasonings. Instead of this, the method at least has been learned, and Medicine is in its true place, duly authenticated and in relation with all the other elements which go to constitute Science. This has been a great task, though not a long one. Indeed, the name of Louis Pasteur, who chiefly effected it, does not occur in the last edition of the *Encyclopædia Britannica*, so newly has it arisen. The turgid lines which Pope applied to Newton might with equal truth be applied to Pasteur, for what the law of gravitation did for astronomy, Pasteur's law of fermentation did for the study of disease. There have always been glimmerings of this truth. The demonstration of micro-organisms in the saliva with the first rude microscope, the *contagium vivum*, and the speculations concerning it, the experiments of Gay-Lussac, and finally the discovery that alcoholic fermentation was due to a living organism, all opened the way for Pasteur, who disclosed the truth concerning fermentation, and disposed of the delusion of spontaneous generation which was as old as the beginnings of things.

Pasteur was not a physician, of course : he was a man of science alone. His labors covered the whole range of molecular dissymmetry, spontaneous generation, fermentation, the diseases of wine, the manufacture of beer and vinegar, the diseases of silk worms, and the artificial cultures of living contagia which have been converted into vaccines. This was surely sufficient to give a man breadth of view. His earliest studies were in molecular physics upon the right-handed and left-handed tartarates, which latter he discovered. Then he applied his mind to the idea of molecular dissymmetry, which was introduced by Biot, and he believed that his researches pointed to a physical barrier between organic and inorganic life ; this barrier has long since been broken down. Next, he worked out the conception that ferments are living things,

dealing with the process in lactic acid, butyric acid and beer, in which he showed that the capacity of an organism to act as a ferment depended on its power to live without air. To-day, the meanest brewery profits by his research. No one could accuse Pasteur of being a mere savant, for now he turned his attention to the manufacture and maladies of wine, and by a simple device at a stroke he abolished them all. The business of the silk worm followed, and all the world knows its issue. Up to this time his labors did not carry him into the field of medicine. But now he was led by the germ theory of disease to the process which he called "virus attenuation," and first taking the fatal virus of splenic fever, he rendered it not only harmless but a shield against the disease, and saved to France in one year the lives of half a million beasts. Next, he investigated with equal success cholera in chickens, and plucked out his secret from the mysterious disease of rabies.

No great scientific theory has ever been made to prevail without conflict, and it is well it should be so. The theories of gravitation, of evolution, the dynamical theory of heat, had all to fight for their lives, and so it was with all that Pasteur propounded. Time enough has elapsed to judge fairly of his work and the benefits of it to mankind, now that it has been tested and errors of detail passed away. So long as men seek knowledge they will have to seek it after much the same method as did this investigator. This was his great achievement: he showed men how to work. Theories may change, and conclusions pass away, but scientific experiment endures for ever, and such durability pertains to Louis Pasteur and his work.

DEATH OF DR. E. P. WILLIAMS.

The Profession in Montreal have, by the death, on the 8th September last, of Dr. E. P. Williams, lost one of its promising young members. Dr. Williams was born in Ottawa in 1867, and graduated M.D. from McGill University in 1887. He at once entered the surgical service of the Canadian Pacific Railroad, but in 1889 removed to Montreal, and began practice. His onward progress was steady, and he soon became attached to the teaching staff of his *Alma Mater*, being appointed Assistant Demonstrator of Pathology. About the same time he became Assistant Pathologist to the Montreal General Hospital. His death was due to septiciæmia, contracted, it is believed, while performing his pathological duties. It is sad to see so bright a life cut short in the very hey-day of youth, yet he lived long enough to give an example of honest sincere work.

Miscellaneous.

DENTAL EXAMINATIONS.

SUCCESSFUL CANDIDATES FOR MATRICULATION, PRIMARY AND FINAL.

The regular semi-annual matriculation and special examinations of the Dental Association of the Province of Quebec have just been completed. The examination in practical, operative and technical work has been going on during the last two weeks, and the written and oral examinations began on the 2nd of October, and continued for three days. The examinations were held in the Dental College, corner of Phillips square and St. Catherine street.

In the matriculation examination Doctor H. Aspinwall Howe and Rev. Abbé Verreau were the examiners. There were thirteen applications for admission to study. The following received a matriculation certificate :—Rosario Horace Brazien, John Albert Butler, Walter Elliot, F. A. Howard, Thomas L. Marseneur, Hardouin Lionais and F. L. Wilkinson.

On the whole the results of the examinations were more satisfactory than at any former time.

For the primary examination there were six candidates. The results were as follows :—

Passed in Anatomy—S. W. Boisvert, D. C. Martel, A. E. Vadeboncœur, P. P. Vosburgh and J. H. O'Connor.

Passed in Chemistry—E. C. Martel and A. E. Vadeboncœur

Passed in Physiology—E. C. Martel, P. P. Vosburgh.

Passed in Metallurgy—A. E. Vadeboncœur, A. D. Garneau, J. H. O'Connor.

There were eight applications for licenses, of which the following passed and received diplomas as licentiates of dental surgery :—W. S. Allan, E. C. Martel, H. C. McConnell, C. W. H. Rondeau, P. P. Vosburgh.

The Board of Examiners consisted of Messrs. S. Globensky, L.D.S., president ; E. B. Ibbotson, L.D.S., vice-president ; Geo. W. Lovejoy, M.D., L.D.S., secretary ; H. E. Casgrain, L.D.S. ; J. Nolan, L.D.S. ; and L. J. LeBlanc, L.D.S., registrar.

ZYMOTIC DISEASES.

RETURNS OF DISEASES IN THE VARIOUS MUNICIPALITIES IN THE PROVINCE.

According to the returns received at the Provincial Board of Health office, the mortality from contagious diseases in the province for last month was as follows. The first named is the county and the second the municipality :—

Montreal—Diphtheria, 59 ; scarlet fever, 18 ; typhoid fever, 46 ; measles, 2.

- Quebec—Diphtheria, 10 ; typhoid, 9.
 Bagot—St. Pie, typhoid fever, 1 ; Ste. Rosalie, typhoid, 2.
 Beauce—St. Joseph village, typhoid, 2 ; North Adstock, diphtheria, 1.
 Beauharnois—Valleyfield, scarlet fever, 3 ; typhoid, 3.
 Bonaventure—St. Charles de Caplan, diphtheria, 1.
 Brome—Sutton, typhoid, 2.
 Champlain—St. Tite, diphtheria, 2 ; whooping cough, 10.
 Chateauguay—Ste. Martine, whooping cough, 18 ; St. Jean Chrysostome, diphtheria, 1.
 Compton—Scotstown, diphtheria, 1 ; Compton township, whooping cough, 6.
 Dorchester—Ste. Henedine, diphtheria, 2.
 Drummond—Wickham West, measles, 2 ; St. Germain, typhoid, 1.
 Gaspé—Malbaie No. 2, typhoid, 2.
 Hochelaga—Westmount, diphtheria, 2 ; Outremont, scarlet fever, 3.
 Huntingdon—Typhoid, 2.
 Jacques Cartier—Lachine city, diphtheria, 1 ; typhoid, 3.
 Kamouraska—Ste. Anne de la Pocatière, typhoid, 6 ; grippe, 2.
 L'Assomption—St. Roche, typhoid, 1.
 Levis—St. Romuald d'Etchemin, typhoid, 4.
 Maskinongé—Typhoid, 1 ; St. Paulin, typhoid, 3 ; whooping cough, 3.
 Megantic—Kingsville, whooping cough, 6.
 Montmagny -- St. Pierre, typhoid, 1.
 Montmorency -- Ste. Brigitte de Laval, whooping cough, 1.
 Napierville—St. Michael, whooping cough, 5.
 Nicolet—Becancourt, typhoid, 1.
 Ottawa—Ange Gardien, typhoid, 1 ; Masham, scarlet fever, 2 ; Clyde, scarlet fever, 1 ; Thurso village, typhoid, 1 ; Hull city, diphtheria, 8 ; scarlet fever, 1 ; typhoid, 1.
 Portneuf—Cap Santé, typhoid, 1 ; St. Augustin, typhoid, 1 ; grippe, 1.
 Quebec—St. Gabriel west, diphtheria, 5 ; Beauport, typhoid, 1.
 Richmond—Stoke, whooping cough, 2.
 Soulanges—Coteau Station, whooping cough, 10 ; St. Polycarpe parish, diphtheria, 2 ; St. Téléspore, diphtheria, 4.
 Stanstead Plain, diphtheria, 1.
 St. Hyacinthe parish, typhoid, 1.
 Terrebonne—St. Sauveur, diphtheria, 1 ; Terrebonne city, scarlet fever, 1.
 Vaudreuil parish, typhoid, 1.
 Yamaska -- St. François du Lac, typhoid, 1 ; La Baie de Febvre, typhoid, 1 ; St. Elphège, diphtheria, 1.

Book Reviews.

LECTURES ON APPENDICITIS AND NOTES ON OTHER SUBJECTS, by Robert T. Morris, A. M., M.D., Fellow of the New York Academy of Medicine, American Association of Obstetricians and Gynæcologists, American Medical Association; member of the New York State and County Medical Societies, Society of Alumni of Belasco Hospital, etc., with illustrations by Henry MacDonald, M.D. G. P. Putnam's Sons, New York, 27 West 23rd Street; London, 24 Bedford street Strand, 1895.

This is a handsome volume of 160 pages, properly illustrated, full of original ideas. Dr. Morris possesses the happy faculty of convincing his readers and hearers, because he is himself convinced of the truth of what he teaches before trying to convince anyone else. There is a useful chapter on preparation of surgeon and patient, the appendix vermiformi cecum, appendicitis, surgical treatment of appendicitis, and a collection of notes on various surgical types collected for the various journals to which Dr. Morris has been a steady contributor for several years past. We congratulate Dr. Morris on this his second book, and trust that it will not be the last from his pen.

LE PALUDISME. Etude de quelques-unes de ses causes, sa prophylaxie et son traitement. Par le Dr. A. F. Dubergé, médecin principal de la Marine en retraite. Paris: Société d'Éditions Scientifiques, Place de l'École de Médecine, 4, rue Antoine Dubois, 1895.

This work has been written after great study by a gentleman who, having had a long experience in the French navy on foreign service, seems especially qualified to deal with this subject. Among his most interesting chapters is one on the accidents of quinine. The style is easy and pleasant to read, and as much of its contents are entirely new, the work will prove a valuable addition to the literature of the subject.

THE THEORY AND PRACTICE OF COUNTER-IRRITATION, by H. Cameron Gillies, M.D. McMillan & Co., London and New York; Copp, Clark & Co., 9 Front street west, Toronto. Price \$1.50 nett.

The author has hunted up nearly everything that has ever been written on this subject, and collected it into this volume. Although he has made a very exhaustive study of counter-irritation, he has not made a hobby of it; he is quite impartial, giving it no more credit than is its just due. As we are of the opinion that counter-irritation is not at the present day employed as often as it might be to advantage, we think that the volume will be productive of much good in drawing more general attention to the advantages of counter-irritation.

Pamphlets Received.

- PUERPERAL PELVIC CELLULITIS AND PUERPERAL PERITONITIS. By Charles P. Noble, M.D., Surgeon in Chief Kensington Hospital for Women, Philadelphia. Reprint from The American Gynæcological & Obstetrical Journal.
- CŒLIOTOMY FOR PUERPERAL SEPTICÆMIA AND PERITONITIS. By Charles P. Noble, M.D., Surgeon in Chief Kensington Hospital for Women, Philadelphia. Reprint from The American Gynæcological & Obstetrical Journal.
- SOME IMPRESSIONS OF GYNÆCOLOGY IN EUROPE. By Hunter Robb, M.D., Professor of Gynæcology, Western Reserve University. Reprint from Western Reserve Medical Journal, January, 1895.
- TUBERCULOSIS IN THE ANO-RECTAL REGION. By Thomas H. Manley, M.D., Visiting Surgeon to Harlem Hospital, New York, 1894. Reprinted from the Medical Brief, St. Louis, Mo.
- INTESTINAL ANASTOMOSIS. With the Report of a Case. By Frederick Holme Wiggin, M.D., Visiting Surgeon to the City Hospital, Gynæcological Division; Assistant Visiting Surgeon to the Lebanon Hospital, etc. Reprinted from the New York Medical Journal for December 1, 1894.
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To keep pace with the large and steadily-increasing demand for their "Blaud Pill Capsules" on this side the Atlantic, Messrs. DUNCAN, FLOCKHART & Co. have found it necessary to establish a CANADIAN AGENCY, particulars of which will be found on 3rd page. These Capsules hold place in the esteem of the Profession corresponding with that attaching to the Chloroform of this world-famous firm. They are of GUARANTEED STRENGTH, and perfectly soluble, and will never oxidize or harden.

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I have been using Sanmetto for the past two years, with surprisingly good success. As a remedy for declining virility there is no equal,—in fact, it is a *sine qua non*. Have also given it with success in ovarian pains, and in that troublesome and painful condition due to chronic endometritis. Sanmetto is an important addition to our therapeutical means. Its beneficial effects are simply marvelous.

J. D. BENNETT, M.D.

Crystal River, Fla.

CHRONIC CYSTITIS WITH STRICTURE.

My experience with Sarmetto is quite extensive. I could give special cases in which its action was simply astonishing, but in this report I wish to summarize my experience by saying I have given Sanmetto a long and thorough trial in a case of chronic cystitis, accompanied with stricture, the result of which warrants me in saying Sanmetto is unsurpassed by any other preparation with which I am acquainted. Its effects are prompt and positive.

RACHAEL J. KEMBALL, M.D.

Buffalo, N. Y.

CANADA MEDICAL · RECORD

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No. 2.

Original Communications.

FRACTURE OF BONES AND OSSIFICATION OF MUSCLE IN TABES DORSALIS.*

J. BRADFORD McCONNELL, M.D.,

Associate Professor of Medicine and Neurology, Vice-Dean of the Medical Faculty University of Bishop's College, Montreal, Physician Western Hospital.

Each case of Tabes Dorsalis, that one meets with, presents some new symptoms and features, not observed in our preceding cases. This Protean character of the manifestations of this disease thus relieves their study from the monotony which is apt to

* Case exhibited at meeting of Montreal Branch, British Medical Association.

obtain in recording cases with greater uniformity of symptoms. The following case illustrates some of the rarer effects observed in this disease, depending on trophic disturbances.

✓ Mrs. M., aged 32, was admitted to the Western Hospital on February 9th, 1895. Complained of inability to walk or stand, numbness in the legs, defective vision, and symptoms referable to the bladder. She was born in England in 1863, coming to Canada in 1883; she was then in good health; she married in 1884, but has not had any children. Some four years after marriage she was treated for a gastric attack which lasted two weeks. She then suffered from some uterine disease, was told she had "ulceration"; there was considerable leucorrhœa. She was treated with internal remedies and local applications for about 3 months; at that time she noticed difficulty in walking.

Besides scarlatina, whooping cough, and measles, has not had any other illness. There is no definite history of syphilis, although some circumstances not noted would lead to the inference that such was not improbable. Her family history is good.

She dates her present illness from the floods of 1888, her house in Griffintown being in the inundated district. Some two weeks after, she complained of shooting pains in both legs; the joints were not swollen. She has not been free from these pains since, but they have been less during the last four months.

In October, 1891, three years after her attack of what she calls rheumatism, while putting a stick of wood in the stove, her right hip suddenly gave away, the leg becoming two inches shorter than the left one. She suffered none, and had no treatment other than rest. Was able to move about until the fracture occurred, although during the two previous years she noted a weakness in the limbs which was gradually becoming more marked, so that she required to lean on a chair or other support in moving about; locomotion was more difficult at night. She describes a sensation as of pricking with pins and needles in both feet, followed later by numbness, which was also progressive. During the last four years has had gastric attacks lasting 7 or 8 days, consisting of pains in the region of the stomach, and vomiting, appearing usually about the menstrual period. About the time of the fracture the eyes gave evidence of disturbed vision. In December, 1894, while trying to get downstairs, she fell, and fractured the left leg. Both fractures occurred above the trochanters in the neck, and were not accompanied by pain, and but slight irritation of the surrounding parts.

About a year ago there began to appear in the right side of right hip a bony plate, which has gradually increased in size, now measuring about 3 inches in length and 2 inches in breadth, triangular in shape, the base upwards, occupying the position of the tensor vaginæ femoris muscle. During the last two years has passed her urine with difficulty; now takes some fifteen minutes to empty the bladder.

At present she appears fairly well nourished; the lower limbs are atrophied, especially below the knee, and the power of the limb very much lessened, and the movements not under her control. The movements at the hip are very free in all directions; there is a complete *intra-capsular* fracture of the neck of both femurs; but little attempt at union has apparently been made, and no evidence of any great amount of callous having been thrown out is now apparent, though crepitus can easily be brought out on forcing the roughened ends together, and the manipulation causes no pain. There is loss of muscular sense; sense of touch present, but referred to opposite foot; is analgesic in both limbs; pricking with the aesthesiometer, and other stimuli, gives a sensation of burning, noticed only two to four seconds after contact. Both patellar reflexes are absent. The sense of warmth and cold is present. The muscular sense is diminished in the arms also; with the aesthesiometer two points are felt at the finger tips only when they are 15 to 18 mm. apart, except in the thumb, index, and middle finger of the left hand, where it is 6 to 8 mm.

The eyes were examined by Dr. Stirling. There is left ptosis; sees double in near vision; pupil immobile to light; changes during accommodation; left v. 5-9 right, v. 5-5 left. Color perception normal; fundus normal, no pallor of disc, yet field is much contracted for colors and form, and concentrically.

The features of interest in this case are: anomalous analgesia, in which different painful irritants gave her only a sensation of burning; allochiria, or irritation of one limb being referred to the other; the fact that the peripheral nerves appear to have been the earliest to have undergone the degenerative changes. The deep anæsthesia is evidenced by the painless condition of the hip after the fracture. There is also delayed sensibility.

The progressive atrophy in the lower limbs is not accompanied by any fibrillar contractions, and the lessened power indicates degeneration in the peripheral motor nerves, which is most marked at parts remotest from the cord. This case thus lends sup-

port to Dejerine's view, that atrophy is due rather to peripheral neuritis than to involvement of the anterior roots or horns in the cord, and points to the new views in regard to the pathological anatomy of this affection, which locates the primary changes in the nervous tissue of the posterior roots, and even in the peripheral sensory trunks and nerves, rather than in the posterior horn and columns of the cord.

The fractures observed in this case are chief elements of interest, the fragility of the bones being caused undoubtedly by the same influences, which produce the muscular atrophy, and are the result of destruction of the conducting tissue between these parts and their trophic nerve centre, or possibly some defect in the sensory portion of the nervous arc. Although we have a symmetrical condition at present in the two hips, the fact that several years elapsed before the second fracture occurred, would show that the degeneration was not so much of primary spinal origin, as from the roots, or peripheral, as its progress was unequal on either side. The brittleness and fragility is explained by *Richardière* to be due to a thinning of the bone throughout, owing to enlargement of the Haversian canals, and destruction of the osteoblasts. It is interesting to note in this connection a description of a similar resorption of bone, in a form of Greek Lepra, or Elephantiasis, described by Dr. Evaristo Garcia, called in Columbia, South America, where it is very prevalent, mal de San Antonio; and reported recently by Dr. A. S. Ashmead, in *New York Medical Journal*, in which a slow form of disease of the nerves, beginning with anæsthesia of the extremities, is followed by atrophy of the muscles, and complete resorption of the bones.

Among the rarest of the complications of Tabes is ossification of the muscles. Obersteiner, in the last issue of the *Annual* of the Universal Medical Sciences, states that this condition has been thus far but seldom observed, mentioning a case reported by Lockering, of Sheffield, where a substance of bony consistence, seven inches in length, appeared in the right rectus femoris muscle of a tabetic patient.

In this case the bony plate occupies the position of the tensor vaginæ femoris, and is quite movable beneath the skin, the base of the triangular mass corresponding to the attachment of that muscle to the anterior part of the outer lip of the crest of the ileum, and appearing as it did some three years after the spontaneous fracture here, cannot be regarded as the result of calcification of callous thrown out at that time, but apparently is a calcareous infiltration of a muscle undergoing atrophy.

REPORT OF A CASE OF PAPILOMATA OF THE
OVARIES AND TUBES, REMOVAL' RECOVERY.

By A. LAPHORN SMITH, B.A., M.D., M.R.C.S., Eng.
Professor of Clinical Gynecology, Bishop's College.

Owing to the comparative rarity of this disease, a brief report of a typical case which recently came under my care may prove of interest.

Mrs. H., 40 years of age; mother of two children; last child 15 years ago; one miscarriage 12 years ago. Menstruation began at 13 years of age; always normal till marriage at 23. Menstruation now lasts five days, normal in quantity but exceedingly painful. Bowels moved every four days, but even then only by taking medicine, and before they move there is an intense bearing down pain, all over lower abdomen. Coitus is so painful as almost to be impossible. Locomotion and riding in carriage causes severe pain, and it also pains her to sit down. She has a bad complexion and a dirty tongue, and complains of a bad taste in the morning. But the pain, which began 2 years ago, and has been steadily growing worse, is the symptom for which she is compelled to seek relief. On examination externally, a moderate amount of fluid is found to distend the abdomen, and by bimanual palpation the uterus is found to be retroverted but not fixed, and the appendages very much enlarged and nodular, appearing about as large as two oranges.

After two days spent in the usual preparations for abdominal section at my private hospital, the patient was placed in the Trendelenburg posture, and the abdomen opened. About a pint of dark serum was mopped out, when there was at once seen a large bunch of warty growths completely filling the pelvis, and rising to half way between the pubis and the umbilicus. They were of a glistening white, very much resembling white currants both in color and size, but none were to be seen on the peritoneum other than that portion lying in the pelvis. They were removed in bunches, their connection with the tubes was so friable that they broke off at the slightest touch, leaving a freely oozing surface. When enough of them had been removed to permit the ovary and tube to be seized, these were tied and removed. The two sides presented exactly the same appearance. As there were a great many smaller bunches adherent to the back of the uterus and to all the posterior surface of both broad ligaments, these were all

removed by scraping them off with the ends of the fingers. The oozing was now very free, but was eventually stopped by ligatures on the ovarian and branches of the uterine arteries. The bleeding from the back of the uterus still continuing, a purse string silk suture was placed just below the surface all around the bleeding area, and when this was tightened, the bleeding was completely arrested.

I might here add that without the Trendelenburg posture, this operation would have been a desperately difficult one on account of the bleeding; but being able to see the bleeding surfaces, it was a comparatively easy matter to grasp them with a long Pöean forceps, and encircle them with a ligature.

The uterus was then fastened to the anterior abdominal wall, after scarifying the opposite surfaces, and the incision closed with through and through silk worm gut sutures. No drainage tube was employed; in fact, from being an ardent advocate of the tube, I have come to consider that its usefulness has gone. With our ligatures securely tied, all oozing stopped and the peritoneum thoroughly cleaned, what need of a tube? The Trendelenburg posture has done away with the need of it.

Although the patient suffered a good deal of pain, necessitating four small hypodermics of morphia, she made an excellent recovery, getting up in three weeks and going home in four and a half, and I have since heard from her physician that she is feeling perfectly well.

The most interesting points in connection with these cases are, first their pathology, second their diagnosis, and third their prognosis.

As is well known, two different pathological conditions may present somewhat similar appearances with those found in my case. The most common is due to papillomatous cysts of the parovarium. These cysts sometimes become so filled with warty growths sprouting into their cavity from their lining membrane that the cyst finally bursts through the broad ligaments, and turns inside out, as it were, presenting a dense mass of warty material. Some of them become detached, and are carried by the movement of the intestines to distant parts of the peritoneum, where they become engrafted. I once saw Olshausen in Berlin operate on such a case, and the abdomen was so filled with these masses growing from every portion of the peritoneum that there was nothing left for him to do but to sew the patient up without attempting their removal.

In other cases again, which may be called primary papilloma of the ovary, the warty growths begin on the inside and penetrate through to the outer surface of the ovaries, and gradually spread until the ovaries and tubes are covered with them, and even the adjoining surfaces, of the broad ligament. This seemed to be the case in my patient, the warts being very numerous on the peritoneum, lining the recto-vaginal pouch, and on the back of the broad ligaments ; but there was no evidence of infection on any other part of the peritoneum ; after the ovaries and tubes had been tied off and the warts removed, the broad ligaments appeared quite natural apart from the oozing from the raw surfaces. An analysis of trustworthy lists of abdominal sections shows us that papillomatous cysts of the ovaries are rare before 25 years of age, the period of life when they are most frequent being between 25 and 50 years.

In some cases the warty growths take on malignant action, forming a sort of cauliflower epithelioma, while in other cases they become very hard, either fibrous or even cartilaginous ; but in the specimen under notice they are extremely soft and friable.

As to the diagnosis, it would of course be almost impossible to diagnose the exact pathological condition before the abdomen was opened. The complexion of the patient and the presence of fluid must have led one to suspect malignant disease. Indeed, Bland Sutton says* surgeons are alarmed when they meet with this condition, as they mistake it for cancer or sarcoma. There is, however, he says, no cause for alarm, as the warts quickly disappear after the removal of the primary tumors.

With regard to the prognosis, it is much better than one might at first suppose, considering the resemblance between these warty masses and malignant disease or epithelioma. The prognosis is quite favorable, provided all the warty masses have been removed, in which case it is not usual for the disease to recur. Skin warts appear suddenly, and almost as suddenly disappear. Thus the life of a wart is often very transient. So with peritoneal warts ; but as long as the seed supply continues, new warts spring up, last for a time, and die, to be succeeded in their turn by a new crop. When the tumors are removed, the supply of germ epithelium ceases, the warts die and the crop is not renewed.

In my case the immediate result seemed very satisfactory. The pain has gone, the bowels are regular, appetite and strength improved, and the dirty complexion has cleared up. As only a few months however, have elapsed since the removal of the growths, it is too soon yet to say what will be the ultimate result.

In view of the possibility of these growths taking on malignant action, their early removal cannot be too strongly recommended.

*Bland Sutton, Tumors, p. 399.

Selected Articles.

FIVE YEARS' EXPERIENCE WITH THE COLD-BATH TREATMENT OF TYPHOID FEVER.*

By WILLIAM OSLER, M.D.

OF BALTIMORE, MD.,

Professor of Medicine in Johns Hopkins University.

During the first year of the hospital service, typhoid fever was treated symptomatically. The number of severe cases admitted was unusually large, and there were eight deaths among thirty-three patients—a percentage of 24.2. For the past five years ending May 15, 1895, systematic hydrotherapy has been used—the method of Brand, with certain minor modifications. In the first report (vol. iv) the plan was given, but I may repeat here that each patient receives a tub-bath of twenty minutes at 70° F. every third hour, when the rectal temperature is at or above 102.5° F. Frictions are applied in the bath, and a warm drink or a stimulant is given afterward. In a large proportion of the cases no other treatment is employed. If the pulse is feeble, whisky is given, and strychnine. The diet is either wholly milk or in part broths and egg-albumin. It may be noted that all the cases come under my immediate care or, in my absence, that of Dr. Thayer, the Associate in Medicine.

In estimating the value of any plan of treatment, it is important that all circumstances should be taken into account. In the previous report I dealt with the statistics as so many patients admitted, of whom so many died; and this, I think, should be done in all institutions—give the total number of cases of each disease treated to a conclusion, and the number of deaths, irrespective altogether of the length of stay in the hospital or the condition on admission. General hospitals are everywhere liable to be repositories of the more severe or troublesome cases, and in typhoid fever more particularly of protracted cases, in which serious symptoms have developed late in the disease. A high rate of mor-

*From forthcoming "Studies in Typhoid Fever," No. ii, Johns Hopkins Hospital Reports, vol. v.

tality in any given acute disease may be an indication of a special usefulness of the institution. As already given, the general statistics of the hospital in typhoid fever are :

Cases admitted during the six years ending May 15, 1895	389
Number of deaths	34
Percentage of mortality	8.7
Cases admitted before the introduction of hydrotherapy	33
Number of deaths	8
Percentage of mortality	24.2
Cases admitted since the introduction of hydrotherapy	356
Number of deaths	26
Percentage of mortality	7.3
Number of cases bathed	299
Number of deaths among the bathed cases	20
Percentage of mortality in the bathed cases	6.6

The percentage 7.3 represents the total mortality during the past five years ; but as it does not represent the mortality of the cases treated by hydrotherapy, the figures must undergo a further analysis. Many circumstances interfere with the systematic carrying out of the plan, among which the following are the most important :

In the first place, a number of cases are admitted in the second week, and even in the third week, with a falling temperature, and the fever constantly below 102.5°F. Cases, too, are admitted early, which have low temperatures and mild symptoms throughout. Brand and others urge that these should also be bathed ; but in a large proportion of all such cases this appears superfluous. There are exceptions, however—cases in which the fever is low on admission, and even remains low for a week or ten days, to be followed by active and threatening symptoms. Nos. XXII and XXIX of the fatal cases were of this kind, and in both one could not but regret that the baths had not been used from the outset. In the very mild cases, seen more frequently in private than in hospital service, the baths are unnecessary. Last year we admitted an unusually large number of such mild cases.

In the second place, some patients are admitted late in the disease, and are too ill to bathe. A patient brought in at the end of the third week, with high fever, rapid, feeble pulse, meteorism and diarrhœa, stands, I believe, a much better chance, with careful sponging, to reduce the fever, than he does with tubbing every fourth or fifth hour and the disturbance unavoidable in the lifting out of bed. There were five patients admitted in too feeble a condition to bathe, not one of whom died.

Thirdly, there is a group of cases which on admission present serious complications—hemorrhage, signs of perforation, very intense bronchitis, pneumonia, pleurisy or intense meteorism, with severe diarrhœa. On account of hemorrhage the baths were postponed on several occasions. There was no instance in which on admission the pulmonary symptoms seemed to contra-indicate the treatment.

Fourthly, there are cases which were not bathed at first because the diagnosis seemed doubtful. Two of the fatal cases, to which reference will be made shortly, were not recognized clinically as typhoid fever. Each autumn we have a certain number of cases of malaria that present features closely resembling typhoid fever—so much so that baths have been given. These are instances of the so-called estivo-autumnal fever in which the organisms may at first be difficult to find. In other instances, with a strong suspicion of malaria for a day or two, the symptoms of typhoid fever have developed subsequently, but the temperature meanwhile has fallen below the bathing-point. In several cases the condition at first resembled tuberculosis.

And, lastly, the baths have been frequently changed to cold sponges, on account of hemorrhage, profound weakness, tenderness, and swelling of the abdomen, signs of perforation, and in a few cases because of the active protestations of the patient. The sponging, when thoroughly done, is almost as formidable a procedure as the cold bath ; indeed, we have had patients ask to have the baths resumed.

The following are among the most important reasons which caused transient suspension of the method: hemorrhage, 13 cases; perforation, in which condition even the sponging is rarely allowable, but in which the extremities may be bathed without disturbing the patient ; great weakness and prostration, 11 cases ; active mental symptoms, for one day in one case, for two days in another ; extreme tenderness of the abdomen, for one day, one case ; severe bronchitis, intense laryngitis, after operation on abscess of parotid, severe phlebitis, pleurisy, each one case. In many of the fatal cases the baths were suspended for 24, sometimes 48, hours before death.

There were several instances in which the symptoms of relapse were so slight that the treatment was not rigidly enforced.

Of the 356 cases treated during the five years, 299 were bathed ; of these, 20 died, a mortality of 6.6 per cent.

Of the 57 cases that were not bathed for various reasons, usually because of the mildness of the disease, 6 died,—a percentage of 10.3. This high ratio of mortality in the unbathed cases is, of course, due entirely to the circumstance that conditions, mentioned later, interfered with the use of the baths in a group of cases of unusual severity. In the 6 fatal cases, the histories of which are given in full in another place, in two, Cases XI and XVIII, the diagnosis was wrong; in the one, in an old man of 70, with consolidation of the lower lobe, the disease was thought to be lobar pneumonia, and in the other the patient had been in the hospital the year before with entero-colitis, and on re-admission with severe diarrhœa, typhoid fever was not suspected.

In Case XXVII the disease was at first thought to be tuberculous cerebro-spinal meningitis; the temperature was low, the nervous symptoms marked, and it was not until parotiditis developed that our suspicions were aroused about typhoid fever.

In Case XXVIII, after twelve days of moderate fever, severe symptoms developed, with tympany and abdominal tenderness and diarrhœa. It was thought best to use the cold sponges; death was probably due to perforation.

In Case XXXII the patient was admitted, bleeding profusely from the bowels.

In Case XXXIII the fever was low, only touching 104° at entrance, and subsequently not rising to the bathing-point. Death occurred from thrombosis of the middle cerebral arteries.

Two advantages are claimed for hydrotherapy in typhoid fever—a mitigation of the general symptoms of the disease and a reduction in the mortality. Our experience during the past 5 years bears out these claims.

In general hospitals, to which cases rarely are admitted before the end of the first week, the full benefits of the cold bath, as described by Brand, cannot be expected; nevertheless, in any large series, the severer manifestations appear to be less common. As has been urged so often and so ably by many writers, the beneficial action is not so much special and antipyretic as general, tonic, and roborant. The typhoid picture is not so frequently seen, and we may have 20 or more cases under treatment without an instance of dry tongue or of delirium among them. It is a mistake to claim, as do the too-ardent advocates of the plan, that severe nervous symptoms are never seen. I have taken the pains to go carefully over our records on this point. There were

in the first 3 years 13 cases, in the past 2 years 9 cases with delirium. Most of these were protracted cases which had from 75 to 120 baths.

A far more important claim is that the use of the cold bath reduces the mortality from the disease. The comparison from death-rates as a measure of the efficacy of any plans of treatment is notoriously uncertain unless *all* the circumstances are taken into account. Our own figures for the past 5 years, for example, illustrate this—6.2 per cent. in the bathed cases, 10 in the unbathed cases—as the latter group is made up entirely of cases too mild to bathe and 6 patients in whom either the disease was not recognized or who were too ill on admission to treat.

Statistics have a value in this connection only when the figures on which they are based are numerous enough to neutralize in some measure their notorious mobility. Small groups of cases are useless; 24 per cent. of mortality in our first year in 33 cases, and a series of nearly 50 bathed cases without a death, illustrate the liability to error in discussing a few cases. Unfortunately, typhoid fever is a disease in which the cases may be reckoned by hundreds and thousands, and the average mortality in general and special hospitals throughout Europe and America is easily gathered. The rate may be placed between 15 and 20 in each 100 cases. In the Metropolitan Fever Hospitals, London, the death-rate, as given in the report for 1893, was 17 per cent.

The cold-bath treatment, rigidly enforced, appears to save from 6 to 8 in each hundred of typhoid patients admitted to the care of the hospital physician.

While I enforce the method for its results, I am not enamored of the practice. I have been criticized rather sharply, for saying harsh words about the Brand system. To-day, when I hear a young girl say that she enjoys the baths, I accept the criticism, and feel it just; but to-morrow, when I hear a poor fellow (who has been dumped, like Falstaff, "hissing hot" into a cold tub), chattering out malediction upon nurses and doctors, I am inclined to resent it, and to pray for a method which may be, while equally life-saving, to put it mildly, less disagreeable.

ON THE ADMINISTRATION OF THE SALICYLATES
IN ACUTE RHEUMATISM.

By P. W. LATHAM, M.A., M.D.

Extracts from a paper read before the Cambridge Medical Society.

(From the *St. Louis Medical and Surgical Journal*, October, 1895.)

We have now become so familiar with the successful treatment of acute rheumatism by means of salicylic acid and salicylates, that it may seem somewhat superfluous for me to address you on the subject. But cases have come under my observation in which objections have been taken to the use of these remedies, on the ground either that they disagreed with the patient, producing nausea, vomiting, etc., or that notwithstanding fairly large doses of the drug, the pains have not been relieved, the temperature has not been reduced, or, most serious of all, cardiac or other complications have arisen during the time the patient was taking the medicine, and when apparently he was under its influence. Now it is in preventing the development of these complications that, when properly administered, the remedy so strikingly shows its power, truly acting as a distinct specific.

In my Croonian Lectures, in 1886, I spoke *à propos* of rheumatism, as follows: "Here is a disorder which, under different treatment, may exist for weeks, stationary, so to speak, in its intensity, the great heat and nervous and vascular excitement and pain and swelling exactly of the same amount to-day as they were weeks ago; a disorder which, less than fifty years ago, was said to be often such in itself, and such in its appalling incidents, as to need, from time to time, that medicine should put forth the full compass of all its powers. Every organ, or system of organs, which, either directly or indirectly, can receive the impression of remedies, are from time to time called to bear all that they can possibly endure; and it is often only when the powers of medicine are pressed even to the verge of destroying life that life is saved.

"And now, with or without the administration of a purgative, as the occasion requires, the patient is placed fully under the influence of salicylic acid, and in from forty to sixty hours, not unfrequently in a shorter time, the pains in the joints have subsided, the limbs can be freely moved, and the bodily temperature has reached the normal condition. But more than this—and here the remedy shows its signal power—in no case of rheumatism that has

come under my care during the last six years, either in hospital or in private practice, has there been developed, where the heart was previously sound, any cardiac complication, such as endocarditis or pericarditis. If this can be maintained and ensured, we have, indeed, in our hands a most potent remedy. Cardiac complications constitute the chief danger of acute rheumatism, and the danger, if the disease is taken in hand soon enough, may with our new remedy be averted.

“Eight years’ further experience has only confirmed what was then stated. I have seen numbers of cases where complications have been developed before the patients came under my care, but I feel strongly that these complications might be prevented, or at least materially lessened, by earlier and more energetic treatment, and it is for this reason chiefly that I venture to address you to-day.

“Now, what are the conditions to ensure success?”

“Principally, the true salicylic acid obtained from the vegetable kingdom must alone be employed. If you have to give large doses, avoid giving the artificial product obtained from carbolic acid, however much it may have been dialysed and purified. An impure acid will very quickly produce symptoms closely resembling delirium tremens.”

The causes of failure with this remedy, as far as I have been able to judge, are :

- 1st. Insufficient doses at the commencement.
- 2nd. The non-administration of a purgative.
- 3rd. Feeding with substances other than milk, such as beef tea, broths, etc., especially in the earlier stages.

As this plan of treatment works prosperously day after day in its immediate effects, so day after day it gives an earnest of the remedial impression it is exercising upon the whole disease. It abates the fever, it softens the pulse, it reduces the swelling, and it lessens the pain. In short, it subdues the vascular system like a bleeding, and pacifies the nervous system like an opiate ; and often in the course of a week the acute rheumatism is gone. In three days there is often a signal mitigation of all the symptoms ; and in a week I have often seen patients who have been carried helpless into the hospital, and shrieking at the least jar or touch or movement of their limbs, risen from their beds and walking about the ward quite free from pain.

Now, if, in the treatment of acute rheumatism, you were to choose one indication and abide by it, and were to trust one class

of remedies, and to it only, you would find more cases that admit of a readier cure by the method now described than by either of the two former. You would find the aggregate of morbid actions and sufferings, which constitute the disease, more surely reached and counteracted and more quickly abolished by medicines operating upon the abdominal viscera only than by those which influence either the blood vessels only or the nerves only.

I would still recommend that the natural salicylic acid, or its salt, should be employed in preference to the artificial acid when large doses are to be administered. I admit that what are termed the "physiologically pure" preparations may be as good ; but I prefer using the natural products, owing to the complete safety which, with ordinary care, attends their administration. In a paper in the *British Medical Journal*, of December 10th, 1881, I first called attention to the danger of using the artificial acid. The impurities then existing in it amounted to as much as 15 per cent. By improved methods of preparing it, in 1884, these impurities were reduced to 5 per cent., and now it is so carefully prepared, that the product is said to be "physiologically pure." In the *Pharmaceutical Journal* of November 22nd, 1890, you will find a very exhaustive paper by Professor Dunstan, giving an account of these impurities, with a report also, by Professor Charteris, of the poisonous effects which two of these impurities, viz., ortho-creosotic acid and para-creosotic acid, have on the animal system. The same journal also contains a report of an interesting discussion on the subject which took place at the Pharmaceutical Society.

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

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THE MOST SUITABLE AMERICAN CLIMATE FOR CONSUMPTIVES.

By A. H. STEWART, M.D.,

*In American Practitioner and News.**

He presumes that in a climate where tuberculosis is prevalent, it either favors the development of the specific organism or renders the inhabitants more susceptible to its action.

Laboratory experiments show that moisture, darkness, bad ventilation, and moderate warmth increase the vitality and virulence of these specific organisms, and increase their power to propagate their species, and that dryness, light, especially sunlight, moving atmosphere, and extreme temperature, either hot or cold, especially the latter, lessen the vitality and virulence of these organisms and diminish their fructifying powers. Observation has also shown that cold and moisture, and, to a less extent, warmth and moisture, retard the transpiration of the fluids of the body, both through the skin and respiratory mucous membrane, diminish the excretion of urea and carbonic acid, induce congestion of the internal organs, especially the lungs and kidneys, favor colds and catarrh of the respiratory mucous membrane, lessen hæmoglobin and other vital constituents of the blood and tissues, and in this way weaken potential and kinetic cell energy, and favor tuberculosis. While, on the other hand, cold and dryness, and, to a less extent, warmth and dryness, increase the transpiration of the fluids of the body, facilitate excretion of urea and carbonic acid, relieve overtaxed viscera, favor oxygenation, increase hæmoglobin

*Read at the June meeting of the Kentucky State Medical Society, 1895.

and other vital constituents, and thereby increase latent and active cell energy, favor constructive metamorphosis, and therefore oppose tuberculosis. It has been further shown that if to dryness there be added a considerable degree of rarefaction, with its usual favorable accompanying influences, sunshine, lowered humidity, lower temperature, and increased diathermancy (power of transmitting radiant heat), the above beneficial effects are doubly intensified, with the additional benefits of accelerated and strengthened heart action and respiration, increased appetite and assimilation, increased thoracic and pulmonary ventilation, and increased absorption of infiltrated exudation and broken down *debris*. The latter obviates the necessity of forcible expulsion by cough and expectoration, removes so much additional culture soil for the tubercle bacillus, and even an additional amount of bacilli themselves. In this way these climatic attributes exert both a direct and indirect beneficial influence on the body organism, and thus favor the healing of morbid conditions in the lungs.

As the reduction of atmospheric pressure comes at the rate of half a pound to the square inch of surface for each thousand feet of ascent, and as lowered temperature through atmospheric expansion, which also gives rise to lowered humidity, comes at the rate of about three degrees for each thousand feet of ascent, these favorable climatic conditions are naturally found in the greatest abundance in such high, dry regions in the interior of Continents as the Alps in Europe, the Rocky Mountains in the United States, and the plains of Nubia and plateaus of Abyssinia in Africa, where solar and terrestrial radiation are the greatest. Consequently these places are fast becoming the Meccas for the consumptives of these respective countries.

The Adirondacks in New York, the Lower Alleghanies in North Carolina and Georgia, the pineries of Georgia and South Carolina and Florida, while offering many advantages to invalids, have no direct therapeutic influence on tubercular lesions and cavities. Such climates are found chiefly in the great plains and plateaus of the West, where moisture lessens as they are approached from the East or West, and sunshine and dryness increases. Thus, while the annual rainfall at New Orleans is 65 inches, in Yuma, Arizona, it is only 2 inches; the average per cent. of cloudiness at St. Louis is 52; Prescott, Arizona, 24; Colorado and New Mexico stand unrivalled in their claims as suitable climates for consumptives, and at Denver and Colorado Springs better results have been obtained than anywhere else.

New Mexico is one of the driest States in the Union, average rainfall 10 to 12 inches, and not more than 25 or 30 cloudy days in the year ; it has a lower altitude and warmer climate in its southern parts than Colorado, and patients who cannot remain in the latter place and in northern parts of New Mexico often do well in the southern parts and in the northern parts of Texas, such as El Paso, and later can come to northern New Mexico or Colorado. In no part of New Mexico does vegetation rot, but dries up ; meats do not decompose, on account of the absence of moisture. Asthma and hay fever are unknown among the natives, and a vast majority of cases of incipient tuberculosis are cured entirely by a sojourn here of from six months to three years.

Many localities west of the Sierra Nevadas, Santa Barbara, Los Angeles, San Diego and Pasadena are noted health resorts, but are not so good as more inland resorts, and north-western Texas and southern and western New Mexico possess the most advantages for tuberculous subjects, as they possess curative influences nearly or quite equal to that of the climate of higher and colder regions, without many of these objectionable features, and many can go there who would not be benefited in the latter places. The most suitable American climate may be included in the nine degrees lying between the 31st and 40th parallels north Latitude and the nine degrees lying between the 101st and 110th meridian west Longitude. The chief objections to the lower regions are the winds and sands which they float, but the same disadvantage occurs in Colorado, and the health resorts are usually protected by hills and mountains.

As a general rule, persons suffering from valvular lesions, rapid action of the heart, emphysema, pneumonia, pneumo-hydrothorax, "existing hæmoptysis," advancing bronchiectasis, hypersensibility of the nervous system, double cavities, pyrexia, great debility or advanced age, should not go to the higher altitudes. Yet many such persons do well in the highest, coldest portions of the central Rocky Mountain regions, but many of these will do better in the lower, warmer, drier sections referred to. Unless hæmoptysis actually exists, such cases usually do well at moderately high altitudes, from the fact that the conditions which give rise to hæmoptysis are rapidly relieved. Many cases of valvular disease and many cases of apparently hopeless pulmonary tuberculosis do well at high altitudes, yet great care should be exercised in the selection of such cases. But cases of incipient tuberculosis do

the best, and from this class most recoveries are recorded. Patients with constant, continued fever, great debility and advanced age should strictly avoid high altitudes.

LEUCOCYTOSIS IN PNEUMONIA—INFLUENCE OF DIGITALIS ON LEUCOCYTOSIS.

Stienon (*La Presse Médicale*, July 13, 1895 in *Medicine*) finds that the leucocytes in pneumonia, while varying greatly in number, are generally increased. With the crisis, the small mononuclear lymphocytes increase as well as the eosinophiles. During the period of fever the polynuclear corpuscles abound. In case of delayed resolution or of suppuration, the polynuclears remain in increased numbers, and the small mononuclear forms do not show the commonly-met-with multiplication. In some cases mononuclear forms predominate during the febrile as well as afebrile period.

Hans Naegeli-Akerblom (*Centralblatt für Innere Medicin*, Aug. 10, 1895) confirms the existence of leucocytosis in pneumonia. He traces a connection between the fact, observed by Von Jaksch and others, that in favorable cases leucocytosis is marked, and the clinical observation of Pétresco as to the favorable influence of large doses of digitalis, believing digitalis to be a producer of leucocytosis.

He had an experience with fifty-five cases, in which eleven were lost. But of the fatal cases one was complicated by empyema, two by tuberculosis, one by severe icterus; four of the cases came under treatment *in articulo mortis*; one received no medicament; the two remaining fatal cases were over seventy years of age. The writer, therefore, justifiably regards his results as very favorable.

Experiments on animals and man showed him that polynuclear leucocytosis followed the administration of digitalis.

His conclusions are as follows:

1. Digitalis is one of our most powerful remedies in the treatment of pneumonia.
2. Its influence on the heart, lungs and blood is favorable.
3. When employed in large doses it tends to cut short the course of the pneumonia.
4. In large doses it exerts a favorable influence in inducing leucocytosis (polynuclear). Daily doses of 1.0 to 5.0 Gm. are borne without harm.
5. The employment of cold water in conjunction with the digitalis is to be recommended, as by this means, also, is hyperleucocytosis induced.

TREATMENT OF THE FULGURATING PAINS OF LOCOMOTOR ATAXIA.

Blondée (*Revue de Thérapeutique*, April, 1895, in *Buffalo Medical Journal*) describes a novel way of treating these obstinate pains, by the following simple methods: Its *rationale* consists in the elongation of the spinal cord in the canal, without suspension and the danger of luxation that accompanies that method. The patient is told to perform the following exercise each evening before going to sleep: lying flat upon his back on the bed, he should flex his thighs upon the body and the legs upon the thighs, bringing the knees as near as possible to the chin, advancing the head to meet the knees as much as possible. A band is then passed about the neck and beneath the knees, enabling the patient to retain this position for five minutes. It is evident that the cord will be stretched, especially in the region of the dorsal columns of the spinal cord or the diseased portion.

SURGERY

IN CHARGE OF

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SARCOMA TREATED BY THE TOXINES OF ERYSIPELAS.

For a long time it has been known that an intercurrent attack of erysipelas frequently retarded the growth of a malignant tumor and in exceptional cases resulted in a permanent cure. Many such cases have been reported.

Since the discovery of the organism of erysipelas by Fehleisen, patients suffering from inoperable malignant tumors have been treated by inoculation with pure cultures of the streptococcus erysipelatis. Some of the cases subjected to this treatment showed signs of improvement, others were not benefited, and to some the treatment proved fatal. More recently Coley and Bull have obtained better results by using sterilized cultures of the organism of erysipelas instead of the active cultures. This it would seem is an important advancement, as it is not attended by the risks incident to an attack of erysipelas. Erysipelas under any circumstances is a grave disease, and it must be fraught with special dangers when occurring in one already suffering from a

grave affection. To amputate at the hip joint in a young child for sarcoma involving the lower end of the femur must always be a serious matter. To excise the superior maxillary bone for malignant disease is even worse. If an early diagnosis has been made, and the case is in the hands of a skillful surgeon, recovery from the operation will probably occur, life be prolonged, and possibly the disease eradicated. The deformity, however, which results must remain to a greater or less extent throughout life.

Thirdly, malignant disease often affects structures which cannot be completely removed by the most radical operation. The writer intends to watch this treatment in the hands of different representative men of large medical centres, and later will pronounce upon the results of this treatment.

The sterilized culture used first by Coley is to be found in the shops in a diluted form to be used in doses of from 5 to 30 minims. The treatment should be commenced by injecting 5 minims every alternate day, increasing the dose gradually, according to the severity of the reaction obtained. The temperature after the injections at times reaches an extremely high point.

In April last I saw a case of sarcoma of the femur under the care of Dr. Gibney at the Hospital for Ruptured and Cripples, New York. The sterile erysipelas culture was injected. The patient, a little girl, had been under treatment only two or three weeks. The limb was said to be rapidly decreasing in size, and the reactions following the injections were becoming less marked. In this case the temperature on one occasion after an injection rose to $106\frac{1}{2}^{\circ}$ F.

TAPPING THE VETEBRAL CANAL.

This method was first recommended by Quincke in 1891 as a means of distinguishing between serous, purulent, and tubercular meningitis. The operation is done with the understanding that there is an open communication between the subarachnoid space surrounding the spinal cord and the ventricles of the brain. The terminal cone of the cord is situated at the level of the first lumbar vertebra, and if a puncture is made below this point it is not likely that any of the divergent strands of the cauda equina will be injured. The patient's body should be bent forward while the puncture is being made. In semi-comatose children and in adults, narcosis is not required, and aspiration is also unnecessary, as the cerebro-spinal fluid will ooze out drop by drop, or spurt out if it is under much pressure.

Augustus Caillé, of New York (*New York Medical Journal*, June 30, 1895), has had a personal experience with tapping the spinal canal in four cases, and gives the following description of his method of procedure :—

“ After locating the third and fourth lumbar vetebrae, I place the middle finger of my left hand upon the spinous process of the third, and the index finger on the spinous process of the fourth lumbar vetebra, pressing firmly upon the bone. I now mark with the nail of my right index finger the interspace between the two fixed points, and puncture precisely in the median line, with a large-sized hypodermatic needle attached to its syringe, which is entirely used as a handle and not for the purpose of aspirating. No undue force should be used in propelling the needle forward ; it readily enters the spinal canal, and can be moved about freely if it is in the right place. The syringe may now be unscrewed from the needle, which remains *in situ* and permits the fluid to escape into a sterilized bottle for subsequent examination.” He expresses the opinion that tapping of the spine may be safely employed to relieve pressure symptoms in various forms of disease. In chronic hydrocephalus it is a safer procedure than tapping the cranium. For diagnostic purposes its value is firmly established.”

ANAL FISSURE OR ULCER.

Harrison Cripps, of St. Bartholomew's Hospital, London (*Brit. Med. Jour.*, July 20, 1895), states that if a case of this kind is of comparatively recent origin, if muscular fibres are not exposed, and there is no undermined muco-cutaneous surface or sinus present, there is a fair chance of a cure being effected by simple remedies. The motions must be kept soft by a laxative ; a teaspoonful of the confection of senna early every morning is effective. Capsules of 15 to 30 drops of the fluid extract of cascara sagrada may be taken at bed-time, or the following dinner pill : Pil. col. co., 10 grains (0.65 gramme) ; pil. rhei. co., 20 grains (1.3 grammes) ; mix and divide into six pills, one to be taken at dinner time. The anus should be gently washed with soap and water night and morning, and on no account should paper be used in the closet, the part being cleaned with a sponge or cotton-wool and water. Two ointments may be prescribed : the one a soothing ointment to be applied five minutes before the motion is passed, the other an astringent ointment to be used at night. It is better for the patient to apply this with his finger than by any form of ointment introducer, for the ulcer is just

at the orifice, and if the patient strain down it can be effectually applied. Six grains (0.39 gramme) of morphine to 1 ounce (31 grammes) of unguentum petrolii form a good soothing ointment ; for an astringent ointment, subsulphate of iron, 10 grains (0.65 gramme) to 1 ounce (31 grammes) may be used, or tannic acid in the proportion of 20 grains (1.3 grammes) to the ounce (31 grammes). Another ointment he has seen occasionally effectual is composed of 15 drops of carbolic acid and 10 grains (0.65 gramme) of powdered camphor to 1 ounce (31 grammes) of simple ointment or unguentum petrolii.

Operative.—Palliative treatment may have failed, or the case from the first may be one better treated by operation. If the ulcer is of old standing and the muscular fibres exposed, or if the edges be undermined or a sinus present, palliative treatment is mere waste of time, for by an operation properly performed the patient may be cured. It should be done as follows : At bed-time two days preceding that of the operation the patient should take two pills (pil. col. co., gr. iv ; pil. rhei. co., gr. vj ; mix and divide into two pills) ; this will insure the bowels being well opened the day before the operation. On the morning of the operation, and an hour before its performance, the bowels should be washed out by an injection of a pint of hot water. The patient being under ether in the lithotomy position, the sphincter is gently dilated. The ulcer is now thoroughly examined with a fine probe to see if any fistulous tract exist, and the extent to which the edges may be undermined. If a sinus exist it must be laid open ; if there is no sinus, or if present after it has been divided, a speculum is introduced into the rectum. The surface of the ulcer is then divided in the middle by a clean cut. The incision should commence on the mucous membrane half an inch above the ulcer and end on the skin half an inch or a little more below it. The depth should be such as partly to divide the external sphincter, and to accomplish this it would have to be at least a third of an inch in depth in the middle. It is quite true that in many cases a more superficial incision will suffice, but as superficial incisions are often insufficient, it is better to make a bolder one at once. Moreover, the depth of the wound makes little difference in the time taken in its healing. After the incision has been made, a narrow strip should be cut with a pair of scissors off the two edges, which will otherwise overlap and interfere with the healing. A strip of lint smeared with eucalyptus-ointment, laid in the cut, and covered

with a pad of aseptic cotton-wool, completes the operation. For a fortnight the patient should be kept in a recumbent position, and, as in all other rectal operations, the wound should be thoroughly washed and redressed night and morning. A dose of castor-oil is given to open the bowels on the fifth day, and after this a mild laxative every alternate evening. When the patient is allowed to get up, it will do him no harm to walk about a bit, but he should sit as little as possible till the wound is completely healed. Nothing retards the healing of a rectal wound so much as the congestion produced by long sitting.

THE TREATMENT OF GONORRHOEA IN THE MALE BY URETHRAL IRRIGATION WITH POTASSIUM PERMANGANATE.

Dr. Cumston (*Journal of Cutaneous and Genito-Urinary Diseases*, October, 1895) reports excellent results after two years experience in the treatment of that common and disagreeable affection, specific urethritis, by daily irrigation of the whole urethra. The strength of permanganate solution used is 1 to 3000. Little pain is experienced by the patient after the second irrigation. At the same time this solution has been found quite strong enough for the destruction of the gonococcus. The solution should be given at blood heat and the average number of irrigations to effect a complete cure has been fifteen. A pint is the quantity of solution used at each irrigation, an ordinary douche pail or irrigator, with a conical bulb rubber catheter attached, perforated by three pin point holes at the base of the cone, thus giving a recurrent flow, is all the apparatus required. A coverslip preparation of the pus is always made at the commencement of treatment; a second after, the fifth irrigation, and from time to time up to the end of treatment.

It is found that the gonococci have considerably decreased in number after the fifth irrigation, and they have generally disappeared after the 10th. His conclusions after treating 30 cases by above method :—

I. The average duration of the affection is 15 days.

II. Complications, such as cystitis orchitis, epididymitis arthritis or bubo are very infrequent. Chordee is less frequent under this treatment, although some of my cases suffered from it.

III. Ardor urinæ only lasts at most four days, usually two.

IV. That gleet is infrequent if the treatment has been properly carried out.

LAPAROTOMY FOR PERFORATION IN TYPHOID FEVER.

PARKIN (*British Medical Journal*, January 26, 1895) gives the history of a case in which the perforation was promptly diagnosed and operated on only two hours after it had occurred. The patient died three days after the operation. The author states that this added one more to the list of twenty such cases which had been so treated with only one recovery. There is no doubt that perforation in the course of the enteric fever is almost invariably fatal, and any recovery from such a complication can only be regarded in the light of an accident, unless surgical treatment be adopted.

TREATMENT OF OBSTRUCTION OF THE BOWELS BY ELECTRICITY.

ALTHAUS (*British Medical Journal*, January 26, 1895) gives the details of two cases in which he was enabled to produce passages from obstructed bowels by means of electricity. An insulated sound with free metallic end was introduced into the rectum, and a moistened conductor applied to the parietes chiefly in the region of the sigmoid flexure. The primary faradic current was sent through, and its force gradually increased until the patient experienced a decided feeling of vibration in the bowel. This was done in one patient at ten o'clock A.M., and the same evening he had a copious movement.

In the second case the application was made at half-past five P.M., and a good motion followed at one o'clock A.M. The method employed by Boudet and Laval of injecting some salt-water in the rectum to act as an electrode is also mentioned. The author states that if electric injections were made soon after the appearance of bad symptoms, and laparotomy followed quickly after failure of electricity, the electrician, as well as the surgeon, would have a better chance of saving the patient's life than now, when they are often called in too late.

PERITYPHLITIC ABSCESS NOT DUE TO APPENDICITIS.

HOMANS (*Boston Medical & Surgical Journal*, December 13, 1894) gives the details of a case of abscess in the right iliac region occurring in a child 4 years of age. There was pain to right of and around the umbilicus, also distention of abdomen and ten-

derness. The pulse was 120, and temperature 103° F. A dose of oil produced only a slight movement. On opening the abdomen the healthy bowels were seen, and to the right of the umbilical region was a level surface of grayish color. This was the roof of an abscess, and on it lay the healthy appendix. The abscess was evacuated and recovery ensued, the appendix not being disturbed. Except for the youth of the patient and the fact that the appendix was normal, the case did not differ from others that are called appendicitis when operated on, and in which the appendix does not happen to be seen.

RESTORING PERSONS APPARENTLY DEAD FROM CHLOROFORM.

LEEDHAM-GREEN (*Birmingham Medical Review*, February, 1895) calls attention to the König-Maas system of rapid compression of the precordium as used in Göttingen. The case on which he tried it was a child four months old. The operation of circumcision had nearly been completed when the child became deadly pale, the pupils dilated, and the respiration and the heart's action ceased. The child was apparently dead. The surface became pale and cold, the eyes shrunken, pupils widely dilated, and there was a collection of froth at the mouth. Rapid compression (about 120 per minute) of the precordium was followed by a faint gasp and ultimate recovery. Seven minutes had elapsed during which neither heart-beat nor respiratory effort could be detected. Sylvester's method, which was first used, was totally inadequate.

GYNÆCOLOGY.

IN CHARGE OF

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Puerperal Fever.—As the gynæcologist is so frequently called to the aid of the general practitioner in the accidents of labor, we venture to begin our retrospect by some reference to an interesting clinical lecture recently delivered by Professor Pinard at the Baudeloque Clinic, Paris (*Medical Press and Circular*, Aug. 16, 1895). He remarked that the later the date after labor that fever supervened, the less serious it was, while the most serious cases were those in which the fever began on the second or third day. He

therefore urged his hearers to take the temperature, not in the axilla, which was unreliable, but under the tongue every evening for the first three days. He also places much reliance upon the rapidity of the pulse for diagnosing. He recommends three grades of treatment : first, intra-uterine irrigation, night and morning, with a 1-4000 solution of biniodide of mercury. (We have found a 1-40 Condy solution to be equally effective.) Second, if the temperature remains high on the evening of the third day, he recommends continuous irrigation with a 1-600 carbolic acid solution. Third, if on the evening of the fourth day the temperature and pulse remain high, he advises curetting. This should be followed next day by another irrigation after the gauze packing has been removed. If this fails, he considers the case beyond the reach of human aid. (We would like to add to the above excellent advice : make sure that your irrigator really enters the uterus, as we have known cases in which the attendant was unable to get the irrigator into the uterus, and the douches which he thought were intra-uterine were only cervical. This was due to kinking of the uterus at the level of the internal os. To perform intra-uterine irrigation surely, the anterior lip of the uterus should be seized by the vulsellum, and drawn down until the canal has been straightened, when there will be no difficulty in introducing the return flow catheter. We have also found it of great benefit to introduce a wick of sterilized absorbent gauze up to the fundus, which is allowed to hang out in the vagina, thus keeping the canal open ; for if the discharges are infected, and then kept pent up in the uterus, by the closing of the canal, the uterus becomes an abscess cavity. We would also like to call attention to the importance of removal of the uterus in desperate cases, as quite a number of recoveries are on record after this treatment.)

Bicycling for Women.—Dr. Bannan, a female physician, has recently (*N. Y. Medical Record*) brought a charge against bicycling for women. She claims that, owing to the form of the saddle, the weight of the body rests upon the soft parts of the perineum instead of on the tuberosities of the ischium. Although we are inclined to think that the saddles would be more comfortable if a little wider, owing to the greater distance apart of the tuberosities in women, yet we absolutely deny that there is any foundation for her insinuation that riding the bicycle is akin to masturbation, and therefore immoral. We have inquired from several lady riders, whom we can depend upon, to tell us the truth freely and

frankly, and they all agreed that nothing could be more absurd. In our own opinion, it would be as unreasonable to call walking an immoral exercise for men because the clothing rubs against the genital organ, as it is to call bicycle riding immoral for women because their genitals rest upon the saddle. For women who are suffering with pus tubes and ovaries and pelvic peritonitis, we admit that bicycle riding is injurious, because it calls the psoas and iliacus muscles into active play, as does the sewing machine; but so would the bicycle be injurious for men with diseased testicles, and such men would not dare to ride. Apart from this one exception, we can see nothing but benefits to be derived from the bicycle for women. They are suffering for want of muscular exercise in the open air and sunshine, and nothing will be more likely to induce them to take it than the fascination of the bicycle. As a celebrated New York gynæcologist recently stated, he had ordered at least one thousand women to walk four miles a day in the open air, but he did not believe that ten of them had obeyed him; while of the ten women for whom he had prescribed four miles a day on the bicycle, every one of them had more than carried out his orders.

We see one source of danger to men in riding the bicycle,—that is, the ungraceful, stooping position they assume, and which is technically called “scorching”; but women riders are free from this fault. One gynæphobe physician, who is opposed to bicycling or any other form of exercise for women, recently stated that the gynæcologists were recommending it in order to fill their offices with such women; but if he saw as we do how many women are sick for want of fresh air and water and exercise which riding the bicycle would make them take, he would see as we do that it is the very thing that will diminish the numbers that come to us.

Abdominal Surgeons.—We sometimes hear the statement made that there is no need of specialists; but this is not the opinion of Jonathan Hutchison, one of the greatest living surgeons, who, in his recent address before the British Medical Association, stated that as soon as he found by personal investigation that the death rate of the abdominal surgeon and gynæcologist was much lower than his own, he resolved that he would cease to do this work, and he would in future send these cases to those who could get the best results.

Lacerated Cervix; immediate suture.—In the *N.Y. Medical Record*, August 31st, Dr. Dudley of New York makes a strong plea for the above. The immediate operation is easy to perform while

the vagina is relaxed, and the cervix can be readily drawn down to the vulva. The advantages are manifold and manifest. First, bleeding from the circular artery is at once arrested; secondly, septic absorption is prevented; thirdly, involution is not interfered with; and fourthly, the formation of cicatricial tissue in the angle of the tear is prevented, thus saving the woman from the many reflex disturbances which we encounter so often.

For the immediate operation, all that is required is the bullet forceps or vulsellum, and an Emmet needle threaded with medium sized sterilized catgut. The bullet forceps can be sterilized by heat, while the needle and catgut may be preserved in a little bottle of absolute alcohol, so as to be ready at a moment's notice.

We need hardly draw the attention of our readers to the importance of the immediate repair of laceration of the perineum, as we presume that this procedure is now generally followed. If for no other reason than the closing up of a common avenue for the entrance of sepsis or puerperal fever, it is well worth the trouble. A darning needle will do for the purpose; but the best instrument is the large curved perineum needle mounted on a handle. This and a tube containing half a dozen threads of sterilized silk worm gut in alcohol should be found in every obstetric bag; for if the laceration is to be repaired at all, it were better that it were done quickly, while the woman is still under the influence of the anæsthetic or while the parts are benumbed by the stretching they have just undergone.

Vaginal versus Abdominal Method of Removing Diseased Uteri and Tubes and Ovaries.—Henrotin, of Chicago (*American Journal Medical Sciences*, October), points out the indications for and advantages of each method in a very clear and able article. In all cases in which there is gonorrhœal infection of both tubes and ovaries necessitating their removal, the uterus should be removed at the same time by vaginal hysterectomy. But when only one side is affected, and the woman is young, it is better, he thinks, to enter by an abdominal incision, as also in the case of large fibroids and when disease of the appendix vermiformis is suspected. We have not yet become converts to the vaginal method; its principal advantage of avoiding an abdominal scar is more than counterbalanced by the difficulty of operating in the dark. To our mind, the abdominal incision, with the patient in the Trendelenburg posture, is the ideal one; every adhesion is seen and ligatured before being cut, and every oozing surface dried; while in cases where the uterus

must come out, the abdominal method leaves a clean, closed, dry line as the only evidence that the peritoneum has been cut and the uterus and appendages have been removed. As far as hernia is concerned, this is an accident which is daily becoming more rare, especially since we are in the habit of leaving the stitches in for four weeks instead of four days, as was done some years ago. By our present method the abdominal incision has had time to become strong before losing the support of the silk worm gut stitches, the presence of which, moreover, hardly causes the slightest irritation or inconvenience.

The Ligature in Oophorectomy.—Penrose (*American Journal Obstetrics*, August, 1895) calls attention to the large number of deaths on record, owing to slipping of the ovarian artery out of the bite of the ligature. In most of the cases the Staffordshire knot had been employed. Tait himself admits that he has seen the ovarian artery slip out of the knot, and hemorrhage take place into the broad ligament, causing an operative hæmatocele as many as fifty times. Penrose therefore recommends the ligature of ovarian artery at its pelvic and uterine ends, when the tubes and ovaries can then be removed without any bleeding whatever. We think that this accident would never occur if the following method, which we always employ, were more generally followed: a medium silk ligature three feet long is caught in the middle with a Cleveland ligature carrier,—a most valuable instrument,—and passed through a portion of the broad ligament free from vessels, and below the level of all bleeding points. It is then divided, and one-half made to encircle the pelvic side of the ligament. Care is taken to make the two ligatures cross each other once or twice, and to see that we are tying the two ends of the same ligature. They are then tied in a surgical knot,—that is, crossing the ends twice in the first knot and once on the second. A few seconds must be devoted to allowing the stump to be squeezed and giving the knot another pull before placing the second knot. The same thing is then done with the half of the stump nearest the uterus.

The next step is, we claim, the most important one—namely, to encircle the whole stump with the ends of the ligature of the uterus side. An important precaution on cutting the tubes and ovary away is to keep the lower blade of the scissors well away from the ligature, as otherwise the ligature may be cut. Since the general adoption of the Trendelenburg posture, hemorrhage has almost ceased to be a cause of death, as the stumps and all other

cut or torn surfaces can be so readily seen and ligatures can be applied without difficulty. In cases of pus tubes of long standing, very profuse bleeding sometimes follows their removal, owing to denudation of the posterior surface of the uterus. We formerly found this difficult to arrest, until lately we have tried the plan of running a purse or puckering string all around the edge of the oozing surface. When the two ends of this are tied, the raw surface is covered with neighboring peritoneum, and bleeding at once stops.

PHARMACOLOGY AND THERAPEUTICS.

IN CHARGE OF

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ON PERMANGANATE OF POTASSIUM AS AN ANTIDOTE TO OPIUM AND MORPHINE POISONING.*

The October number of the *Therapeutic Gazette* contains an able article by Leedon Sharp, LL.B., M.D., on the above subject. Since the time that Moore brought prominently before the profession the question, whether or not potassium permanganate is an antidote to poisoning by opium or its alkaloid morphine claiming that it had certain chemical antidotal powers, different views have been held by the general practitioner. The usual number of devotees to new and untried remedies have found it work "beautifully," and lauded it inordinately; the more conservative thought there might be something in it, and have tried it as occasion arose, but, like wise men, chary of trusting to new remedies alone, have supplemented it with the older methods of treatment; while a minority were satisfied to leave alone innovations of which they had barely heard and never read. Leaving the first and last class out of the question, and taking the opinion of those who, keeping abreast of the times, had tried potassium permanganate, one is surprised, in reviewing the literature, to find how few are the cases of poisoning by opium or its alkaloid which have recovered under the exhibition of Moore's antidote alone. Sharp reports in his thesis being able to trace only one case,—that of Dr. C. H. Callender, who, through an accident to his carriage, had no medicine case with him, the only drug being potassium

*Inaugural thesis delivered by Leedon Sharp, LL.B., M.D., at the University of Pennsylvania (*Therapeutic Gazette*, Vol. XIX, p. 651.)

permanganate, and the only other treatment being walking about, the patient having been well rubbed with whisky previous to his arrival. In this case two ounces of laudanum had been swallowed, the patient recovering. One point brought out in this case is the fact that the permanganate acted better when given hypodermically, increasing force and number of respirations; this is important, in view of the fact that Moore's claims were made on the results of experimentally mixing albumen, morphine and potassium permanganate, and then demonstrating oxidization of the morphine into an inert substance; the statement that 1 gr. of the permanganate was antidotal to 1 gr. of the poison, and the statement that morphine, after absorption into the blood, was excreted by the gastric and intestinal mucous membranes, and there meeting with the antidote, was rendered inert.

Sharp, in his remarkably careful and well-controlled experiments, arrives at the conclusion that, even granting the poison to be excreted (after absorption) by the gastro-intestinal mucous membrane, it had already done its deadly work, and as far as saving the patient's life was concerned, might be considered inert, whether the antidote (given by the mouth) was administered or not *if the antidotal power depended on chemical action alone*. Sharp is inclined to question this chemical action, and by experiment demonstrates about 6 per cent. of morphine in the filtrate and precipitate of a mixture of equal parts of morphine and potassium permanganate solutions, while Wormley* found traces of morphine in a mixture of two parts permanganate and one part morphine, and basing his conclusions on his own series of experiments, and Dr. Callender's case, thinks the best method of administering the antidote is by hypodermic injections.

He draws attention to three important facts which have a material bearing on the experiments of Moore and others, on the lower animals: (a) The large size of the lethal dose in the lower animals, notably dog and rabbit,—10 grains not being fatal to the average dog; (b) the susceptibility of the dog, and especially the rabbit, to poisoning by potassium permanganate; (c) in cases where experiments have been carried out by investigators on themselves, the drug had been taken by the mouth, followed quickly by the antidote, also by the mouth, thus bringing it into *direct contact with the poison* in the stomach, before much has been absorbed.

*University Magazine, Vol. VI., p. 747 (Philadelphia).

Sharp asks some pertinent questions, and finds the answers in the results of his investigations.

1. Has potassium permanganate any antidotal properties?

He answers yes, but not to the extent claimed by Moore and others, for while there is only one case (that of Callender's, noted above) where life was saved by the permanganate alone, there is hardly one reported where life would not have been saved by the other measures used, independently of the permanganate. At the same time, the animals treated by the poison and its antidote, although they died, lived much longer than those used as controls, and treated with morphine alone.

2. Is its action chemical or physiological?

When brought in direct contact, as where the permanganate is administered immediately after ingestion of morphine, to a certain extent chemical; when administered some time after ingestion, and when absorption has taken place, there is no evidence to prove that it acts chemically on morphine in the tissues; therefore it must be physiologically.

3. Is it physiological?

From cases cited, his own experiments, and those of Binz and Sydney Ringer,* he concludes that potassium permanganate has an influence (*a*) on *respiration*, increasing it in frequency and force, but doubts whether this increase is due to any action of the antidote in the poison; but while admitting that it *may* not be due to permanganate absorbed into the system, thinks it may be due to some of the products of this drug; † (*b*) on the vaso-motor system, causing dilatation of peripheral arterioles; and on (*c*) blood pressure, causing a steady and perceptible fall (succeeding a brief rise at time of administration), due either to stimulation of vasodilators or vaso-constructive paresis.

4. Is permanganate of potassium a reliable antidote?

(*a*) Given by mouth immediately after ingestion (also by the mouth) of poison—yes; (*b*) given some time after ingestion of poison, where it has had time to be absorbed into the blood and tissues,—no, although its physiological effects noted above in (3) point to it being a valuable adjunct to other measures; the good effects being due to these physiological actions and to the fact that permanganate gives up some of its oxygen in the presence of organic substances; the increased O in the tissues

*Journal of the American Medical Association, Vol. II, p. 630. Article by Jones.

†See editorial on permanganate, in the Journal of the American Medical Association, Vol. I, p. 755.

due to increased respiration, and that liberated by the permanganate, being of paramount importance in a condition where the patient dies almost as much from Co_2 poisoning as from the toxic effects of the drug. That the O in the tissues is antidotal to the Co^2 poisoning, and not to the morphine poisoning, he proves by a supplemental series of experiments with the combined use of peroxide and morphine in the animal, and by their mixture external to the body, the former not preventing death, and the latter not rendering the active principles inert. As the result of his investigations, Sharp draws the following conclusions :

1. The susceptibility of lower animals to morphine is so low as to render unreliable any experiments on them in arriving at any results referable to man.

2. The dose of permanganate of potassium necessary to counteract the enormous lethal dose of morphine in the lower animals must of itself prove fatal.

3. The exhibition of the permanganate, either by stomach or hypodermically, has a marked influence in prolonging the life of rabbits poisoned by morphine.

4. The action of the permanganate, when given separately, and not immediately following the dose of morphine, is not chemical : (*a*) because there is no proof of a chemical action to be adduced from cases reported or from experiments ; (*b*) because there is evidence that it does not act chemically.

5. The action of permanganate of potassium is physiological : (*a*) because there is no proof that it acts chemically except when brought in direct contact in the stomach ; (*b*) because its exhibition by stomach or hypodermically increases the number of respirations ; (*c*) because its exhibition has an appreciable effect on the circulation, seen in the dilated peripheral vessels, and on the blood itself (favoring clotting).

6. That it is not a reliable antidote : (*a*) because there is no proof that when given after absorption of the morphine, it is *per se* a reliable antidote ; (*b*) because there is proof that when given after absorption of the morphine, it has no apparent effect.

7. That permanganate of potassium, like strychnine, caffeine and atropine, has some valuable properties useful in the treatment of morphine poisoning, but as yet undetermined.

The remarkably careful and thorough investigation of Dr. Sharpe on this subject is of peculiar value, coming, as it does, at a time when the mind of the profession at large is still undecided as

to the merits of Moore's so-called antidote. While the claims of permanganate of potassium have been before us now for some time, fortunately, opium poisoning is not of sufficiently frequent occurrence to justify a rapidly formed opinion from clinical data alone; and while this report places permanganate in its proper rank as a remedial agent in this condition, it teaches a lesson of caution to those who are too willing to worship at a new shrine and follow after strange gods.

The report being on the value of permanganate, of course only incidental mention was made of the value of oxygen in morphine poisoning; but we think there can be little doubt that, while the wise physician will not bind himself down to any one procedure or any one drug, the exhibition of respiratory, cardiac, and nerve stimulants (such as atropine, caffeine and strychnine), with the forced inspiration of pure oxygen, is to-day the most rational and most successful method of combating the conditions found in opium poisoning.

The emergency ward of every hospital should place in the first rank of its appliances, a cylinder of oxygen and an inhaler, or face mask, the usual bivalve nitrous oxygen inhaler of the dentist, with its supply bag, forming an admirable method of administration, while the practitioner, who is within reach of a druggist, should remember the ease with which a fairly pure supply of the gas may be obtained from manganese dioxide, by heating in a Florence flask with sulphuric acid, passing through a wash-bottle, and in lieu of a proper inhaler, using a cone of stiff brown paper, whose small end has been bound around a glass tube inserted in the rubber supply pipe, removing it from the face at every expiration of the patient.

STYPTICIN, A NEW HÆMOSTATIC.

This is cotarmine hydrochloride, mentioned by Gottschalk at the Gynæcological Congress at Vienna, as a useful styptic for hæmorrhage, administered as a 10 per cent. solution for injection, and internally in from $\frac{1}{10}$ to $\frac{8}{10}$ gr. doses.

PERMANGANATE OF CALCIUM.

Nordas (*Gaz. Méd. de Paris*) states that when permanganate of calcium is brought in contact with organic matter, it decomposes into oxygen, manganese dioxide, and lime. Its oxidizing and antiseptic powers are very great; experiments prove it to be more powerful than bichloride of mercury, quite free from toxic properties, and is not caustic.

A NEW TREATMENT FOR PERTUSSIS.

Chateaubourg, in *Médecine Moderne*, describes the following treatment for this distressing and rebellious ailment:—subcutaneous injections of a 10 per cent. solution of guaiacol and eucalyptol in sterilized oil (olive). After the third injection, the fits of coughing are reported to diminish notably, appetite returns, vomiting rapidly ceases, and as the improved general condition begins to show the good effects of the treatment, the cough disappears.

INERT COD LIVER OILS.

The *Druggist's Circular*, in a late issue, has a timely warning anent cheap cod liver oils, which is worth noting. A marked discrepancy in prices having been noticed by those buying wholesale; the increase in the number of wines and other preparations containing the active principles of the oil; and the demand for empty cod-liver oil barrels, led to investigation, with the startling result that the oil, from which the various active principles, grouped under the name of "Gaduel", had been extracted (for use in the various wines, etc., of cod-liver oil) had been sold as refuse, and found its way back into the market again, *stored in the empty barrels used for the genuine oil: verb sap. sat.*

A CANCER CURE.

Dr. E. G. Goodman, in the *North Carolina Medical Journal* again brings forward the claims of *Phytolaca* (*Decandra*)—the Poke—as a cure for epitheliomatous growths. He uses the expressed juice of the leaves, applied locally in the form of a plaster, and remarks: "It has a selective action for the morbid tissue, follows out all the irregularities of the epithelioma, causes, as it were, its liquefaction and removal, and then acts as a cicatrizant for the open sore," and says he has *seen* "large epitheliomatous growths disappear in a few weeks, leaving nothing but a scar to mark its place, its application being painful, but quite harmless to the patient." Advocates of the scalpel or of the later erysipelas-prodigiosus toxine serum will please note, and take a back seat accordingly; several questions arise to one's mind on reading this note—does the disease have a tendency to, or does it ever, recur in the scar which marks the Ebenezer of this dread disease?—does it also cure the glands, which are presumably affected in "large epitheliomatous tumors (cured in a few weeks)?—shall we join the ranks of those who advertise "cancer cured without the knife"?

It is our misfortune not to have seen the issue of the Journal which contains Dr. Goodman's article, and therefore cannot say whether the usual array of statistics (after the style of laparotomy and hysterectomy reports) accompanies, but it sounds too good to be true. It is worth while remembering that Poke is an emetocathartic and depresso-motor, causing death by arrest of respiration through paralysis of the organs concerned, and its local application causes intense pain. Among the other remedies which have been vaunted as cancer cures, one recalls Chian turpentine (from Pistocia Terebenthis), recommended originally by Clay, for internal inoperable cancers, now rarely used, and if at all, only as a possible palliative; arsenious acid, as a caustic, used by Sir Astley Cooper in the form of an ointment, with spermaceti cerate (a dram to the oz. cerate), as a local application, the danger of absorption being too great to permit its use except in selected cases. Among the newer remedies, we find Condurango bark, as an alterative: Pyoctanin (*Methyl-violet* or *yellow* pyoctanin—an anilin dye) given in from 1 to 7½, or even 15, grs. a day—subcutaneously (Stilling), and the serum containing the toxins of the erysipelas and prodigiousus microbes—(Cassar, Berlin; Coley, America), the latter acting best on sarcomata, having little effect in carcinomata, less on melano sarcoma, and osteo-sarcoma giving least satisfactory results of any other form (Coley).

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF

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LARYNGEAL TUBERCULOSIS.

Loeb (*N. Y. Medical Journal*) discusses the effects of Paquin's anti-tubercle serum in the treatment of nine (9) cases of this disease, and claims from results obtained, which were carefully recorded, that this serum should rank equivalent to the antitoxine of Behring and Roux as a remedial measure. While nominally the subject considered is termed laryngeal tubercle, in reality pulmonary symptoms were prominent in each case reported. It is not, therefore, as a local remedy simply that good results are claimed, but as being antagonistic to tubercle with existing evidence of systemic dissemination. Prof. Klebs (*Journal American Medical Asso-*

ciation) gives results of treatment in eight cases of tuberculosis of children by anti-phthisin which seemed beneficial except in two of the patients. He says that this non-success was due to existing septic conditions, and that "although the material reported was "small, I believe it sufficient to show that particularly in tubercular "affections of childhood, anti-phthisin offers most favorable prospects; the selection of cases is of the greatest importance, cases "only being taken which present neither septic complications nor "conditions of exhaustion or marasmus. Cases also fail to recover "where there is great extent of tubercular disease. Such treatment "is preferably conducted in hospitals." These results are said to be satisfactory as far as they have gone, and the treatment is claimed to be worthy of trial.

The recital of details in these recorded cases brings forcibly to the writer's mind some phases of his experience at Berlin in December, 1890, when studying the action of Koch's tuberculin. It will be remembered that this fluid was being then tested with great expectations, owing to the high standing of the originator of it. Time and experience having proved the unreliability of the fluid as a cure for tubercle, its reputation descended with a rush from the pinnacle of enthusiasm to the depths of oblivion and neglect. The wonderful affinity, however, of the fluid for tubercular tissue was not forgotten in the reaction of feeling that followed the crushed hopes of many, and to-day we find veterinary surgeons practically applying this quality for diagnosing tubercle in suspected cattle. It is said to be the most reliable test known.

In the same field of research we find at a later date the serum treatment of rabies, anthrax, etc., fully established. Then the success attending Behrings and Roux's antitoxine of diphtheria confirmed in reputation ere now by time and experience has revived an impetus to investigate and elaborate in the same direction a serum or lymph cure for tuberculosis, and Kleb's anti-phthisin and Paquin's anti-tubercular serum are some of the results of this revival. In view of our experience on this subject we may well receive with utmost caution any vaunted remedy for the disease in question, and it is plain that the results afforded by nine cases treated on any system of cure cannot commend itself as being of much practical value.

At the same time it were a mistake to err on the side of absolute skepticism, for I feel persuaded that some of us will see the day when a reliable serum for cure of tubercle will have been elaborated

and its claims to just recognition established. In this connection the evidence of a late post mortem examination at Royal Victoria Hospital made on the lungs of one of Koch's earliest tuberculin patients is interesting. The pathologist of the Hospital, Dr. Adami, says :—

“ In both apices were to be seen the results of the treatment in 1890-91—abundant signs of arrest of the tubercular process. The most interesting feature of the specimen was the evidence it gave of the extent of pulmonary tuberculosis capable of being arrested by Koch's treatment. Both apices had clearly been the seat of extensive tubercular change. There was extensive tubercular pleurisy, much caseation and the development of numerous cavities in the two apices. The treatment that the patient had undergone during his year's stay in the Berlin hospital had succeeded in bringing the lesion to a standstill during four years by interstitial fibroid change.” The second attack fatal in result was thought to have originated in the old arrested foci of the disease.

Gleitsman, at the last meeting of British Laryngological Association, in a discussion upon Laryngeal Tuberculosis, says although curettement as the most modern and radical treatment of laryngeal tubercle deserves our greatest attention, other endo-laryngeal measures may be necessary as incisions, curettement, submucous injections, electrolysis and galvano cautery, as well as extra-laryngeal operations, viz., intubation and laryngotomy. It is claimed that by curetting we improve or cure the throat lesion, and a better chance is afforded the patient to fight the lung affection. It is the best way of relieving the distressing dysphagia due to tubercular infiltration of the arytenoid region. As the duration of life in a consumptive is in direct ratio to his ability to eat and digest, we easily estimate the vital importance of removing the dysphagia. Lennox Browne says lactic acid alone does not an atom of good ; we must first curette. Improvement in the pharyngeal and laryngeal conditions at once causes improvement in the pulmonary disease. Any serious bleeding is not apt to follow curetting if the wound be not a ragged one. Dr. Luc advises phenol-sulphuric acid for infiltration of larynx, having used it with good effect. Heryng says that curetting reduces œdema when present instead of causing it, although in some few cases œdema may arise from slight operation on larynx. This author advises 2% solution pyoktanin painted over the wound after bleeding ceases, to avoid septic infection. Professor

Sommerbrodt says that the more creosote a patient can tolerate the better the effect. This statement needs modifying, for although a patient's digestive tract may in some cases tolerate large doses of creosote, one needs to be constantly on the outlook for kidney irritation. The writer has two cases of laryngeal tubercle which he is curetting, and each one is taking twenty-five (25) drops pure creosote three (3) times a day in a mixture of glycerine and cod liver oil, with evidently good effect. There are pulmonary symptoms present in one case, not in the other. Carbonated creosote has been introduced for those who cannot take the ordinary drug. It is said to contain 8% acid carbonic and 92% creosote. It is naturally better tolerated in large amounts, but the present price is objected to by some patients.

Apropos of Serum-therapy an American journal advertises Paquin's anti-tubercle serums, stating that a number of prominent physicians are using it with *profitable results*. The satisfactoriness of results is estimated evidently by the profit made in its distribution hypodermically. How deserving of sympathy are the patients whose unhappy existence is an essential factor in such traffic. It is to be hoped our medical societies will soon agitate for the passage of a law similar to what has just been enacted in France, regulating the sale and traffic of therapeutic serums (*La Tribune Médicale*, October, 1895). This law not only regulates the sale of serums, so that druggists can sell only on physicians' prescriptions, but guarantees the purity of composition of such products through scientific supervision. This regulation assures against the danger of impure serum as well as against the sale of fraudulent imitations.

Anti-phthisin is said to be the same as the original Koch's tuberculin deprived by precipitation of its toxalbumens. Certain precautions are requisite in its employment. It is prepared in this country under Prof. Klëbs' supervision at Winjah Sanitarium, Ashville, N.C. Dr. Von Ruck claims better results in incipient Pulmonary Phthisis than by any other known remedy, and that topical application to laryngeal ulcers heals them.

Medical Society Proceedings,

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

ANNUAL MEETING.

The twenty-fifth annual meeting was held on Friday evening, October 4th, 1895.

Dr. G. P. Girdwood, President, in the chair.

There were present: Drs. J. G. Adami, D. B. Alexander, J. H. B. Allan, T. J. Alloway, G. E. Armstrong, G. A. Berwick, A. D. Blackader, E. H. P. Blackader, G. A. Brown, F. Buller, J. C. Cameron, K. Cameron, G. G. Campbell, F. R. England, D. J. Evans, J. J. Gardner, W. Gardner, G. P. Girdwood, N. D. Gunn, D. F. Gurd, H. D. Hamilton, W. F. Hamilton, J. Alex. Hutchison, J. M. Jack, R. C. Kirkpatrick, H. A. Lafleur, F. A. L. Lockhart, C. F. Martin, W. Mills, J. A. Macphail, J. B. McConnell, R. T. McKenzie, J. Perrigo, A. Proudfoot, T. D. Reed, T. G. Roddick, G. T. Ross, F. J. Shepherd, A. L. Smith, Jas. Stewart, J. W. Stirling, W. J. Telfer, A. S. Wade, G. Wilkins, and C. F. Wylde; forty-five in all.

The minutes of the last annual meeting were read and confirmed, and the reports of the Treasurer, Secretary and Librarian were read and adopted.

The following officers were elected for the session 1895-96:

President, Dr. A. D. Blackader; 1st Vice-President, Dr. F. G. Finley; 2nd Vice-President, Dr. J. W. Stirling; Secretary, Dr. G. Gordon Campbell; Treasurer, Dr. J. M. Jack; Librarian, Dr. F. A. L. Lockhart; Council—Drs. G. P. Girdwood, J. G. Adami and G. E. Armstrong.

ANNUAL ADDRESS OF THE RETIRING PRESIDENT.

Dr. G. P. Girdwood delivered the annual address as follows:—
The proceedings in which you have just taken part warn me that another year has completed its course, and it becomes my duty to read the annual address. I have to carry my thoughts back to a year ago, when you honored me by electing me to preside at our meetings, and, gentlemen, before I briefly review the work that has been done in the Society, permit me to thank you, not only

for the honor you conferred upon me at that time, but also for the kindly courtesies which I have received from one and all, for assistance so often required, always so cheerfully given, which has enabled me to conduct the business of the Society with, I trust, satisfaction and benefit to all interested. But, gentlemen, although I have to thank every member of the Society, I must especially return thanks to the other officers of the Society, who have so largely contributed to the result—the energetic Secretary, the careful custodian of our funds, and the members of the council, one and all.

On looking back over the records of the past twelve months, I find that death has been busy amongst our members, and we have to deplore the loss of three of our younger associates. Dr. E. A. McGannon, of Brockville, one of our country members, who from his distant residence was not often able to come to our meetings, but always kept us in mind, and forwarded us such subjects and notes of cases of interest as came in his way. Dr. E. E. Duquet, who had devoted himself to the care of those unfortunates who from some causes had lost their reason and become insane, a class of the community whose misfortune appeals to our care and requires the utmost watchfulness and the highest qualities of mind and education on the part of the physician. And Dr. E. P. Williams, who was associated with the teaching staff of McGill College, where he was making a name for himself by his devotion to his profession, and especially its pathological department, who lost his life by accidental blood poisoning whilst fulfilling the duties required of him in the alleviation of human suffering; a young man of bright promise, who had endeared himself to those associated with him by his earnest work and his many sterling qualities. Gentlemen, we mourn their loss.

The membership now numbers 120.

Our financial statement our Treasurer has read to us. I would that the outlook were brighter; but by putting our shoulders to the wheel, and by paying in our subscriptions at the time they are due, we shall keep the Treasurer in funds, and be able to carry on any work that may be needed.

We have had 19 meetings with an average attendance of 40.3, an increase of average of 7 over last year; our largest attendance 63, smallest 18. We have had brought before us in all 88 subjects of interest by 38 members, a very good measure of success. Of these, living cases 16, pathological specimens 40, case reports 13, papers 16, discussions 3.

We have had amongst these highly interesting case reports and pathological specimens and results of recent surgical methods and appliances, physiological experimental work, and observations of numerous cases of one sort collected together, and results tabulated, a number of papers, and cases of great interest to those whose time is occupied in general practice, as well as to the specialist in each branch.

The prominent feature of the year is the introduction of the practice, suggested by Drs. J. C. Cameron and J. Bell, of setting apart special nights on which some subject of general interest to the Society has been introduced by three members, and a subsequent discussion taken part in by the members generally. This practice, I think, has been so much appreciated by the members as to commend itself to them for future and further extension. I must congratulate the Society on the number of younger members who have brought before us their experience and ideas.

Amongst the subjects to which the Society has directed public attention, one was the practice of spitting about in public places and public vehicles. In this connection a representation was made to the management of the Street Railway Company, to which representation a courteous reply was received, and I see that notices are placed in the cars against the practice. Upon this subject I think a more energetic protest may be made, and a more public one. I think we might induce the Board of Health to obtain the assistance of the School Boards and teachers to inculcate the dirtiness, uselessness and danger to health of this habit, whereby micro-organisms or dirt in which they may grow are distributed broadcast, and thus encourage early development of cleanly habits, and educate the young to a more cleanly and therefore more healthy life than their predecessors.

The Society this year sent a deputation to call the attention of the Harbor Commissioners and engineers connected with the harbor improvements to the probable source of danger to the health of the citizens, by the emptying of the city drains into the slack water basin at present under construction. The attention of the Board of Health was also called to the same question by the Society, and representations made by that body to the authorities.

I think, gentlemen, that our Society ought to have, as my late predecessor has said, a permanent resting place and a home of its own. He pointed out the possibility of some well-disposed and

wealthy citizen aiding in the erection of some permanent home. If this should be carried out, I think it will be the result of the Society performing public duties by calling the attention of the general public to those steps and to such regulations as will help on public sanitation, and thus bring about a more healthy condition of city and dwellings, and in the end lead to a monetary value in the reduction of the rate of life insurance, or its equivalent,—the addition of larger profits on the policy. If we could show an increased longevity as the result of our efforts, I think there would soon be a generous outpouring by the recipients to those who had been the cause.

And then it would be possible for this Society to supply a well-equipped work-room, where the members who are not connected with teaching bodies could be supplied with every convenience for original research and private rooms to work in, as in the Medical Society of Edinburgh

THE LATE DR. E. P. WILLIAMS.

The following resolution was passed :

That the President and members of the Montreal Medico-Chirurgical Society herewith tender to Mrs. Williams their sincere commiseration with her in the great loss that she has sustained in the untimely death of her only son, Dr. Edward Parmelee Williams. As a member of this Society, Dr. Williams had shown himself a keen and enthusiastic worker. As Demonstrator of Pathology and Assistant Curator of the Museum at McGill University, and as Assistant Pathologist at the Montreal General Hospital, he had made abundant use of the opportunities presented to him, and had been most active in bringing before the Society the results of his investigations. In his frequent publications before this Society he had not simply given promise of future distinction, but, young as he was, had brought before it results of researches which are of abiding interest.

Warm-hearted as a friend, as a comrade always bright and inspiring, and never sparing of himself in the exercise of his profession, this Society mourns his loss, and deplures that he should have been removed from its ranks and from the service of his profession at a time when the enthusiastic work of years was at last beginning to bear fruit. It begs with all respect to convey its sympathy to his widowed mother in her irreparable loss, and to his sister left thus suddenly brotherless.

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All communications for the Journal, books for review, and exchanges, should be addressed to the Editor, Box 2174, Post Office, Montreal.

Editorial.

PHONOGRAPHY IN MEDICAL AND SCIENTIFIC WORK.

The inaugural address of the Society of Medical Phonographers was given last month by W. R. Gowers, M.D., F.R.S. London, President of the Society, his subject being "The Art of Writing in relation to Medical and Scientific Work." This Society, which is the first of its kind, is not quite a year old, having been organized in December, 1894, and has now a membership of 175. The object is the cultivation of shorthand writing among its members and the profession generally, and thus promoting the work of medical advancement by facilitating the acquisition of medical knowledge and augmenting its application.

Dr. Gowers points out the pressing need for such an acquirement by members of our profession; its advantages, and how best to obtain the knowledge. He considers it a reflection upon our means of recording progress, that the mechanical writing, given us by Caxton,—which through the centuries since has undergone little change,—is but little less clumsy than the symbols of speech given us by the Phœnicians and Egyptians, the first alphabetical writing given to mankind. The cumbersomeness of modern writing is evidenced by the fact that five different movements are required to represent each simple movement of speech, and often the number is doubled and trebled. Phonetic shorthand simplifies this, and produces the work of longhand in one-third the time, and with one-third the trouble.

The science of Medicine has progressed through observation; such observation must be recorded, and is better recorded at once.

As more can be written in shorthand, more detailed and minute observations will be made, and consequently greater accuracy will obtain, and transient phenomena, which would with longhand not be recorded, are noted, and a closer regard to facts is thus secured.

Dr. Gowers rightly claims that this minute observation will improve the observer, making him more precise in his work, and suggests as a motto: "Writing maketh a man exact." It involves the retention of a greater amount of knowledge by the memory, and it is remembered better than would otherwise be possible.

He points out the great advantage it would be to the general practitioner, who requires to observe and record as much as the advanced investigator does, as inferences drawn from unrecorded facts are apt to be influenced by the striking exceptional points, and his patient may suffer from judgments and decisions which would not have obtained where the events were all recorded in detail. It is of inestimable advantage to the student, in enabling him to make, with ease, and without drawing his attention from the subject, a perfect report of the lectures and demonstrations he attends, and through the ease with which it can be done, encourages him to record all his own personal observations in detail.

As shorthand can be learnt in a couple of months, or in one month by giving two hours a day to its study, any student could acquire the art during the holidays; but Dr. Gowers favors making it compulsory on all entering the study of Medicine, and expects soon to see this suggestion, which has already received the attention of the General Medical Council, adopted. A subject can be reported in shorthand with three times the speed of longhand, more than three times the ease of writing, and with a definitely greater legibility. The general acquirement of this accomplishment will lead to increased knowledge for the individual, and the medical community as a whole, and an increase of ability to learn, and thus make more effectual the work of our profession, for those depending on its ministrations. Dr. Gowers' address in behalf of the more general adoption of shorthand by the members of our profession is comprehensive and convincing, and without doubt the movement which has made such rapid progress in Britain will ramify widely, and similar organizations be established generally for the purpose of mutual aid in acquiring the methods of Phonography, and urging its adoption generally as a part of ordinary education.

In all departments of active life, we see continual progress

being made in finding "short cuts" for the attainment of objects which formerly were arrived at by roundabout ways and lumbering methods. Why should the progress of scientific knowledge be hampered by the hindrance imposed in reporting its detailed onward march, by cumbersome, tedious and ancient modes of recording, when, with a little effort, an art can be acquired, which enables one to take note of every detailed statement of a lecture, or minutest personal observation, or shade of thought, with such a minimum of effort, that it ceases to be a difficulty, or a burdensome labor. We are in full sympathy with the movement, and fully endorse all that has been said in favor of it by Dr. Gowers, and hope that within the near future there will be established in Montreal, the chief collegiate centre of the Dominion, a society advocating and practising this method of recording thought. The Society in England has a medical periodical and other publications, containing all necessary instruction for students, which can be obtained from the Honorary Secretary, Dr. Neil, Warneford Asylum, Oxford.

DINNER TO SIR WILLIAM HINGSTON.

The Medical profession of Montreal, to the number of nearly one hundred and fifty, tendered a complimentary dinner to Sir William Hingston at the Windsor Hotel on the evening of the 5th of November. The large and representative character of the gathering, as well as the speeches of the various speakers, showed how fully all were in accord with the recognition by the Queen of the merits, professional and otherwise, of the guest of the evening, and that the distinguished honor conferred on Dr. Hingston was regarded also as an honor conferred on the entire Profession in this Province. The Chair was occupied by Dr. Craik, Dean of the Medical Faculty of McGill, and the Vice Chairs by Dr. Rottot, Dean of Laval Medical Faculty, Montreal, and Dr. F. W. Campbell, Dean of Bishop's College Faculty of Medicine. A large and representative committee had charge of getting up the Banquet—the secretaries being Dr. Hervieux and Dr. Proudfoot, and it is to be congratulated on the success which attended its efforts. Several Medical men from abroad were present, among them the Hon. Dr. Sullivan, Kingston; Sir James Grant, Ottawa; Dr. Wolfred Nelson, New York; Dr. Duchenois, Varennes; Dr. Slack, Farnham; Dr. Hart, Bedford. It is impossible within our limited space to give even

an outline of the remarks of the Chairman in proposing the health of the guest of the evening, Sir William Hingston. We never heard Dr. Craik speak more appropriately or in better form ; and his speech was received with unbounded enthusiasm. In the course of his remarks he said "that the honor in this instance has been most worthily and fittingly bestowed is, I am certain, the sincere conviction of everyone here present, and the conviction also of the community at large, and Sir William Hingston has only to look around him to-night, to realize in this large and representative gathering of his professional friends, the high place which he holds in their affection and esteem, and the appreciation of these qualities in him which have rendered his honors so appropriate and becoming."

Sir William Hingston made a very eloquent reply, in which he gave expression to his feelings for the magnificent testimonial from his professional brethren, his love for his profession, and his strong desire to be always in touch with his confrères.

The Toast of the Dominion and Provincial Parliament was proposed by Dr. F. W. Campbell, and responded to by the Hon. Dr. Sullivan, Sir Jas. Grant, Dr. S. Lachapelle and Dr. Guerin. In every way the celebration was a success, creditable to all who took part in its preparation.

PHYSICIANS' SUITS.

Quite recently in California, a physician sent in his bill for professional services, charging for sixty-six visits covering a period of thirteen months. Payment of the account was refused, on the ground that the visits were too frequent and not at all necessary. The highest Court in California decided for the plaintiff, and said that it would be very unfortunate for the sick if the physician was compelled to prove the necessity of each visit before he made it. In undertaking to treat a patient, it was decided that the physician contracts to give him reasonable care and attention, and in the event of neglect would be liable for the consequences.

Correspondence

We were much pleased to hear from our former and esteemed pupil, Dr. A. J. Richer, who graduated at Bishop's College in 1892. He has been now some eighteen months in Europe, studying at various medical centres, being now at Breslau. He will spend the winter chiefly in Berlin, and Paris, returning to Montreal in the spring. Besides posting himself in general medicine at various clinics, he has been doing some special work in Bacteriology. He sends us the following items for the RECORD :—

THE TREATMENT OF GONORRHOEA IN NEISSER'S CLINIC.

Each case upon its application for treatment is subjected to a thorough examination, the secretions are examined microscopically, and inoculations in different culture media are also practised ; during the whole treatment the pus is subjected to a microscopical examination at least every four days. If the case be an acute one, Prof. Neisser recommends the salts of silver, but in fairly weak solutions ; he gives preference to argentamine in solutions of $\frac{1}{4000}$ to $\frac{1}{2000}$; the injections are continued (4 or 5 times in 24 hours) until the gonococci have disappeared, and even for 2 or 3 weeks after ; if in spite of this the secretions persist, but without gonococci, then astringent injections are used instead,—in fact, you treat the same as a simple urethritis. If during the course of the latter treatment the gonococci re-appear, then you return to the use of silver salts, but giving preference to argonine (arg. nit. and caseine) in 1 to 2 per cent solutions. If you find the affection has gained the posterior portion of the urethra, you may then use the ordinary silver nitrate in solutions varying from $\frac{1}{400}$ to $\frac{1}{100}$, or preferably a solution of oxycyanate of mercury from $\frac{1}{300}$ to $\frac{1}{200}$. If you have to treat a gonorrhœa which has become chronic, then Janet's method of *grands lavages* with potassium permanganate $\frac{1}{4000}$ is recommended ; instead of permanganate you may also use astringents by this method, but in weak solutions.

A NEW DOUBLE COLORATION OF GONORRHŒAL PUS.

Recommended by Dr. Schaeffer, assistant to Prof. Neisser, Breslau.

Make the following coloring baths, and use as directed under each formula :—

1. Fuchsin	0.1
Alcohol	20.0
Aqueous sol. Carbolic Acid, 5 per cent.	200.0

The preparation fixed and dried is plunged in this solution for 5 to 10 seconds only, and then washed.

2. Put 3 drops solution Methyl. Blue 10 per cent. in 10 c.c. of ethylene diamyle, and in this dilution plunge your preparation, leaving long enough until it takes a bluish tint, but not longer. Wash and mount in the usual way. In order to succeed, you must have the very smallest possible quantity of pus to color on the slide, otherwise, if the layer is at all thick, you will not succeed.

By this method the pus globules appear partly in pink and red, while the gonococci are colored in a deep blue.

COCAINE AS A LOCAL ANÆSTHETIC.

As an occasional death is directly imputed to chloroformic anæsthesia, and not a few broncho-pneumonic complications are often enough observed after ethereal anæsthesia, surgeons generally have resorted to the use of cocaine anæsthesia when such was possible, and where general anæsthesia would either surely prove fatal, or where the operation, is so light as not to justify the use of the former.

In France cocaine is not as often employed as in Austria and Germany. Some surgeons in the two latter countries simply have a mania for using it, and in this class may be found the younger surgeons who always handle chloroform and ether with the greatest care. I mean by this that when they operate under general anæsthesia they are never free from anxiety.

During my term of assistantship at the Faculty Surgical Clinic in Cracow, I had occasion to see cocaine anæsthesias for all sorts of minor operations, from that of a puncture to the removal of enlarged cervical glands, in all, at least 150 minor operations without a single accident.

Of the major operations thus far I have only seen two, performed by Prof. Rydygier of Cracow: one was a gastro-enter-

ostomy, and the other a resection of the appendix. The solution used in Rydygier's clinic is a 2 per cent. solution ; for the 2 last named operations he used respectively 6 and 4 Pravaz syringes full, while for minor operations, according to the extent and duration, 1 to 3 syringes full. The ordinary technique in these cases was followed, that of injecting the tissues in parallel lines on each side of the intended incision. During the two major operations mentioned, the intestines were handled with slips of gauze soaked in a 1 per cent. solution of cocaine during the whole of the operation, and the patients complained but very little. My personal experience with cocaine anæsthesia is confined to about a dozen cases, among which were three lipomas and a pre-patellar hygroma ; but these, along with the number I have witnessed, have made me a partisan of its use.

In Neisser's Clinic at Breslau it is also very commonly used, but the solution is stronger (5 per cent.). In Mikulicz's Clinic; (Breslau) it is also often used, especially by his assistants.

If ever a local anæsthetic less ephemeral than cocaine is discovered, it will almost be safe to predict the gradual abandonment of general anæsthesia.

ON THE TREATMENT OF ACTINOMYCOSIS BY INJECTIONS OF THE IODIDES INTO THE MORBID TISSUES.

(Translation from *La Semaine Medicale*, Sept 1895.)

The curative action of iodide of potassium internally in actinomycosis has recently been well brought forward ; and in cases of this disease recourse is always had to medication by the iodides, usually associated with surgical intervention. Unfortunately, there are cases where this treatment fails, and where, in spite of complete and repeated removal of the morbid tissues, in spite of prolonged use of iodide of potassium in large doses, the lesions return indefinitely and increase in extent.

Under these circumstances, Dr. Rydygier, Professor of Clinical Surgery in the Medical Faculty of Crakow, advises the use of injections into the parenchyma, of a 1 per cent. solution of potassium or sodium iodide, a method of treatment which has given him excellent results in the two cases in which he has so far had occasion to use it.

The first case was that of a man aged 26, suffering for a year past from actinomycosis, which had begun by a small, hard tumor at the angle of the jaw on the right side, which had persisted in

spite of two operations and the use of potassic iodide internally. The patient, when first seen by Prof. Rydygier, presented on right side of neck a hard infiltration, extending from the mastoid process to lower part of the cervical region, and especially pronounced along the course of the sterno-mastoid muscle. The skin covering the part was livid; there was a fistula, through which escaped pus containing actinomyces. The sterno-mastoid was contracted, so that the patient's head was inclined forward and to the right. Dr. Rydygier prescribed iodide of sodium and potassium internally, and injected into the infiltrated tissues a Pravaz syringe-ful of a 1 per cent. solution of iodide of potassium. Following the injection the tumefaction increased and the skin became of a deeper red, but this reaction soon disappeared, and was followed by a manifest diminution in size of the tumor. A second injection of one and a half syringe-fuls was given a fortnight after the first, and brought about the formation of a small abscess, which was incised, after which the tumefaction and the contraction of the sterno-mastoid lessened to the extent of allowing free motion of the head. After two other injections, at intervals of two or three weeks, the tumor disappeared completely. There is now no trace of induration in the region which had been the seat of the actinomycosis.

Case two was that of a man aged 46, suffering for about eight months past from actinomycosis of the abdominal walls, for which he had not undergone any treatment. There was tumefaction in the right hypochondrium and umbilical region; there were also several fistulæ, the pus from which contained the characteristic elements of actinomycosis. A probe passed into the fistulous openings did not penetrate into the deeper tissues, but remained beneath the skin. From June 16 to July 14, six injections of a 1 per cent. solution of iodide of sodium were made into the substance of the tumefied tissues. The first injection was of one full Pravaz syringe; the second and third times, three syringe-fuls; the fourth time, five syringe-fuls; the fifth time, four; and the sixth time, three syringe-fuls. After the last injection the infiltration in the right hypochondrium had almost totally disappeared, while that in the umbilical region persisted. In this condition the patient left the hospital of his own accord. While this case was not treated to a conclusion, the result obtained shows the efficiency of injections of the iodides in actinomycosis; and the more so as in this case recourse was had neither to the internal use of iodide of potassium or iodide of sodium, nor to surgical intervention.

Personal.

Dr. D. A. Hart, (M.D. Bishop's, 1874), who has practised in Bedford for many years, has removed to St. Lambert, so as to have his sons with him, who are now employed in Montreal. Previous to leaving Bedford, the leading men of the place and surrounding country entertained him to a supper, during the course of which a very handsome gold-headed cane and address were presented to him.

Dr. Wolfred Nelson (M.D. Bishop's and McGill, 1872), of New York, arrived in Montreal early this month, to meet his family who have returned from Europe, and will pass the winter at the Windsor. Dr. Nelson returns to New York about the middle of November.

Dr. Gustave Lewis (M.D. Bishop's, 1895) and Dr. (Miss) Cunin (M.D. Bishop's College, 1895) have passed most successfully an examination for the Triple qualification of L. R. C. P. & S. Edin. and L.F.P. & S. Glasgow.

Dr. Kemp (M.D. McGill, 1886) is still in practice at Little Metis, where, during the past season, every cottage was occupied, and hotel accommodation at a premium.

Dr. F. W. Campbell, Dean of the Faculty of Medicine of Bishops College, has had the degree of D.C.L. conferred on him by that University.

Dr. Adami, Professor of Pathology in McGill University, has been invited to deliver the Middleton Goldsmith lecture for 1896 before the New York Pathological Society.

Dr. Birkett (M.D. McGill) has been appointed Professor of Laryngology in McGill University, in place of Dr. Major, who now resides in England.

Dr. Wyatt Johnson has been appointed Lecturer in Medico-Legal Pathology in McGill University, and Pathologist to the Montreal General Hospital.

Dr. A. D. Stevens (M.D. McGill 1854) was in Montreal during the Exhibition, and called on some of his old friends. He looks good for another half century.

Deputy Surgeon General Sewell, R.C.A., was in Montreal during the races in September on the Bel-Air course. We hear he intends retiring from the racing field.

Dr. Hamilton (M.D. McGill 1893), having retired from the House Staff of the Royal Victoria Hospital, has commenced practice in Montreal.

The many friends of Dr. Edwards (M.D. Bishops 1893) of Spanishtown, Jamaica, will hear with pleasure of his almost complete recovery from the serious illness which attacked him in 1894 while on a visit to Montreal. He is now able to attend fully to his practice.

Dr. Cloutier (M.D. Laval) has removed from St. Arsène to Rivière du Loup station.

Book Reviews.

SAUNDERS' AMERICAN YEAR BOOK OF MEDICINE AND SURGERY.

Edited by George M. Gould, A.M., M.D., assisted by eminent American physicians and teachers. W. B. Saunders, publisher, 925 Walnut street, Philadelphia.

This is the title of a new annual, the first volume of which will be ready in January, 1896. This work is to be published in the interest of the busy practitioner, and will be an epitomization of current medical progress by an editorial staff of specialists and those competent to give a correct synopsis of all that is valuable in each department of Medicine and Surgery.

"It is the special purpose of the Editor, whose experience peculiarly qualifies him for the preparation of this work, not only to review the contributions to American journals, but also the methods and discoveries reported in the leading medical journals of Europe, thus enlarging the survey and making the work characteristically international. These reviews will not simply be a series of undigested abstracts indiscriminately run together, nor will they be retrospective of "news" *one or two years old*, but the treatment presented will be *synthetic* and *dogmatic*, and will include only what is new. Moreover, through expert condensation by experienced writers, these discussions will be comprised in a single volume.

The work will be replete with original and selected illustrations skillfully reproduced, for the most part, in Mr. Saunders' own studios established for the purpose, thus insuring accuracy in delineation, affording efficient aids to a right comprehension of the text, and adding to the attractiveness of the volume."

The high character of this publishing house and the high grade of excellency which applies to the publications they bring out, and the generally recognized eminent qualification of the editor, chosen to superintend the collaboration for this work, bespeaks for it an assured success.

DUNGLISON'S DICTIONARY OF MEDICAL SCIENCE, 21ST EDITION, WITH APPENDIX. Containing a full explanation of the various subjects and terms of Anatomy, Physiology, Medical Chemistry, Pharmacy, Pharmacology, Therapeutics, Medicine, Hygiene, Dietetics, Pathology, Surgery, Ophthalmology, Otology, Laryngology, Dermatology, Gynæcology, Obstetrics, Pediatrics, Medical Jurisprudence and Dentistry, etc., etc. By

Robley Dunglison, M.D., LL.D., late Professor of Institutes of Medicine in the Jefferson Medical College of Philadelphia. Edited by Richard J. Dunglison, A.M., M.D. New (21st) edition, thoroughly revised, greatly enlarged and improved, with the pronunciation, accentuation, and derivation of the terms. In one magnificent imperial octavo volume of 1225 pages. Cloth, \$7.00; leather, \$8.00. Thumb-letter Index for quick use, 75 cents extra. Lea Brothers & Co., publishers, Philadelphia, 1895.

By the valuable appendix just received some twenty-five large pages have been added to this well known work. The dictionary itself was reviewed some time ago in these columns, but it speaks for itself, or rather the Profession has spoken for it, for it has now reached its twenty-first edition. The appendix now before us contains a vast amount of new information especially on the subjects of new drugs and bacteriology. Also many new words coined in recent years by the specialists in neurology and gynæcology have been added, so that we can say that this standard work is fully up to date. It may be ordered through any book-seller.

THE HARVEIAN ORATION, 1894, ON MODERN DEVELOPMENTS OF HARVEY'S WORK, delivered before the Royal College of Physicians, Oct. 18th, 1894, by T. Lauder Brunton, M.D., F.R.S., Fellow of the College, Assistant Physician to St. Bartholomew's Hospital. MacMillan & Co., London. The Copp, Clark Co., Ltd., publishers, 9 Front street West, Toronto.

This interesting brochure is neatly gotten up in cloth, and its 35 attractively printed pages are replete with interesting and instructive points in connection with the heart and circulation, as might be expected in any production from the pen of one so eminent as Dr. Lauder Brunton. He fittingly refers to the death of the late president, Sir Andrew Clark, and to the presence of Sir Wm. Jenner, whom he ranks with Sydenham, Heberden, Bright and Garrod. The names of those associated with the development of our knowledge of the circulatory system are mentioned with their discoveries, such as the measurement of the pressure of blood in the arteries, by Stephen Hale; the resistance offered to the circulation by the capillaries, by Thomas Young; the contraction of the venæ cavæ and pulmonary veins forcing the blood into the auricles, thus becoming the first motor cause which dilates the cavities of the heart, by Haller & Senac; the discovery of the sounds of the heart by Harvey himself, and later amplified by Laennec. The injection of drugs into the circulation by Christopher Wren, and the work and experiments of Blake, Sharpley, Burdon Sanderson, Michael Foster and Ludwig, Hafiz, Weber, Schiff, Paget, Gaskell, Brown-Sequard, Weller and many others are referred to.

The recent work which has shown the influence on the distribution of the blood by various stimuli, exercise, etc., is gone into,

showing that the vessels that supply the muscles of the body and limbs are capable of such extension, that when fully dilated they will allow the arterial flood to pour through them nearly as quickly as it usually does through the vessels of the skin intestines and muscles together, thus explaining the action of cold in producing increased heat by the blood being driven to the muscles from the contracted skin, when the increased oxidation leads to increased heat production, and showing that the vessels of the muscles are not controlled by the vaso motor centre in the medulla oblongata in the same way as those of the intestines and skin. The effect of sudden muscular contraction by compressing the vessels, causing increased blood pressure, is counteracted by the stimulus which is sent at the same time through the motor nerve, producing dilatation and a fall in pressure, thus showing how the blood pressure can be varied by appropriate exercises, and while the irritation of the nerve fibres in the muscles caused by exercise leads to increased action of the heart, stimulation of those of the intestine and skin tend to slow it. The pathology of angina pectoris is made clear, and the rationale of some of the modern methods of treating affections of the heart pointed out, such as absolute rest in bed, with massage for increasing the circulation, after the methods of Ling, and Weir Mitchell, the graduated movements under resistance while the patient is still, and the further stimulation of the skin by saline and effervescing baths, as practised by the brothers Schott at Nauheim, and the graduated exercises in bathing and climbing, of Oertel. Reference is also made to the disposition of chloride of sodium during digestion (the hydrochloric acid going to the stomach, and the sodium to the blood), and the zymogens; and the ferments of the pancreas. The effects of the juice of the thyroid on the blood and of the ferments derived from different organs, as modifying agents, and the recent views in regard to antitoxins as remedies are also dwelt upon. This oration should be in every physician's library, as it has compressed in a small compass information from extended sources, which will bear more than one reading, and is a valuable historical reference in one of the most interesting departments of medical research.

Pamphlets Received.

Chairman's Address. Read before the Section on State Medicine, at the Forty-fifth Annual Meeting of the American Medical Association, held at San Francisco, June 5-8, 1894. By George W. Stoner, M.D., Baltimore, Md., Surgeon United States Marine-Hospital Service. Reprinted from the Journal of the American Medical Association, August 18, 1894. Chicago: printed at the office of the Journal of the Association. 1894.

The Legal Question in Operations on the Insane. By Walter P. Manton, M.D., Detroit, Mich. Reprinted from The American Gynæcological Journal, Toledo, Ohio. June, 1893.

A Plea for the Amelioration of Insane Women Suffering from Local Disorders. By W. P. Manton, M.D., Detroit, Mich., Consulting Gynæcologist to the Eastern and Northern Asylums for the Insane and St. Joseph's Retreat; Vice-President of the Medical Board Detroit Woman's Hospital and Foundlings' Home, etc. Reprinted from the American Gynæcological Journal, Toledo, Ohio. January, 1893.

A Contribution to the History of Ovariectomy on the Insane. By W. P. Manton, M.D., Detroit, Mich. Reprint from Transactions, 1889.

Aseptic Prophylaxis of Asiatic Cholera: Arsenization. By Reginald Barkley Leach, M.D., Mem. American Public Health Association, etc., etc. The subject-matter of this little monograph is confidently commended to the respectful consideration of all investigating Medical men, as the hypothesis herein discovered is consistently dedicated to suffering humanity. Paris, Texas.

Lectures to my Hospital Interns Past and Present, by Casey A. Wood, M. D., Chicago. Reprinted from The Journal of the American Medical Association, August, 10, 17 and 24, 1895. American Medical Association Press, Chicago.

Some forms of eruption Simulating Scarlatina, by A. D. Blackader, M.D., Montreal. Pediatrics, Sept., 1895.

PUBLISHERS DEPARTMENT.

LITTELL'S LIVING AGE FOR 1896. The announcement of a reduction in the price of this famous eclectic from *eight* dollars to *six* dollars a year will prove of more than usual interest to lovers of choice literature. Founded in 1844, it will soon enter its fifty-third year of a continuous and successful career seldom equalled.

This standard weekly is the oldest, as it is the best, concentration of choice periodical literature printed in this country. Those who desire a thorough compendium of all that is admirable and noteworthy in the literary world will be spared the trouble of wading through the sea of reviews and magazines published abroad, for they will find the essence of all compacted and concentrated here.

To those whose means are limited it must meet with especial favor, for it offers them what could not otherwise be obtained except by a large outlay. Intelligent readers who want to save time and money will find it invaluable.

The prospectus, printed in another column, should be examined by all in selecting their periodicals for the new year. For the amount and quality of the reading furnished, the new price makes *The Living Age* the cheapest as well as the best literary weekly in existence. Reduced clubbing rates with other periodicals offer still greater inducements, and to new subscribers remitting now for the year 1896, the intervening numbers of 1895 will be sent gratis. Littell & Co., Boston, are the publishers.

RENDER THE INTESTINAL CANAL ANTISEPTIC.

The *Materia Medica* gives at least one safe intestinal antiseptic. It is Salol. Professor Hare, in the last edition of his *Practical Therapeutics*, says that Salol "renders the intestinal canal antiseptic, and so removes the cause of the disorder, instead of locking the putrid material in the bowel, as does opium." He regards Salol as "one of the most valued drugs in the treatment of intestinal affections." Have we a substitute for opium for the relief of pain? Here comes in the American coal-tar products, the first of which, for the relief of pain, stands Antikamnia. Therefore, we conclude that to remove the cause, to render the intestinal canal antiseptic, we have an invaluable remedy in Salol; while to remove accompanying pain, to quiet the nervous system, and to reduce any fever which may be present, we have a remedy equally efficacious in Antikamnia; *an ideal combination for the treatment of this large class of diseases, and we may specially cite Typhoid Fever*. These two drugs are put up in tablet form, called "Antikamnia and Salol Tablets," each tablet containing two and one-half grains of Antikamnia and two and one-half grains of Salol.

NEW WORK ON CONSUMPTION.

A new work under the title of "CONSUMPTION—ITS NATURE, CAUSES AND PREVENTION," over 340 pages, with illustrations, is announced, to be soon issued by William Briggs, the Toronto publisher. The prevention of this prevalent and most fatal disease is a subject of the greatest importance. Too many works on it can hardly be published. The author of this one is Edward Playter, M. D., author of "Playter's Physiology and Hygiene" (authorized for teachers), and a number of pamphlets and papers on Consumption, and for twenty years editor of the *Canada Health Journal*. He has himself made some special investigations relating to the causes of consumption, and during a practice of over a quarter of a century given special attention to the subject. The following indicates the heads and sub-heads under which some of the preventive measures are treated: Pure air, soil, dwellings, bed-rooms, respiratory exercises, sitting and lying out-doors, occupation, preventing "colds," words to parents, marrying, state measures, public instruction, drainage, better inspections, sanitarium, with chapters on climatology, and a short one on the climate of northern New York, Vermont and Canada.

NOVEMBER LITERARY NOTE.

A complete and immediate revolution of transportation methods, involving a reduction of freight charges on grain from the West to New York of from 50 to 60 per cent., is what is predicted in the November *Cosmopolitan*. The plan proposes using light and inexpensive corrugated iron cylinders, hung on a slight rail supported on poles from a cross-arm—the whole system involving an expense of not more than fifteen hundred dollars a mile for construction. The rolling stock is equally simple and comparatively inexpensive. Continuous lines of cylinders, moving with no interval to speak of, would carry more grain in a day than a quadruple track railway. This would constitute a sort of grain-pipe line. *The Cosmopolitan* also points out the probable abolition of street cars before the coming horseless carriage, which can be operated by a boy on asphalt pavements, at a total expense for labor, oil, and interest, of not more than one dollar a day.

PLANS FOR A \$3,500 DWELLING.

Architect W. L. Price contributes to *The Ladies' Home Journal* for Dec. the first of a series of articles illustrated with perspective interior views and working plans upon moderate-sized homes. He describes the construction of a dwelling to cost \$3,500, presents word and pen pictures of the interior, and has this to say in behalf of builders and architects: "Don't expect your house to be perfect; wood will shrink, plaster will crack more or less, and doors and windows stick; and don't expect them to keep the house in repair. They cannot afford to do more than put it in proper condition when they hand it over to you." Other illustrated articles by leading American and Canadian architects will appear in the *Journal* during the year.

CANADA
MEDICAL · RECORD

VOL. XXIV.

DECEMBER, 1895.

No. 3.

Original Communications.

ARTIFICIAL LIGHTING OF PUBLIC BUILDINGS
AND PRIVATE HOUSES, AND ITS EFFECTS
UPON THE HUMAN EYE.

In three parts, with Illustrations.

I. INTRODUCTORY.

By CASEY A. WOOD, M.D.,

Professor of Ophthalmology in the Chicago Post Graduate Medical School; Oculist to the Passavant Memorial Hospital, Chicago.

Several observers have drawn our attention to the damage that may be done to the eyes of both pupils and teachers by the injudicious lighting of schools, one writer at least holding the malposition of their windows to be the principal defect in all our public buildings. Still another believes that misdirected sunlight stands high in the list of causes that produce school myopia. There is undoubtedly a great deal of truth in all this. I am sure that if anyone whose eyes are not of the strongest will make a tour of the schools in our larger towns, and will devote a few hours daily to sitting, for say ten minutes at a time, at various points in the different study and recitation rooms, not forgetting the teachers' desks, he will readily detect any weak spots in the illumination of the buildings in question. Sometimes it is the teacher, sometimes it is his or her pupils that suffer, sometimes both are victims. Occasionally either direct or diffused sunlight is permitted to pour upon the upturned face of the student, but more often his eyes are handicapped in their efforts to see by reflections from distant window panes, or by annoying sidelights, or by being obliged to make out figures on polished blackboards that only mirrors in disguise; or the light is so variable that one hour the school-room is brightly lighted and the next it is shrouded in semi-darkness.

Certainly the problem of effectively lighting large buildings—especially school buildings—is one that may well tax the ingenuity

of the best architect. The principal rule now recognized for the illumination of schools by natural means is much the same as the one to be observed in lighting them artificially, viz. :—*the light should never shine directly or by reflection into the eyes of either pupil or teacher ; it should be fairly constant in character, and should fall equally upon all parts of the work in hand, whether it be a near object (like a book or a slate) or a distant object (as a blackboard or a map) with about the same intensity.*

When night comes on, or when, as often happens in the offices, stores and workshops of cities especially, it is necessary to resort to an artificial illuminant during the daytime, the problem becomes more complex. Some years ago I was asked to investigate this matter in the case of printers.*

I have since found that the difficulties encountered in the attempt to properly illuminate newspaper and other printing offices and workrooms are much the same as those experienced by clerks in banks, bookkeepers, stenographers, workmen at the bench—in fact, by most of those who pursue a sedentary occupation of any kind. Indeed the same causes of complaint exist in many private houses. These troubles, strange to say, have been intensified by the introduction and almost universal employment of brighter, whiter and in some respects better lights. Among these are the various forms of the electric light,—the Welsbach and the Auer light. These admirable sources of illumination are, in my experience, powerful agents for evil when their employment is not hedged about by certain precautions.

Indeed, I feel sure that the ordinary electric lamp, as we usually find it arranged in private houses, is a common source of eye trouble. As to the arc light, particularly when it is unprotected by a ground glass globe, is a most fertile source of ocular irritation and disease when it is employed to illuminate warehouses, halls, hotel rotundas, ball rooms and other large apartments. Even the employment of the naked arc light in street illumination is trying to the eyes of the passer-by.

In dealing with this subject, it is wise to study the conditions under which both healthy and defective vision is accomplished. To attain this end it is not necessary that the reader should make an extended study of physiological optics, or that the writer should

*I am indebted to the publishers of *The Inland Printer* for the illustrations of those articles, and for permission to make use of my contributions to that Journal of September, October and November, 1892.

express himself in severely technical language. On the contrary, anyone of average intelligence can, by the aid of a few columns of reading matter and a small number of diagrams, obtain a practical knowledge of the method—for method it is—employed by the eye in seeing.

First of all, let us examine the normal eye, which from the optical standpoint may be regarded as an irregularly shaped globe whose long diameter is about an inch. An organ of this proper shape and size is called the *emmetropic* eye.

I have begun by giving prominence to the idea of size and shape in the eye, because, as we shall afterward see, it is almost invariably deviations from the normal shape and the normal size, or deviations from both of these, that produce most of the ills to which human eyes are subject.

The contour of the healthy eyeball is that of a watch glass set upon a regulation baseball; the watch glass is the *cornea* or external transparent portion of the globe, while the almost complete segment of the larger circle is covered by the *sclera* or tough white coat.

Immediately behind the cornea is the outer plane of the *iris*, that beautifully tinted velvet-like curtain whose contraction and expansion regulate the size of the *pupil*. A very curious thing about the iris, and a fact not generally known, is that differences in the color of the eyes depend not upon *variety* in the iritic pigment, but in the quantity and disposition of the coloring matter of the iris. That is to say, the only difference between deep blue eyes, hazel eyes, gray eyes and the various shades of brown eyes is that each possesses a different quantity of pigment from the others. This coloring material is in all eyes a sort of dull brown substance whose appearance of brilliancy is produced by seeing it through the cornea and a certain fluid (called the *aqueous*) lying between cornea and iris. In much the same way bright color impressions are obtained in a certain kind of glass paper weight. When, however, the glass is broken, the optical illusion disappears and the colored background is found to be dull and commonplace.

Immediately behind the iris curtain lies a remarkable structure—the crystalline lens—a veritable double convex “magnifying glass,” inclosed in a thin capsule and held in position by innumerable “guy ropes” by which it is attached to the sclerotic. These strong, thread-like fibres are joined to a small but powerful and very active muscle (called the ciliary muscle). Owing to the attach-

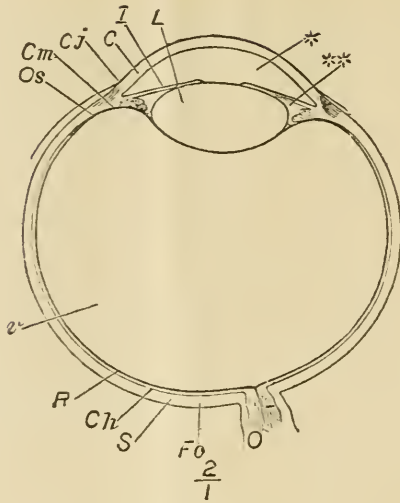


FIG. 1

SECTION OF EYE.—*O*, optic nerve ; *S*, sclerotic or sclera ; *R*, retina ; *v*, vitreous ; *Cm*, ciliary muscle ; *C*, cornea ; *I*, iris ; *L*, lens ; **ciliary body ; *aqueous humor.

ment of these ciliary fibres both to the anterior capsule of the lens and to the tough sclerotic the front surface of the lens is kept rather flat. This constant action of these fibres should be remembered in connection with a most remarkable adjustment which the eye undergoes in seeing at various distances, to be shortly considered.

The principal space within the eye is filled by a transparent, jelly-like substance called the *vitreous*. This glass-like substance is

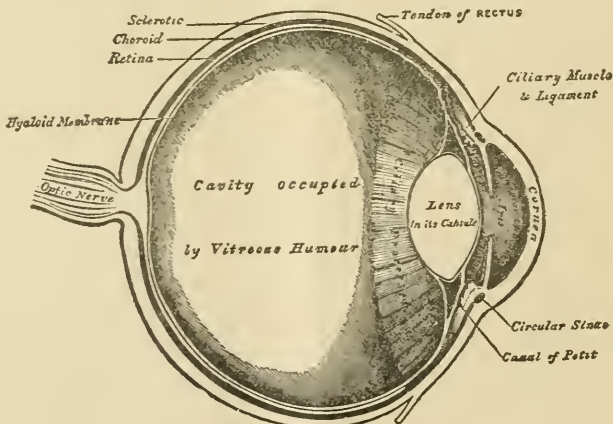


FIG. 2.

VERTICAL SECTION OF THE EYE.

in contact with the posterior surface of the lens in front. It touches,

behind, the *retina*—that complex expansion of the *optic nerve* which coats the inner part of the globe throughout two-thirds of its whole area, and acts as the sensitive plate of this optical camera. The nerve of vision, as seen in the diagram, carries impressions made upon it to the brain, and the individual interprets them as color, light, form, etc. We must not forget the *choroid*, which forms a dark, almost black, background to the retina. This coat is of especial importance in the eyes of printers, and those who habitually use their visual organs for near work of all kinds, as by means of it the superfluous light entering the eye is absorbed and prevented from rebounding against other parts of the retina, and so making a blurred picture upon the nervous "plate."

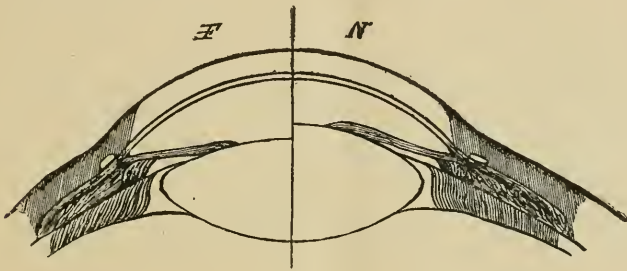


FIG. 3.

Showing how the eye adapts itself for vision at all distances; *N* shows the contracted ciliary muscle and more convex lens for near work; the left side (*F*) shows the lens adapted for distant vision.

In the case of the normal eye, rays of light from all objects more distant than a couple of yards are focused on the retinal background without much effect upon the part of or change within the organism; but if the object be brought much closer, a very decided alteration of the optical apparatus is necessary. This change must be made "in the twinkling of an eye," and to understand how it is accomplished necessitates a brief reference to some of the first principles of optics.

Convex lenses make parallel rays convergent, divergent rays less divergent, and convergent rays more convergent.

Concave lenses make parallel rays of light divergent, divergent rays more divergent, and convergent rays less convergent.

Figure 4 shows the course of the parallel rays (*a, a, a, a*) of light from a distant object as they strike the cornea and enter the normal eye through the pupil. A ray of light coming from a rarer medium (air) into a denser one (cornea) is turned toward a perpendicular let fall at the point where it strikes the surface.

Hence we find that the hitherto parallel, or almost parallel, rays begin to approach one another. Further on, a still denser substance—the crystalline lens—is met with, and the rays are still further refracted, until finally they are accurately focused on the retina at *c*. But let us suppose the rays of light (*b, b, b, b,*) from a *near* object strike the eye. In such a case they would be distinctly *divergent* rays, and if left to themselves would not come to a focus

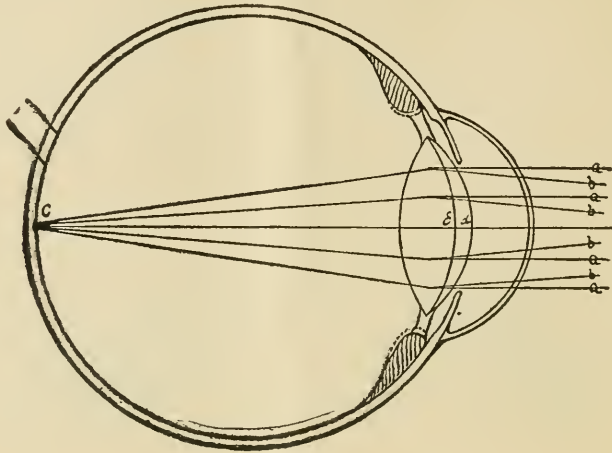


FIG. 4.

Showing how both divergent and parallel rays are focused on the retina by action of the ciliary muscle on the lens.

on the retina but *behind* it, and a blurred image of the object would be transmitted by the optic nerve to the brain. Or suppose the eyes, arranged for focusing upon the sensitive retina, divergent rays from near objects, to be suddenly turned upon distant objects. Manifestly these more parallel rays would come to a focus in *front* of the retina, and an equally blurred image would result. *This defect in the visual apparatus is remedied, as indeed most optical defects are remedied or attempts at a remedy are made, by a change in the shape of the crystalline lens.* This wonderful power of *accommodating* the eye to all distances resides mainly in the ciliary muscle. As before mentioned, the elastic lens is kept flat in front by the pulling upon it of certain "guy rope" fibres by which it is attached to the sclera. When it is necessary to look at a near object (or, what amounts to the same thing, make the lens *more convex* so as to render divergent rays properly convergent) the ciliary muscle *contracts*, pulls the parts about it forward, and the taut fibres loosen; the lens, left to itself, swells out, becomes more convex, and in an instant the work is done.



FIG. 5.

The small, hyperopic or long-sighted eye whose images come to a focus beyond the retina.

In this way the lens can adjust itself to almost any required degree of convexity, and consequently to any distance needed.

However, eyes are not all of that convenient size which permits of the ready focusing of images on the retina.

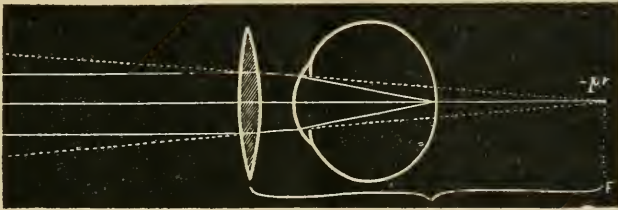


FIG. 6.

Showing how convex lenses bring rays of light to a focus on the retina of a long-sighted eye.

They may, for example, be *too small*, and in that case the ciliary muscle is constantly at work. An eye that is too short from before backward belongs to the class of long-sighted or hypermetropic eyes. For habitual distant vision, the ciliary muscle of a long-sighted eye adjusts itself pretty much as the driver of a cable car does his "grip" between stopping places, to hold the lens in proper shape. Young people do this easily, as their lenses are soft, and not only expand easily but are quickly and readily compressible; but as time goes on the crystalline

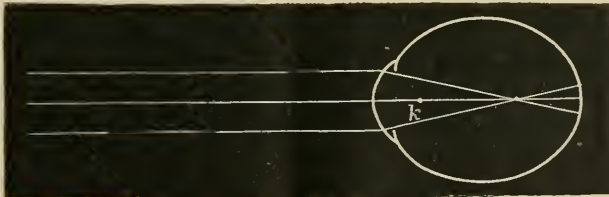


FIG. 7.

In the large or myopic eye, the focus "falls short" of the retina, as shown above.

grows, gets harder and less elastic, and the ciliary muscle has a greater struggle than ever, especially in hyperopic eyes, to make the refractory lens sufficiently convex for reading and other similar purposes. When the individual has reached the age of forty, or thereabouts, the lens has become so firm that it cannot be readily made more convex by relaxing the fibres that "hold it down" in front, and as time passes on, and the lens gets still harder, convergence of the rays (so as to make in reading a clear image on the retina) must be accomplished by the use of stronger and stronger convex glasses.

This is the reason why long-sighted persons are obliged to hold their books, papers, etc., farther away from them as they advance in years, and why so many decidedly *hyperopic* individuals who do much near work require glasses (convex glasses, recollect) for comfortable reading, writing, etc.

The converse is true of eyes that are too large, and consequently too long from cornea to retina. These belong to *myopic* or short-sighted people.

In spite of all efforts to relax itself sufficiently, the myopic image is focused by the ciliary muscle in front of the retina; then the rays cross and form a blurred image on the back of the eye. The only thing to do is to get close to the object so that the rays are more divergent, or to wear concave glasses which accomplish the same end.

Here the ciliary muscle has not much to do, and does that little within a narrow range; like Bre'r Fox, it mostly "lies low;" and as a matter of demonstration, the ciliary muscle of the long-sighted eye is developed to twice the size of that of the myopic eye, and is much larger than in the emmetropic eye. Indeed we find in this fact an example of a rule universal in the human organism: an organ constantly used develops in size and strength;

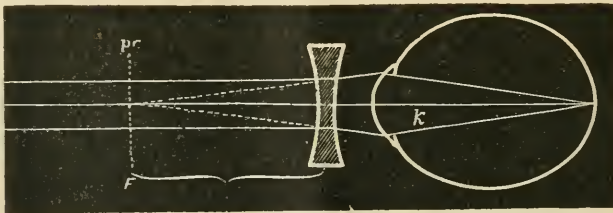


FIG. 8.

Showing how concave glasses act in focusing rays of light on the retina of a short-sighted eye.

a part whose function is rarely utilized dwindles away, and in time may even disappear.

The one advantage possessed by the moderately short-sighted man is that when he falls into the "sere and yellow" he is not obliged to wear glasses for reading. Such persons often pride themselves upon this, and never cease to talk about it. They even hand it down as a legacy to their children, and one hears echoes of it when he is informed that "grandma at seventy" never needed glasses when reading or sewing. The fact that the old lady could not differentiate between a cow and a horse at a hundred feet was left out of the story.

There is another form of optical defect, due to a malformation of the eye, called *astigmatism*. Not only should the eyeball be neither too long nor too short from before backward, but it should be of the normal *shape*. When it is not, when the watch glass of the cornea is wider from side to side than it is from above downward, or *vice versa*, the rays of light become mixed, as it were, and the blurred image also results. The unfortunate ciliary muscle still tries to neutralize this burdensome defect, pulls on a few "guy ropes" here, and lets out a few there, and does its best to focus the picture aright, and so long as the astigmatic person is young and in good health, often succeeds pretty well; but some day too much application to study, or too frequent reading by an improper light, or an acute illness furnishes the last straw that breaks the muscular back, and then headaches, eye-aches, blurred vision and a host of other symptoms may result. Properly fitting cylindrical glasses—plane in one part and convex or concave in another—must be used to correct such an error.

In the vast majority of cases infants are born hypermetropic, and as they grow older the eyeballs enlarge a little, so that they become emmetropic or retain a slight degree of the original hyperopia. If the enlargement of the ball, through overstudy, constant close work, etc., goes on, the individual becomes myopic, and the eye may be the subject of disease. Astigmatism is nearly always congenital.

That the human animal has two eyes must not be forgotten. Vision with both eyes together—*binocular* vision—is a much more important and useful thing than monocular sight, and to obtain it we must have not only two fairly good eyes, but they must be directed toward the object to be seen in much the same way. The image of this object must fall upon corresponding points of both

retinas. For this purpose the eyeballs are provided with six muscles: four straight, two oblique ones. By means of the latter the eyes are rotated—by the *superior oblique* inward and upward, by the *inferior oblique* outward and downward. The straight or recti muscles have a less complicated effect upon the eyeball.

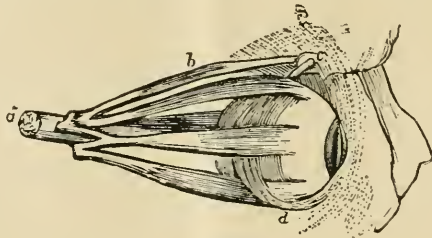


FIG. 9.

MUSCLES OF THE EYEBALL.—*a*, optic nerve; *b*, superior oblique muscle with its pulley, *c*; *d*, inferior oblique. The other four are the recti.

The superior recti draw the front of the eye up; the inferior oblique draw it down. Acting alone, each external rectus draws the eye out and each internal rectus draws it in toward the nose. Acting together, both recti cause the eyes to *converge*—as when looking at a near object—while the externi again direct the eyes toward the distance. It is evident that all these muscles should be in equilibrium; that none should be stronger than and tyrannize over the others. That, however, sometimes happens, and is not an uncommon trouble with persons suffering from “weak eyes.”

In conclusion, it is remarkable how few persons have their eyes placed in symmetrical sockets. Look at your opposite neighbors in a street car, and you will almost certainly see at least one whose left eye is placed higher or lower in his face than the right! This, of course, makes it difficult for images to be accurately focused on corresponding retinal points, and is often a source of ocular weakness.

(To be continued.)

TUMORS OF THE ORBIT.

By J. W. STIRLING, M. B. Edin., etc.

Professor of Ophthalmology, University of Bishop's College.

Tumors of the orbit are of comparatively rare occurrence, but yet the possibility of their turning up at any time in practice, as well as their obscureness, is sufficient and good reason for treating of this subject in regard to the salient points as to symptoms.

The first thing to decide is naturally the presence of the tumor ; next is its site, and, if possible, the place of origin ; and lastly its nature.

The tumor generally makes its presence known by displacing the eyeball, the direction of the displacement varying with the position of the tumor.

If it be inside the cone formed by the bellies of the muscles at the back of the eye, the eye will be projected directly forward, and there will be comparatively little loss of motion. In this position also it characteristically causes early blindness by pressure on the optic nerve setting up atrophy. At the same time, it is wonderful the degree of stretching the optic nerve can suffer without loss of function, if the stretching has not taken place too rapidly, and if no direct pressure be exerted on it. The irregular S shape of the optic nerve will partly account for this.

If the tumor be outside the muscle cone, the eye will be projected in a corresponding direction, as it is crowded to one or other side. The best way to judge of the projection in slight cases is to stand behind the patient and draw up both upper eyelids and compare the eyes. We have next to trust to palpation, and although this is a help in diagnosis, and a pretty sure one, too, if the tumor be in the anterior part of the orbit, yet when the tumor is located at all deeply, it is a very uncertain guide.

Even in the anterior segment of the orbit, one has to exert great caution and care ; for instance, a tumor springing from the anterior portion of the inner wall of the orbit may push the lachrymal bone forward and in front of it, so as to mask the tumor's true nature and real situation. Swanzy mentions a case like this of Mr. Kendall Franks, where a sarcoma from the ethmoid cells spread to the frontal sinus and orbit, yet its soft nature could not be made out, owing to its displacing the lachrymal bone forward in front of it, simulating an osteoma. The point of diagnosis would

be the perception by touch of the sharp posterior edge of the lachrymal bone.

Palpation here only guides us as to the presence of the tumor, not as to its nature, which is a far more difficult thing, and which I will mention later on.

Now, as to the other general symptoms to which tumors of the orbit give rise.

Chemosis is a marked one, it is of the non-inflammatory type, and is due to the mechanical impediment to the circulation offered by the presence of the tumor; in a slowly growing tumor it is frequently absent.

From the malposition of the eye, diplopia must exist, varying, of course, with the position of the eye, and producing of course the concomitant giddiness.

If the exophthalmos be severe, so that the lids cannot close over and protect the eyeball, the cornea suffers from the exposure, and ulceration of a severe type results.

The tumor may in the course of its growth exert pressure on the third nerve, when, as a result, paralytic dilatation of the pupil ensues.

Paralysis of motion of the eyeball varies, and may be due to the mechanical obstruction of the tumor, or to atrophy of the muscles or nerves from pressure.

Pain is a very varying symptom, and may be entirely absent, especially in benign growths.

Pulsation may be present in vascular growths, but it has also been observed in malignant growths.

So much then as to the main points indicating the presence of a tumor in the orbit, now as to its site and place of origin.

It may be mentioned, to start with, that tumors rarely invade the eyeball from the orbit, but the opposite condition is not uncommon.

Starting from the eyeball, a sarcoma invades the orbit, by fungating through the wall of the eyeball, in a case of my own, through the upper outer posterior quadrant. The ophthalmoscopic examination of the eye before operation made the diagnosis pretty certain.

The next most common site for a tumor of the orbit is the frontal sinus. The sinus becomes distended with mucus, and may even go on to abscess formation,—the swelling being greatest at the upper inner angle of the orbit, and is generally slightly

elastic. A great difficulty, however, sometimes arises in these cases where the mucocele extends to the ethmoidal sinus, and thence first spreads to the orbit. In the three cases I have come across I have not found this condition.

Another tumor occurring in this position to be diagnosed from the distended sinus is a meningocele ; this is situated rather further forward ; we also have the history of its duration, and occasionally the appearance of cerebral irritation symptoms on pressing it firmly.

This area is also the favorite seat of osteomata, which are generally ivory hard and of very slow growth ; these can occur elsewhere, especially on the roof of the orbit. The slow growth and ivory hardness guides, although occasionally a tumor of the frontal sinus driving the outer bony table down in front of it may simulate osteoma, as Swanzy points out.

In tumors growing from the inner wall and back of orbit, it is of importance to examine the palate, pharynx and teeth, as also the permeability of the nostril, since growths originating from the sphenoid and ethmoid frequently invade these cavities.

The misdirection of the eye assists us as to the position of these growths.

It is much rarer for growths to originate from the outer walls of the orbit.

Again, it is very rare for tumors of the brain to invade the orbit, the preceding cerebral symptoms would help as a guide, but by no means surely, for it may happen that a tumor of the orbit, giving rise to very slight if any localizing symptoms may early invade the brain.

Tumors of the antrum can secondarily invade the orbit through its floor ; here the symptoms would guide one.

Tumors of the lachrymal gland present no great difficulty, but there is a slow type of periostitis associated with much thickening, which may occur, especially on the roof of the orbit, and associated with syphilis.

Lastly, primary tumors of the optic nerve and of the cellular tissue of the orbit occur ; of these the characteristics will appear more fully in the ensuing portion of this article.

The last point we have then to consider is the nature of the new growths, and here great difficulties confront us.

Rapid growth, pain, early blindness, enlargement of præaural gland, invasion of surrounding cavities, and sometimes pulsation

point to malignancy. Complete immobility of the eye means general invasion of all structures, and indicates malignity.

In slowly growing tumors, which are generally benign, we have difficulty in diagnosing them from the periosteal thickening I have already mentioned, and also from chronic localized phlegmon.

If the tumor be *vascular* in nature, the exophthalmos can generally be reduced temporarily; excitement, crying, etc., can increase it; and, lastly, we may watch the effect of compression of the carotid on it. A pulsation and bruit can be observed in some of these tumors, but we must not forget these are also present in malignant tumors. Of the vascular tumors, I have only seen a congenital nævus, at the back of the eye, and it became partly visible on rotating the eye far outward. The most common tumor of the cellular tissue is sarcoma, and the diagnosis at best is conjectural. In an old note-book I find the following, copied from Berlin of Heidelberg: "If the tumor be solid, surface nodulated, does not fluctuate or pulsate, but is not stone hard, not connected with brain, nor proceeds from walls of orbit, eyeball, nerve, muscles or lachrymal gland or neighboring cavities, then it is almost certainly sarcoma of orbit."

Tumors of the optic nerve may or may not be malignant; here the blindness and atrophy of the disc as seen by the ophthalmoscope precede other symptoms; later we get the projection of the eye directly forward.

This exophthalmos directly forward we get with other diseases, such as Grave's disease, and paralytic proptosis, etc.; but in Grave's disease, etc., there is the lack of blindness, and the exophthalmos is generally bilateral.

Lastly, cysts of the orbit are not uncommon. Dermoid cysts being congenital, then there are hydatid and extravasation cysts. Encephalocele I have already referred to.

Selected Articles.

SERUM THERAPY.

Professor Bouchard, in an inaugural address given to the Second French Congress of Medicine, held at Bordeaux on August 8th, gave an exceedingly interesting sketch of the treatment of specific diseases by means of bacteria or their products, claiming in passing that his experiments of May 30th, 1890, published in the *Comptes Rendus de l'Académie des Sciences* on October 26th of the following year, wherein he pointed out that a curative power rested in the serum rather than in the leucocytes of the blood, was the first published contribution on serum therapeutics, although Hankin in his paper on defensive proteids has practically the same idea.

Bouchard insists that when an infectious disease is treated by injection of the bactericidal serum of a vaccinated animal, we are not to apply the term bacterio-therapeutics; we are using an antiseptic substance in which, however, there is this peculiarity, that the antiseptic substance has been manufactured not by the chemist but by the vaccinated animal. He points out that we do not act upon the tissues, etc., of the sick person, but rather on the attacking microbe. In the course of infective diseases the serum of vaccinated animals acquires not a bactericidal power, which exists to a certain extent in serum of all animals, but distinct antitoxic properties, which properties have been conferred by the action of the cells of the vaccinated animal whose nutrition and secretion have been profoundly and more or less permanently modified by the temporary action upon them of vaccinal bacterial substances.

Having stated his own position as regards the history of the subject, Professor Bouchard points out that Behring and Kitasato in December, 1890, showed that antitoxic serum acts in doses so minute that we have an additional argument that it does not exert a bactericidal action. Antitoxic serum does not kill the microbes, nor does it interfere with their multiplication or even with their production of poison, nor is it yet proved that it can destroy or neutralize these poisons; rather it aids the tissue cells to resist the action of these poisons, many of which appear to act by paralyzing the ordinary defences against bacterial invasion.

The antitoxic action does not belong to a substance which is found in the blood nor to a particular chemical condition of the blood plasma. But the blood, or its plasma, or some of the constituent substances of this plasma may acquire the property of setting

into action the organic processes which naturally protect the economy against certain poisons. These normal protective processes, which may be impeded by certain poisons or exalted by the presence of certain substances in the blood, are of two kinds: (1) the destruction or chemical transformation of the toxic substances; (2) a stimulation at a distance of portions of the nervous system which the poisons tend to paralyze.

After reviewing the proteid products of metabolism, Bouchard points out that many of them possess powerful physiological action; they possess a certain degree of toxicity which is destroyed by heat; they are therefore of a proteid nature. The primary products of metabolism have been termed toxalbumins, and their unfavorable influence only has been studied, but their benign effects when acting in moderate quantities have been ignored. They differ in their physiological activity and in their effects, even those derived from the same cell, according to the variation in the functions and activities of such cell. By these products each cell influences its fellow, both as regards their nutrition and function, either temporarily or permanently, whilst beyond, and more important than this, the effect may be transferred to other animals, and even to different species. He goes so far as to say: "It is by the soluble products which the cells elaborate, much more than through the nervous system, that vital equilibrium among the cells is established." Such equilibrium is unstable. The opposition of antidote to poison, of antitoxin to toxin is constantly going on. The cells react against the poisons coming to them from other cells, whilst even the primary products of metabolism may have their molecules divided into two sets—hemialbumose or hemipeptone, and antialbumose or antiptone; the products of the two sets may differ from the originals, but they have not different properties, although when acting on the organism they may have different or contrary effects.

Taking a pancreatic cell as an example, Bouchard points out that it secretes a ferment which passes out from the cell, and which certainly interferes with the process of coagulation. At the same time the cell manufactures a ferment which remains in the cell, but which, if set at liberty—by death or weakness of the cell—actually induces this same process of coagulation. It is, he argues, a matter of little importance whether the organism produces an antidote at the same time and place at which the poison is produced, but it is important that the presence of poison, naturally or artificially brought about, should be followed very closely by the formation of a counter poison or antidote.

The protective substance may be (1) a ferment which destroys the poisonous substance, for example, in the liver; (2) an internal secretion which may become more active in the formation of substances for the purpose of stimulating those tissues which are specially exposed to the attack of the poison, or which are specially necessary to the well-being of the organism.

The merit of Behring's great work lies in the fact that he has been able to prove that the serum of an animal exposed to the action of certain bacterial poisons acquires the property of neutralizing the effect of the action of these same poisons, although he is probably in error in assuming that the antitoxic substances are of bacterial origin ; they are really dependent on a permanent modification of the tissues of the animal in which the poisons are acting, in which case the theory of serum therapy exalts the functions by which we naturally defend ourselves against microbic invasion. The agent which prevents the paralysis of nutrition and function is manufactured by the tissues themselves as a kind of protective reaction against the action of the organized toxins or poisons.

Professor Bouchard's paper is instructive, not only for what it contains, but also for what it suggests as regards the building up of serum therapeutics on a rational basis.—*British Medical Journal*, Sept. 14, 1895.

At the sixth Italian Congress of Internal Medicine, Rome, a discussion on this subject was opened by Professor Foà, Director of the Anatomico-Pathological Institute of Turin. After referring to his own investigations and to those of others, he summarized the present condition of the subject. Hitherto the most certain and efficacious results have been from toxic infections ; the latest researches, however, show the possibility of obtaining effects quite as certain in septic infections. The concept that every infection reduces itself to a pure poisoning, and that every reaction consists in the production of the counter-poison, is, perhaps, too absolute. In the case of diphtheria, serum therapy has issued triumphant from the test of practice, and statistics show the sensible diminution of the mortality obtained by the new treatment. Serum therapy has been less efficacious in acute cases of tetanus. The tetanic manifestations in such cases would indicate grave organic lesions already complete, against which serum therapy cannot cope : it is, however, the best preventive remedy. In typhoid and cholera it has not found any application up to the present time, probably owing to the notable difference between experimental results and the natural condition of the infections in man. The latest researches of Foà have solved the problem of serotherapeutics in diplococcic infection of the rabbit ; it remains to study the problem in the larger animals, which permit of the results being applied to man. Serum therapy must not be allowed to hinder the development of prophylaxis. Both aim at the prevention of diseases, and serum therapy, where it shows itself in preventive immunization, becomes a prophylactic measure.

Professor Maragliano, Director of the Institute of Clinical Medicine, Genoa, referred to his researches on tuberculosis. He said he had clearly explained the materials used in the vaccinations, and summarized the new results obtained with his treatment by many Italian and foreign physicians. A total of two hundred and fifteen cases had been reported up to date, of most

diverse character, and all confirming the value of the treatment. He concluded his address with the following propositions : 1. Therapeutic serums, to develop their special action, require the active concurrence of the affected organism. 2. The value of serum therapy can be determined only by clinical observation. 3. Serum therapy can develop its special action as much in acute as in chronic infections. 4. The therapeutic serums introduced up to the present in practice in Europe are absolutely innocuous. 5. Serum therapy in its clinical application has up to now given indeterminate results in streptococcic and typhoid infections, doubtful in tetanus, promising in pneumonia, which awaits only a methodical clinical consecration ; positive in tuberculosis, which only wants the confirmation of an extensive trial ; incontestable and surely triumphant in diphtheria.

The only disappointment in connection with the Congress, which was the most successful yet held, was that Professor Maragliano did not explain his method of obtaining the anti-tuberculous serum, as many of the members had expected he would do.—*British Medical Journal*, November 2, 1895.

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

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GOITRE, EXOPHTHALMIC GOITRE, THE THYROID BODY AND EXTRACTS.

Recent investigations in regard to the pathology of Graves's disease point to the probability that the phenomena are not due to an undefined neurosis or disease in the medulla oblongata, but rather to some abnormal condition in the thyroid body. The following translation in the *British Medical Journal* is interesting in this connection :

THE THYROID BODY AND GRAVES'S DISEASE.

The question of the relation of Graves's disease to the thyroid body was discussed (*Sem. Méd.*, August 7th, 1895) before the French Congress of Alienists and Neurologists at Bordeaux. Brissaud reviewed the various theories of Graves's disease: (1) The oldest, that the heart affection is primary, and is caused through the sympathetic nervous system (Trousseau); (2) that the primary lesion is bulbar or central; (3) that the thyroid gland causes the disease by secreting toxic substances; (4) that the disease is only a concurrence of symptoms. The only constant symptom is tachycardia, for the goitre and exophthalmos may be absent, while the coexistence of Graves's disease and simple goitre in the same locality has never been shown to be more than a coincidence. The amount of hypertrophy of the gland is variable and not proportional to the severity of the symptoms, and it is quite contrary to facts to conclude from the anatomical changes that excessive thyroid activity is the cause of the disease, for the author found that of 25 adult thyroids, where no symptoms of Graves's disease were present during life, not one was healthy. The usual presence of goitre has gone against the bulbar theory; but Filehne and Durduff produced exophthalmos, swelling of the thyroid, and tachycardia simultaneously by cutting the restiform bodies in young rabbits. If this is confirmed, one must agree that the thyroid function may be vitiated by morbid bulbar impulse, and that this perverted function may again produce symptoms. As regards the internal

thyroid secretion, all are agreed that it has an immediate action on the nervous system, and a secondary one on general nutrition. Notkine (*ibid.*, April 3rd, 1895) claims to have isolated from the thyroid body the substance (called by him thyroproteid) which causes myxœdema and its acute complications, the actual secretion of the gland being a ferment which converts the thyroproteid which is collected by, and stored up in, the gland into a useful substance (thyroidin). If Graves's disease is caused by over-activity of the gland, there would be, on this hypothesis, no more thyroproteid left, and the organism would be saturated with thyroidin (hyperthyroidation). Renaud (*ibid.*, August 7th), in 1888, had described a lesion which, among the variable ones of thyroiditis, is never wanting in Graves's disease, whether the gland is hypertrophied or not. This is an intralobular cirrhosis obliterating the lymphatics except quite at the margin of and between the lobules, by reason of which the thyroid secretion passes directly into the veins instead of partly into the lymphatics. This, with the presence of a peculiar type of fever, led him to suppose that the disease was caused by a morbid poison, which normally underwent destruction in the lymphatics. The latter view is supported by the fact that an extract of an adult gland is harmless when ingested, being absorbed in the chyle and passing through the lymphatics. In the fœtal thyroid the follicles secrete a mucous substance (thyromucin), in the adult a colloid (thyrocolloidin). This latter is normally produced in all the follicles which are connected with the lymphatics, but in exophthalmic goitre it is only found at the margin of a lobule, the central follicles being poor in thyrocolloidin, or, if freshly formed, filled entirely with thyromucin. This closure of the lymphatics, which in the thyroid take the place of an excretory duct, causes a hypertrophic cirrhosis (*cf.* biliary cirrhosis) with new gland formation of a fœtal type. Renaud concludes that the normal function at the periphery of the lobules being maintained is sufficient to prevent myxœdema by pouring thyrocolloidin into the blood. In the centre, however, only thyromucin is absorbed, and this he looks upon as the poison in Graves's disease. In their attempts to produce hyperthyroidation, Ballet and Enriquez injected extract of adult thyroid, that is, thyrocolloidin, and it remains to be seen whether Graves's disease could be brought about by injecting extract of fœtal gland,—that is, thyromucin. Thus exophthalmic goitre is neither purely of bulbar nor of thyroid origin, the secretion of the gland being controlled by a centre in the medulla (*cf.* diabetes).

An exhaustive paper by E. Fletcher Ingalls, M.D., with the collaboration of Henry G. Ohls, M.D., of Chicago, on the treatment of Goitre, Exophthalmic Goitre by Thyroid Extracts and Desiccated Thyroids, appears in the *New York Medical Journal*, Sept. 7, 1895.

Thyroid extract, he states, was first recommended by G. R. Murray, in October, 1891, and the entire gland by F. Howitz in

March, 1892. Dr. Ingalls in his six cases of goitre, used Armour & Co's desiccated thyroids. The use of these animal products had its origin in the experiments of Ewald & Schiff in 1887, who removed the thyroid body from dogs, and found that death occurred after a period of hypnotic apathy, followed by tetanic contractions of muscles. Ewald found that a thyroid extract injected into a healthy dog hypodermically caused a similar but temporary condition of apathy.

The Reverdins of Geneva found that their removal in man is followed by myxœdema, and in children by arrest of development. Biondi thinks that the alveoli of the thyroid secrete a colloid material which passes into the lymphatic channels. Albertoni and Tizzoni state that the blood corpuscles acquire in the thyroid the power of fixing oxygen. Mobius contrasts Graves's disease with myxœdema, the former being due to excitation—hyperthyrea; the latter to arrest of the functions,—athyrea. Ord says that myxœdema, sporadic and endemic cretinism, cachexia strumipriva, and operative myxœdema of animals are due to annihilation of the function of the thyroid body, which is corroborated by the myxœdema committee appointed by the Clinical Society of London in 1887.

The use of the thyroid gland as a remedy was first applied in man by M. Lannelongue of Paris in 1890, Drs. G. Horsley in 1891, and J. W. Collins in 1892, who found that menorrhagia, headache and melancholia were relieved. G. R. Murray suggested the use of thyroid given hypodermically. Dr. H. W. G. Mackenzie in 1892 suggested the internal use of fresh glands two daily, later twice a week, and later at longer intervals.

The experience of some using this remedy in obesity, in Europe, is then recounted, 4 cases in 5 being benefited; and in 15 cases of Graves's disease it was reported to have been of benefit in 10. Dr. S. J. Meltzer of New York stated that the poisonous effects noted in some cases are due to over-doses, and suggests giving at first only what is equivalent to a grain of Park, Davis & Co's powder. 3 grs. three times daily is the best remedy in obesity. Dr. Ingalls then gives the history of six cases treated by himself, all of which showed improvement. The results obtained by some twenty physicians who reported to him are thus given.

Summary.—With my six cases treated by internal administration of the desiccated sheep's thyroids, and those reported to me by personal letter, I have, all told, fifty cases of goitre, not including one case of advanced exophthalmia, in which the patient died one month after treatment began. In these I find the following results: The swelling was reduced in thirty-eight cases; swelling not affected in eleven cases; no report in one case.

Of the cases where no improvement was noted, the remedy was used only five days in one and a week in another. In four cases the goitre had existed from six to twenty-five years, and perhaps was largely cystic, though not specified.

I have reports of seven cases of myxœdema, with the following results : Improved, five ; not affected, one ; unknown, one.

Of these, in one case the patient improved for seven weeks and then deteriorated, though treatment was continued for three months. Two cases of obesity without other disease are reported. One of the patients lost five pounds ; one gained five pounds.

The symptoms noticed after the administration of this remedy, observed in the various cases reported by me and reported by personal letter, have been : Headache in eighteen ; no unusual symptoms in eight ; no report, twenty-four ; dizziness in twenty ; no unusual symptoms in five ; no report in twenty-five ; trembling in fourteen ; no unusual symptoms in five ; no report in twenty-one ; rapid pulse in eleven ; no unusual symptoms in six ; no report in thirty-three ; weakness seventeen ; no unusual symptoms in ten ; no report in twenty-three ; backache in one ; nausea in seven ; no report in forty-three ; lost weight in twenty-five ; gained weight in two ; mind improved in two ; nervousness in one ; uterine contractions in one.

Conclusions.—From a consideration of the history of this subject and an analysis of the cases which we have presented, the following conclusions seem to us justifiable :

1. Thyroid products produce marked physiological effects upon the nervous and circulatory systems, as indicated by headache, dizziness, pains in other portions of the body, and great weakness, and by flushing of the face and rapidity of the heart's action.
2. Some of these unpleasant symptoms usually occur when a daily dose is reached corresponding to one and a half or two entire thyroid glands of the sheep.
3. If the administration of the remedy in doses that cause such symptoms is continued for a few days, constitutional effects are produced indicating that persistent use of doses of from six to twelve grains of the dried thyroid (equivalent to one or two thyroid glands) three times daily might produce fatal results.
4. Desiccated thyroid glands appear quite as active as the liquid extracts, and more stable.
5. Internal administration appears quite as effective as hypodermic medication.
6. For internal use, the adult dose of the desiccated thyroids should not exceed two grains three times daily at first, but the dose may be gradually increased to two or three times this quantity, provided it does not cause unpleasant symptoms. There is no evidence that moderate doses have an injurious effect.
7. The remedy in some cases has a pronounced effect on the body weight, but this is very uncertain, and varies so greatly in different persons, and in the same individual at different times, that there is strong reason for suspecting that the loss of weight which sometimes follows this administration may be due entirely to disturbance of the digestive organs.

8. In the treatment of myxœdema the remedy has undoubted value, and appears to benefit quite a large percentage. In these cases it is probable that the best results will be obtained by giving it at intervals for a long time.

9. In exophthalmic goître the remedy causes rapid reduction in the size of the gland, but it has no perceptible effect upon the exophthalmia, and it apparently aggravates the heart symptoms. In this disease it must be used guardedly, and its effects must be carefully watched.

10. In many cases of goître, internal administration of full doses of the products of the thyroid is followed by a most remarkable diminution in the size of the diseased gland. Improvement or cure may confidently be expected in seventy-six per cent. of the cases, but sufficient time has not yet elapsed to determine what the final results will be. It is probable that cystic growths in the thyroid gland would not be influenced by this remedy.

11. Clinical experience has not yet demonstrated that this remedy is of value in other diseases, but its effect in diminishing the size even of very firm and hard enlargement of the thyroid gland would certainly justify experimentation in other directions.

SURGERY.

IN CHARGE OF

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John A. Wyeth, M.D. (*New York Polyclinic*, November, 1895) records a case of dislocation of the shoulder complicated with fracture just above the deltoid insertion. The fracture was discovered while attempting reduction under æther anæsthesia. An attempt to effect reduction of the head by McBurney's method was made. An incision was made exposing the surgical neck, the bone was drilled, a hook inserted and extension made. The adhesions were found most rigid and unyielding. Reduction by this means could not be accomplished. The articular surface was excised and the arm put up in splints in the ordinary manner. The condition of the patient before the operation was bad, she took the anæsthetic badly, and died from shock twenty-one hours after the operation. From the extreme fixity of the head and the strength of the adhesions, he suggests that the dislocation must have occurred a year previous to the fracture and had been unrecognized.

CASTRATION FOR PROSTATIC HYPERTROPHY.

Kümmell (*Berliner Klinik*, August, 1895), in a lecture upon the operative treatment of enlarged prostate, reports eight cases of this affection treated by double castration. The operation was followed by considerable relief in these cases, but one patient, aged 77

years, died of exhaustion four weeks after the operation. In a review of his own cases, and those published by other surgeons, he states that in a large majority of instances of senile enlargement of the prostate, White's operation is followed by a more or less rapid shrinking of the prostatic tissue. This result in most cases enables the patient to dispense with the use of the catheter, and to discharge urine spontaneously. The bladder symptoms are much relieved, and the general condition greatly improved.

In the selection of suitable cases, attention should be paid to the condition of the muscular structure of the bladder.

If the detrusor muscle be paralyzed to such an extent that the bladder cannot be completely emptied, even by the use of a catheter, it would be useless to expect the restoration of the normal function as a result of removal of the obstruction to the flow of urine.

In two of the cases here recorded, good results were obtained in spite of the great weakness of the detrusor. In many cases the diminished size of the prostate after double castration permits of a more ready introduction of the catheter, and thus wards off the dangers of retention. According to the author, the operation is only to be recommended in those patients whose sufferings have attained a high degree, and can no longer be relieved by mere symptomatic treatment. The author met with no objection to the operation from any of his patients, all of whom were well satisfied with the results.

The author says the observations as to the influence of unilateral castration in the growth of the prostate are very contradictory, and further information is needed before any definite conclusion can be reached on this question.

DIVISION OF THE VAS DEFERENS FOR PROSTATIC HYPERTROPHY.

Isnardi (*Centralblatt für Chirurgie*, No. 28, 1895) reports the case of an enlarged prostate, with serious and intractable urinary trouble, in a patient aged 71 years, which was successfully treated by double ligature and division of the vas on both sides. The incontinence ceased after the operation, the urine became quite clear, and the enlarged prostate diminished so much in size that it could scarcely be felt through the rectum. The epididymis became smaller and harder on each side after the operation, and the volume of each testicle was reduced by about one-half, the condition of these parts resembling that consequent on chronic gonorrhœal epididymitis.

EMPYEMA IN CHILDREN.

On the ground of an experience of 86 cases, Dr. Cantley (*Internat. Medic. Magazine*) concludes :

1. When pus is found to be present in the pleural cavity the proper treatment is to remove it.

2. The best method is simple incision and drainage.
3. The best site for the operation is the fifth space in the mid-axillary line.
4. Irrigation is unadvisable, and is indicated only in cases of fetid effusion.
5. Exploration and scraping of the cavity are not necessary.
6. Resection of rib is practically never necessary in children as a primary procedure to procure efficient drainage; but may be required to secure the closure of the sinus, subsequently, by allowing the chest wall to fall in.
7. Collapse of the chest wall is not a result to be desired in the early stages of the treatment.
8. Rapid and complete expansion of the lung is the great object of treatment.
9. The tube must be removed early.

INTESTINAL OBSTRUCTION FROM GALLSTONES.

Mr. Mayo Robson classifies these cases as follows: (1) The form dependent on local peritonitis in the region of the gall bladder leading to paralysis of the bowel. Two illustrative cases are related, both of which yielded to general treatment without operation. (2) Volvulus of the small intestine dependent either on the violence of the colic caused by an attack of cholelithiasis, or on the contortions induced by the passage of a large concretion through the small intestine. Two cases are related in which the author¹ performed laparotomy and untwisted the volvulus, recovery following in each case. (3) Mechanical obstruction due to the passage of a large concretion through the small intestine. Two instances are given in which enterotomy, with removal of the concretion, was followed by recovery. (4) Obstruction depending on adhesions or on structure, the result of past gall-stone attacks or of healing fistulæ.—*Brit. Med. Jour.*

¹Dr. F. von Mangoldt, of Dresden, has brought out a method of skin grafting, which he calls "sowing epithelium." The epithelial elements "sown" are obtained by simply scraping a portion of healthy skin, preferably the inner or outer surface of the arm. The part is shaved and carefully disinfected, and with a well sharpened and sterilized razor, held perpendicularly to the surface, the skin is scraped so as to remove the epidermis down to the papillary layer. There is obtained a mixture of epithelial cells and blood in the form of a paste which is applied to the wound and spread over and pressed down with a spatula. In recent wounds any exudation of blood must be previously stopped, while old ones should be freed from granulations and rendered aseptic. The "seed" is bound down with some protective such as rubber sheets previously immersed in absolute alcohol, and dried; over this is put a simple aseptic dressing.

The epithelial scrapings adhere firmly and become covered with a covering of red blood. In a few days the wound seems covered with a pseudo membrane, loses its red color and changes to yellowish gray from coagulation of fibrin at the surface. From the 5th to 7th day the fibrin begins to disappear and the color changes to pink, being the first sign of the proliferation of the epidermal elements. About the middle or end of the third week, the skin is fully formed, smooth but thin; later it thickens and begins to desquamate. This desquamation, probably due to the absence of glands, should be combated with fatty or oily applications. From the 5th day it is well to gently irrigate the wound at each dressing, *i.e.*, every second day, with a luke-warm, sterilized, $\frac{1}{2}$ per cent. solution of chloride of sodium. From the tenth day a borated lanoline ointment is used.

Dr. von Mangoldt has found it advisable in some cases to lightly scarify the part to be covered, that the grafts may closely adhere to the surface.

This method leaves, at the region from which the grafts were taken, but a superficial lesion, which heals rapidly and without any mark. It furnishes the wound with a smooth covering, which is not always obtained with the large grafts of Thiersch's method.

No skin will form over necrosed tissue; the epithelium applied will not adhere, but dies and is thrown off.—*Semaine Médicale*.

OBSTETRICS.

IN CHARGE OF

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ANTISTREPTOCOCCIC SERUM IN PUERPERAL FEVER.

According to the *Revue de Chirurgie*, it seems very probable, from recent observations, that a serum has been prepared which is capable of arresting the numerous forms of infection caused by streptococci. About three years ago it was shown by Roger that cultures of streptococci contain two antagonistic substances, one of which diminishes whilst the other increases the resistance of inoculated animals. The former is destroyed by heat, so that with a culture raised by heat to a temperature of 230° F., animals can be vaccinated against streptococcic infection. The serum of animals thus treated acquires the property, not of destroying, but of attenuating the microbes that are introduced into them, and of checking the infection set up by virulent cultures. Serum taken from a mule which had been extensively injected with sterilized cultures was used on a woman suffering from puerperal fever. After unsuccessful injections of 8 and 16 c. cm., a third injection of

25 c. cm., on the third day was followed by rapid defervescence of the fever and rapid recovery. Another case is reported, where injections of the serum amounting to 40 c. cm. were followed on the third day by speedy defervescence and cure.

Abstract of a Paper on

THE INDICATIONS FOR OPERATION IN PUERPERAL SEPSIS.

By LEWIS S. McMURTRY, M.D.,
LOUISVILLE, KY.

The efficiency of aseptic methods in preventing infection during the puerperium has been demonstrated by the recorded results of Maternity Hospitals. Since operative surgery a few years since disclosed the various lesions of pelvic disease, it has been known that pregnancy and the puerperal state may be complicated by pre-existing inflammatory diseases of the uterine appendages tumors and septic accumulations inside the pelvis, chronic and circumscribed disease of this character may be converted into acute and diffuse inflammatory conditions by the trauma of labor. Puerperal sepsis may in this way be the result of pre-existing disease. This class of cases must necessarily be small since women thus diseased are generally sterile. That such cases necessarily come within the scope of operative treatment will be generally conceded. The author then considers the indications and guides for operative interference. For practical purposes he divides puerperal sepsis into two general divisions:

(1) Those cases wherein systemic infection is marked and prominent with comparatively insignificant local manifestations; and (2) those wherein the local inflammatory lesions are conspicuous and general systemic infection less marked and secondary. In the first division, by the time the diagnosis is made, the mischief is done, and nothing avails; in the second division, when the lesions are demonstrable to the skilled touch and local signs of known value, together with general symptoms of recognized significance are present, they form the basis of decisive action. The author closes his paper by deprecating empirical operations, such as hysterectomy, in the class of puerperal cases where the local symptoms are those of diffuse peritonitis without localization of lesions.

INCOERCIBLE VOMITING OF PREGNANCY TREATED BY ELECTRICITY.

Gautier in the *Gazette des Hôpitaux* advocates the application of the continuous current, placing the positive pole over the pneumogastric, phrenic, and sympathetic nerves above the right clavi-

cle between the two insertions of the sterno-cleido-mastoid, and the negative pole over the umbilicus. The current is descending, of light intensity and long duration. A current of about ten milliamperes should be used for 15 to 30 minutes, care being taken to break the current gently.

REPAIR OF UTERINE INJURY IMMEDIATELY AFTER LABOR.

Dr. Dudley, in the *American Journal of Obstetrics*, sums up his experience as follows:—

(1) That suturing the lacerated cervix properly immediately after labor will result in primary union of the same, and prevent many of the evils that follow in the wake of a union by second intention; (2) that the fear of septicæmia attending the manipulation of the cervix and the introduction of poisons which will induce septicæmia at the same time is an unfounded one, and would be dissipated by giving such work a proper test; (3) that it is a method of procedure more justifiable than an immediate repair of the perineum which the profession of to-day universally advocates; (4) that the securing of primary restoration of the laceration hastens involution, prevents subinvolution and the various forms of displacement which are induced by it in such an over-weighted organ; (5) that catgut is the proper suture, and perfectly safe and reliable when properly prepared.

TURPENTINE IN POST PARTUM HEMORRHAGE.

Dr. N. Mayne, in *Trained Nurse*, says: "For some years I have used spirits of turpentine in post-partum hemorrhage, and in every case with the best results. When the ordinary means, *i.e.*, friction over the uterus, irritation of the uterus by introduction of the fingers, cold, hypodermic injection of ergotin, etc., failed, by saturating a piece of lint with the turpentine, and introducing it in my hand into the uterus, and holding it against the walls, rapid contraction took place, and all hemorrhage instantly ceased. In one or two cases when the patient was almost pulseless, it seemed to act as a stimulant. On no occasion did this action fail or did it cause the slightest inconvenience, except in one, when the side of the patient's thigh was slightly blistered by some that came in contact with it; but it gave very little annoyance. I consider it is much quicker and surer in its action than any other remedy, and does not cause any injurious result, and is much more easily applied. In country practice, getting hot water, or using injections, often means loss of time."

PATHOLOGY.

IN CHARGE OF

ANDREW MACPHAIL, B.A., M.D., M.R.C.S., Eng., L.R.C.P., Lond.

Professor of Pathology, University of Bishop's College.

Every year is making it clearer that pathology is governed by laws the same as those which exist in every department of nature, and that it must take its place upon an equal footing with the other sciences. All proper progress in medicine is based upon the results of a study of the causes of disease, and this is necessary before the value of any remedy can be properly estimated. The recommendation of antitoxin in the treatment of diphtheria is a case in point. The great work of the pathologist in diphtheria was not the demonstration of the Klebs-Lœffler bacillus, but the fact that the ultimate diagnostic test is the presence of nerve degeneration. There are other membranous diseases of the throat, and this bacillus is found in presumably healthy children, but in no other throat disease than diphtheria is this change produced. It is the poison and not the bacillus the antitoxines are meant to counteract. This matter was first brought into prominent notice at the International Congress of Hygiene at Budapesth in September, 1894, by Behring and Roux. It is purely a question of immunity, Metchnikoff and his earnest co-workers holding that both natural and acquired immunity are due to the capacity of cells especially of leucocytes to digest and neutralize infective agents, and so preventing infection by hindering their multiplication and growth in the body. Buchner and his followers on the other hand would deny to the cells any such comprehensive action, yet the result is that acquired immunity at any rate is bound up with the presence in the blood and tissues of chemical substances which do possess a natural antipathy to the infective agent. The further researches of Behring and Kitsato have proved this abundantly, and, lastly, they have shown that the immunizing power of certain agents may be exercised after infection has taken place, and that they have a therapeutic value. The central pathological fact for the year then is the results obtained from the antitoxic serums. The use of the antitoxine for the remedy and prevention of diphtheria has overshadowed all the others. Laboratory and hospital experiments are notoriously fallible, and it is not until remedies have gained a widespread use in the hands of the average practitioner that their real value can be ascertained. This remedy is now receiving such a test. Up to this time the results, while they show no conflict, are variable, and it is impossible as yet to gauge accurately the value of the remedy. Many factors have to be considered,—the accuracy of diagnosis, the gravity of the disease in patients treated by the

serums, the age of the child, and the increased care given to patients under any experimental treatments. Medical therapeutics, weighted down by empiricism, has been at a standstill until a year ago pathology opened up this new path.

In every series the statistics show that decreased mortality, in many instances, has sunk to one-half, and in no case has any series shown results unfavorable to the remedy. This has not been due to the mildness of any given epidemic, for while Roux's cases showed a decreased mortality of one-half, the mortality at the Trousseau hospital, where the remedy was unused, remained the same. Clinically, every physician with a wide experience speaks in the highest terms of this new therapeutic measure; all agree that the exudate clears more rapidly, that the temperature falls, that no ill effect is produced upon the heart or kidneys, and that the tendency to paralysis is not increased, though this last point requires further elucidation.

Following along the same line are the experiments of Dr. T. R. Fraser, of Edinburgh, suggestive, to say the least, that an immunity can be established against the poison of venomous serpents.

The newest application of serum therapy is in the case of cancerous growths. The *Gazette Hebdomadaire*, 27th October, contains a communication sent to the Académie des Sciences, by MM. Richet et Herricourt, giving favorable results in a large number of cases. Further details are promised.

Syphilis has been termed the most asexual of sexual diseases. In the October number of the *Archives of Surgery*, Mr. Hutchinson gives another illustration of the fact, by quoting the case of a member of the profession who consulted him for a typical eruption. Mr. Hutchinson gives it on his authority that primary lesion occurred by the bite of a flea.

The accession of zeal for the purification of food supply caused by the dread of cholera led to the paradoxical advice, "boil your ice." Bacteriological examination shows that freezing does not influence the number or vitality of the microbes. Even melted hail stones yield a goodly number. Yet it has been shown that in freezing a mass of water artificially the microbes are driven to the centre, leaving the clear margin of the block of ice free. It would be interesting to observe what process occurs when ice is formed in large sheets on the surface of lakes and rivers, and whether indeed they are not expelled entirely.

The interesting problem of cold-catching is receiving the attention it deserves. The observations of Pasteur show that when the temperature of fowls was lowered, the liability to contract anthrax was increased. It is probable that any variation in temperature induces a state of body rendering it open to the action of poisons which are generated either within or without the system. The extreme view of a specific infection receives no warrant. Van Buren explains the process as an arrest of function of the skin, whereby noxious materials are retained and act as blood poisons,

This theory of an auto-infection is in opposition to Lister's view, that it is due to a diminished action of the nerves of the surface leading to an increased action of the nerves of an internal organ in sympathy with them.

As men grow wiser they do not get over their desire for a concrete thing. It used to be a demon, now it is a germ. The most recent "manifestation" is the search for the typhoid bacillus in the urine as a diagnostic sign of the disease. The results so far have been negative.

OPHTHALMOLOGY.

OPHTHALMIA NEONATORUM.

(*American Journal of Ophthalmology.*)

Cures for this direful malady are forever being reported, and now we have one from Dr. X. C. Scott, of Cleveland, endorsed highly by Dr. J. L. Thompson.

It is the following:—

Hydrastia Sulph.

Acidi Borici.

Sodii Biborat.,

aa. gr. v

Tinct. Opii. Deodorata,

ʒ js

Aq. Destil.

ʒ i

Mix and filter.

Instil this into the eyes every hour, and wash the eye out between whiles with tepid water; apply vaseline to edges of lids.

If the results claimed still continue on further investigation, the preparation is a most valuable Godsend.

BRITISH MEDICAL ASSOCIATION.

SECTION ON OPHTHALMOLOGY.

Some most interesting papers were read before this section,—in fact, far above the ordinary type of material supplied at these functions.

ERYTHROPSIA.

Fuchs, of Vienna, presented in an able paper a new theory as to this subjective color perception.

As a result of his mountaineering in the snow region, he considers erythroptasia as common among healthy eyes, and says he can produce it in patients from whom he has removed the lens, by sending them out to walk on the snow.

Fuchs' theory is that it is due to the visual purple becoming visible during its formation after exhaustion of it in the retina by long exposure to dazzling light.

MacNaughton Jones, of London, read a paper on the importance of correcting errors of refraction in neurasthenic women, and presented a series of statistics.

PSEUDO MALIGNANT TUMORS OF THE ORBIT.

One of the most interesting, if not the most interesting, paper was that of Professor Panas, on the above subject; and coming from such an authority, it carries much weight.

He opens by inveighing against the common habit of attributing most or all tumors of the orbit, which disappear under medical treatment, to a syphilitic origin.

He cites many cases to the point, and on account of the general obscurity of tumors of this region urges the medical treatment before surgical interference.

Many neoplasms, thought to be lymphomata, sarcomata or syphilomata, ought to be attributed to the dyscrasia produced by some toxins.

The infectious principles, microbes or toxins act by means of the venous anastomoses and by the lymphatics, or after their penetration into the entire organism.

Panas here mentions a case of apparent bilateral tumors of orbit, associated with ozæna, which had also pre-existed, and considered the symptoms due to microbe infection of the cellular tissue of the orbit caused by the microbes of ozæna from the nasal fossæ.

Another case was a non-syphilitic woman from whose nose numerous polypi had been removed, and in whose left eye an exophthalmia developed; operation showed it to be purely indurated cellular tissue, with corresponding lateral masses of the ethmoid.

The explanation offered is that the removal of the polypi was accompanied by an infectious process, which propagated itself towards the orbital cavity, and upon this supposition the patient was treated with arsenic, which ameliorated her condition considerably.

In referring to tumors of the lachrymal gland, he refers to several varieties as caused by general infectious conditions, such as gonorrhœa, eruptive fevers, influenza, mumps, and perhaps syphilis, the peculiarity being that they are bi-lateral, and accompanied by engorgement of the parotid sub-maxillary glands. In some, the starting point was uterine trouble at the menopause, complicated with hemorrhage from a uterine fibro-myoma, and here he attributes the ocular trouble to an infectious state of the organism, as later a double plastic choroiditis developed.

Another case followed acute tonsillitis, in which streptococci were demonstrated in the secretion from the tonsils.

Panas' conclusions were :—

1. In the presence of a tumor of the orbit reputed sarcomatous, even should we be enlightened by the histological examination, we must think of the infectious origin, and not have recourse to any operation until previous medical treatment has proved negative.

2. Among means of treatment we possess, we must include mercury, iodine, arsenic and toxitherapy, as it has been attempted with erysipelas or the pure cultures of streptococci by Fehleisen, etc., etc.

Lassar and others have used by preference streptococcic serum, which is less dangerous, its toxicity being increased by addition of cultures of micrococcus prodigiosus. The injections are made into the tumor, at a remote point under the skin, or into the veins.

3. The research of the point of origin of the infection (nose, sinuses, pharynx), and the bacteriological determination of the toxins which are the cause, contribute to confirm the diagnosis, and to lay down the basis for a rational medical treatment.

It is only after this that we can have recourse to surgical interference, which is often powerless in the so-called sarcomata and lymphadenomata of the orbit.

OPHTHALMIA NODOSA.

At the June meeting of the Ophthalmological Society of the United Kingdom, Mr. Lawford reported an interesting case of the above. It is due to the penetration of the tissues of the eye by the hairs of certain caterpillars.

Mr. Lawford's case was from the foxmoth caterpillar (*Bombyx rubri*).

Symptoms being severe, protracted inflammation, which lasted with remissions and intermissions for six months, ultimately subsiding, leaving the eye little if any the worse.

The inflammation starts with severe conjunctivitis, then infiltration of the cornea, iridocyclitis and opacities of vitreous.

Small, firm, grey nodules developed in the conjunctiva, sclera, or iris, and on examination were found to contain a piece of the hair in the centre.

Only nine or ten cases have so far been reported, and these mainly in Germany.

Mr. Lawford considered the disease to be probably toxic in origin, the poison being contained in the hairs, which in some caterpillars have glands at their bases.

Grosz (Emil). Durch ein wurmabtreibendes mittel verursachter Fall vollstandiger Erblindung :—Königl Aertzverein Budapest.

Dr. Grosz reports in this a case of blindness resulting from the administration of extract of male shield fern and castor oil.

The patient took 8 grammes in sixteen hours, $\frac{1}{4}$ gramme every half hour, on January 9th, the next day became unconscious, and on the 11th was completely blind, with widely dilated pupils. In a few days atrophy of the optic nerve was visible in the way of pallor, which has since become complete.

The toxic action was due to the filicic acid, and experiments on animals have shown that this acid combined with an oil is far more easily absorbed and in greater quantity than when alone.

Grosz mentions several cases from other authorities, some of them fatal, similar to his own, the toxic dose varying according to the freshness of the preparation, from 4 to 45 grammes, and more especially if the drug were accompanied by a dose of oil.

Grosz considers the loss of vision and mydriasis as of peripheral origin.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

ANNUAL MEETING.

Stated Meeting, October 18th, 1895.

A. D. BLACKADER, M.D., President, in the Chair.

SUCCESSFUL CASE OF TREPHINING FOR MENINGEAL HÆMORRHAGE—LIGATURE OF THE CAROTID.

Dr. F. J. Shepherd exhibited a patient who had been successfully trephined for meningeal hæmorrhage. The patient, aged 28 years, whilst coasting down a hill on a bicycle, lost control of his wheel, and was pitched headlong against a telegraph post. He was brought to the General Hospital in an unconscious condition. On entrance he vomited freely, and towards evening regained consciousness, and was quite bright. After a restless night he next morning became stupid; had paresis of right side. Dr. Shepherd saw him then for the first time, and as his stupidity was increasing and difficult to arouse him, and the paralysis of the right side was increasing, he came to the conclusion that meningeal hæmorrhage was going on; immediate operation was advised. A wound on head down to the bone was seen, extending from the anterior superior border of the right parietal bone downwards and forwards for some three inches. A fissured fracture could be seen at the bottom of the wound going down in the direction of the squamous portion of the temporal bone; a slight depression was also seen at the upper end of the wound. At this latter point the skull was trephined, and on removing the bone a thin clot was come down upon, which spread over the vertex and side of the brain. This clot was much larger towards the temporal bone, so another trephine opening was made about the middle of the wound, and a larger clot was met with, and the middle meningeal artery was seen empty lying on the dura-mater, the hæmorrhage evidently coming from deep down. An incision was made down to the zygoma, and the skull cleared of soft tissues, and from the last trephine opening downwards a piece of bone two inches wide by three inches long was chiselled out. Still, the hæmorrhage appeared to come freely from below, so the brain and its membranes were held aside with broad retractors, and the blood clot being removed the fracture was seen to run through the foramen spinosum and then across the body of the sphenoid. The artery was evidently torn in the foramen, and as the man had lost and was losing a considerable amount of blood,

Dr. Shepherd decided to tie the left common carotid artery, which he did very rapidly. The free hæmorrhage immediately stopped, though there was still venous oozing. All the blood clot was washed out, and the space to the base of the skull packed with iodoform gauze. The gauze was brought out of the lower end of the wound; all the rest of the wound was sutured.

On leaving the table the patient was in a very bad condition. Pulse 180 to 190, respiration 30 to 40, and shallow. A large enema of hot saline solution was administered, which immediately lowered the pulse to 140. Patient regained consciousness by evening, and conversed intelligently. Next day his condition was good; pulse 120, respiration 20. No paresis of right side, and patient could articulate well. There was much oozing of bloody serum through the dressings. On August 7th he was very restless, and there was so much oozing that the wound was looked at and the gauze packing carefully removed. No sooner did the last piece come away than there was a tremendous gush of what looked like arterial blood, and this jetted out in a very lively manner, so the gauze was immediately replaced. From this time forwards the patient went on well, with the exception of two days, when there was aphasia, the gauze packing being removed on the tenth day (August 17th), and no hæmorrhage resulting. He was walking about by September 1st, and there was no trace of hæmorrhage, nor was speech affected. He was discharged some days after, the wound almost closed. When shown to the meeting the patient was perfectly well.

WHITMAN'S PLATES IN FLAT FOOT.

Dr. C. Wilson showed two cases, with the appliances in use.

Dr. Shepherd had seen the appliances, and been greatly struck with them, but as considerable technical skill is required in their manufacture he had never used them. He had been satisfied to raise the inner side of the foot and thus make the patient walk on the outside; also performed the operation suggested by Trendelenburg, of dividing the tibia above the ankle so as to produce a condition of bow-legs. The operation is severe and not so satisfactory as the use of many technical contrivances.

PROGRESSIVE MUSCULAR DYSTROPHY.

Dr. Jas. Stewart showed two cases of this disease. In one, a lad 15 years of age, it was of the facio-scapulo-humeral type, the affected muscles being wasted to a marked degree. In the other the affection was more general and less marked.

GALL-STONE SURGERY.

Dr. G. E. Armstrong read a paper on this subject.

Dr. Shepherd said that it was a great advance to attack the obstructive point. Some had opened the bowel and endeavored to reach the obstruction through the duct from below. He thought

that to perform cholecystenterostomy with Murphy's button without first trying to remove the stones was a mistake. He referred to a case on which he had operated. The patient was deeply jaundiced and had xanthoma tuberosum. It was thought there was a close connection between the jaundice and the eruption. He was unable to recognize the normal anatomical relations of the gall-bladder, but he cut down where he knew the gall-bladder should be, and opened several pockets containing a number of large stones; there were altogether seven or eight large stones, each in a separate pocket. As the gall-bladder could not be brought to the surface, a tube was inserted and well packed round with iodoform gauze. For a long time the flow of bile was tremendous, but without any evil results. The stools gradually became colored, the urine normal, and the jaundice and xanthoma disappeared. How the common duct had been restored he could not explain. He had presented the case at the recent meeting of the American Dermatological Society held here, as a case of xanthoma cured by operation.

SYMPHYSIOTOMY.

Dr. Kenneth Cameron reported a case.

Dr. Lockhart wondered why the operation was not performed more frequently, as one had the germs now so much under control.

Dr. T. Alloway, while in Germany this summer, had had a conversation with Professor Zweifel, of Leipzig, who had sixteen cases, several of which he had seen. Zweifel thought there was a good future for the operation, and his methods differed from those ordinarily carried out in the following points: after dividing the symphysis, he did not use the forceps, but left it to nature to deliver the child; he used silver sutures in some cases and silkworm gut in others; and he used a broad leather strap pulled tight around the pelvis, and adjusted it, occasionally tightening or loosening, according to circumstances. He thought, moreover, that there would undoubtedly be cases of halt, from not obtaining good union.

Stated Meeting, November 1st, 1895.

A. D. BLACKADER, M.D., President, in the Chair.

TEMPORO-SPHENOIDAL ABSCESS FOLLOWING MIDDLE-EAR DISEASE.

Dr. James Bell presented the patient, and gave the following history of the case:

He was aged 28; had first suffered from suppurative middle-ear disease and perforation of the tympanic membrane, six years ago. Excepting a running ear, had enjoyed good health until 1st of July last, when he began to suffer pain and tenderness about the mastoid, also œdema over the mastoid, severe headache, and persistent slight elevation of temperature. The end of August he was

sent to Dr. Buller, who trephined the mastoid on the 1st of September, but found no pus. The symptoms were unrelieved, the temperature remained high, there was intense headache and tonic spasm of the muscles of back of the neck and slight delirium. Five days later inequality of the movements of the lower portion of the face was noted. There was slight paresis of the lower left face. On 8th September I decided to operate next day. There was then, in addition to the symptoms already given, a low pulse (45 to 55), but no localizing symptoms and no optic neuritis. I decided to expose the brain by the removal of an osteoplastic flap, which would give access to both middle and posterior fossae of the skull. Next morning, however, there was distinct paralysis of certain groups of muscles of the left arm, especially the extensors of the wrist. It was then clear that the lesion was an ascending one involving the motor area, and from the history and symptoms almost certainly a subdural abscess. I exposed the skull by extending the original incision in the soft parts, and made a half inch trephine, opening at a point one inch above the posterior root of the zygoma, and in a line with the posterior osseous wall of the meatus. In marking the point for the trephine pin with a drill, although prepared for a thin skull, and exercising the utmost caution, the drill went through the skull and wounded the posterior branch of the middle meningeal artery, which bled very freely. When the button of bone was removed with the trephine I cut further forwards with rongeur forceps, attempting to expose the artery in order to ligate it. I was unsuccessful, and was obliged to clamp it with the bone in a pair of Pean forceps, which were left *in situ* for several days. The dura mater bulged but did not pulsate, and on incising it, a couple of drachms of fœtid pus escaped from above, and on pressing up the base of the brain, about half an ounce more escaped from below with shreds of sloughy tissue. The brain surface was covered with lymph, and neither sulci nor convolutions could be identified. The wound in the mastoid antrum was made to communicate with the base of the skull, and the lower border of the trephine opening was cut away with rongeur forceps down to the level of the base of the middle fossa. A drainage tube was inserted along the base of the skull and brought out through the wound. After operation the temperature fell to the normal, the pulse rose to 80-90, and by next day the paralysis was noticeably less; in forty-eight hours it was almost gone, and in another forty-eight hours it was completely gone. All his symptoms improved, and he seemed to be on the way to recovery. On the fifth day after operation he became alternately drowsy and irritable. Later he became sullen and morose and difficult to manage, complained of severe frontal headache, tore off his dressings, insisted on getting out of bed, etc.; optic neuritis began to develop, and the pulse became slow and at times irregular. On the 30th of September (three weeks after the first opening of the cranial cavity) the wound was reopened. Through the trephine opening a livid fluctuating mass

protruded, which did not pulsate. I opened it, and evacuated a couple of drachms of pus. After using an exploring needle I opened higher up and evacuated about an ounce of pus. Passing my finger into the cavity, I found it to contain a considerable mass of sloughy tissue. It was carefully washed out with saline solution, and a glass drain inserted. The cavity was in the temporo-sphenoidal lobe, which was now a mere abscess wall. From the date of this operation the patient speedily recovered, and his optic neuritis has almost disappeared.

Dr. Armstrong said this was a new field in surgery that had recently been opened up, and enabled us to treat cases which in the past had too often proved fatal. No class of brain surgery was more promising than the treatment of abscess from fracture of the base of the skull or from middle-ear disease; the pus could be got at and cleaned away.

VESICAL CALCULI WITH SPECIALLY INTERESTING FEATURES.

Dr. James Bell presented specimens of vesical calculi from two old men.

The first was 70 years of age, who had prostatic troubles ten years ago. In October, 1892, a large stone had been removed by suprapubic operation in France, with relief for a year and a half. In August, 1894, he had been subjected to litholapaxy, but was not relieved. The operation was repeated in May, 1895, with no better result, and in August, 1895, a perineal lithotomy (lateral) had been done and a stone removed. The symptoms persisted, and on the 24th of October Dr. Bell had operated by suprapubic section, and removed eight separate stones and about thirty fragments which had apparently not been evacuated after crushing. The condition of the bladder explained why the stones had not been evacuated by either litholapaxy or perineal lithotomy. The posterior wall and trigone consisted of five separate pouches in which the stones and fragments lay.

The second was that of an old man of 75, in a condition of senile dementia, who had been first catheterized three years ago. Had for two years and a half used a catheter, sometimes as often as every half hour, without making any attempt to keep it clean. The second stone was about two inches long and as thick as an ordinary lead-pencil. The third stone was small and wedge-shaped, and was firmly impacted behind the projecting prostate, and would not have been found by any other than the suprapubic route. Both patients had done well.

PYOSALPINX.

Dr. T. Johnson-Alloway read a paper on this subject.

Dr. W. Gardner considered that these cases differed very much in character and acuteness, but he could not go as far as Dr. Alloway, and say that every case successfully operated on was a

life saved. In many cases after a period the acute stage subsided, and the patient was able to be up and about, and though recovery might not be complete, life was not endangered.

With regard to the time at which to operate, Dr. Gardner stated that he preferred to wait until the acute stage was past, unless rupture occurred, which was very exceptional, or urgent symptoms appeared to endanger life. His reason for delay was that after a certain time had elapsed it was found that the infective organisms had died out and the pus in the tubes had become sterile, and general infection of the peritoneum was thus much less likely to occur. Drainage, now-a-days, he did not resort to as much as formerly; in a goodly number he had not hesitated to close up the abdominal cavity, and no bad symptoms resulted; but this was not always the case. In choosing between gauze and a tube, he did not find gauze satisfactory, as he had at the end of twenty-four hours removed the gauze and had it followed by a gush of pent-up fluid. In future he intended to make use of iodoformized or sterilized wicking, which he thought would be more likely to drain. He used gauze to check hæmorrhage more frequently than for drainage. The French operation, which Dr. Alloway condemned, Dr. Gardner felt very differently about, and he had had a good deal of experience with it. Every patient had not got well, but the results in pus-tube cases had been very good. He thought it a valuable operation, and that the opinion of the profession was coming round very strongly in favor of it in France, Belgium and even in America. The cases in which he had done it had been very satisfactory indeed, and resulted in complete recovery.

Dr. Alloway, in reply, said the cases reported were picked cases of the most severe type, which could not have been relieved by any other form of treatment, though other cases of a less severe type would be published later on. His plain of drainage was a glass tube, with a strip of sterilized gauze in the centre; it had many advantages over the sucker suggested by Tait, and it need not be changed more than once in the twenty-four hours. Gauze packing, by itself, he only used when there was much hæmorrhage due to oozing. He had seen the French method of extirpation of the uterus performed in Paris by Sigond, Champonière and others, and it struck him as being harsh and unscientific. He had seen severe hæmorrhage occur which the surgeon was unable to control with the clamp. The operation seemed to be done more by the sense of feel than by the sense of sight, and the amount of force required to separate adhesions was often extreme. The greatest disadvantage of this method, he thought, was that the keystone of the pelvis was removed, and there would be great liability to have prolapse of the bowel. He more often gave morphia after operations than formerly, when required to relieve pain, but he thought it unwise to use it before operation, as it had a tendency to interfere with the normal peristalsis of the intestines being established after operation.

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Editorial.

MIDWIFERY TRAINING FOR STUDENTS.

This subject is at present being brought prominently before the training bodies and Medical Council in England, and with only too much reason, the absurdly inadequate training of students which exists, and has for many years existed, being reflected in the abnormally high death rate in puerpura, in 1893 being 1 in 95 of the deaths from all causes. Picture to yourself an examining body like Oxford University, requiring no lectures, no clinical instruction, and no labors to be attended by its graduates, and neither the University of London, Oxford or Cambridge requiring any clinical instruction, and London and Cambridge only one course of lectures, the General Medical Council requiring a three months clinical course, attendance on twelve labors, and personally to have conducted three, and then compare this with what is required in Germany, 30 cases personally conducted, and the student here for his final examination must conduct on his own responsibility a confinement before the examiner, and send in a written report the day after. For the next seven days he must visit the woman twice daily; and if the patient die, he must make a post mortem examination and send in a report. Some examining bodies, and even in this country, accept from students certificates of "having been present;" it might perhaps have been well to add, in the same building or town where the confinement happened, as far as practical knowledge goes, and it would probably be quite as useful. The late Dr. Leishman, notwithstanding, stated that he could communicate more sound instruction in practical details at the bedside in one case of labor

than the student would pick up hap-hazard in the course of a casual attendance on twenty. If a student is simply to stand by a parturient woman, and listen to a lecture on the progress of labor, it is only a matter of mere mechanical expertness to produce even the very cries and groans from a mannikin in the class-room, and to teach him enough to pass any examination ; but woe betide his innocent and confiding patients. No amount of didactic teaching can teach a student midwifery any more than it could teach him medicine, anatomy, or how to sign his name ; and while on the one hand it may not be possible to teach as the Germans teach and as it should be taught, still the method adopted so generally in England, and so often here, of looking on and letting another do all the work, will simply send out thoroughly uneducated physicians, who will be a misery to themselves and a terror to the public, worse than any atrocity, inasmuch as there is no apparent ending to the far-reaching and constant results.

H. L. R.

THE ARCHIVES OF PEDIATRICS.

This monthly journal will commence its 13th year with the January number, under the business management of E. B. Treat, publisher, of New York, long identified with medical publishing interests. The *Archives* has been for twelve years the only journal in the English language devoted exclusively to "Diseases of Children," and has always maintained a high standard of excellence.

The new management propose several important changes in its make-up, increasing the text fifteen per cent., and enlarging its scope in every way. This will give room for the fuller contributions, and additional collaborators who have been secured for the various departments, all of which give promise of a more successful era than has been known even in the already brilliant career of the journal.

The editorial management will be in the hands of Floyd M. Crandall, M.D., Adjunct Professor of Pediatrics, New York Poly clinic, and Chairman of Section on Pediatrics, New York Academy of Medicine.

COLLABORATORS.—A. Jacobi, M.D., J. H. Ripley, M.D., J. Lewis Smith, M.D., V. P. Gibney, M.D., L. Emmett Holt, M.D., Joseph E. Winters, M.D., Joseph O'Dwyer, M.D., Augustus Caille, M.D., Henry Dwight Chapin, M.D., A. Seibert, M.D., W. P. Nor-

thrup, M.D., Francis Huber, M.D., J. Henry Fruitnight, M.D., Henry Koplik, M.D., New York; William Pepper, M.D., Louis Starr, M.D., J. P. Crozer Griffith, M.D., Philadelphia; M. P. Hatfield, M.D., W. S. Christopher, M.D., Chicago; F. Forchheimer, M.D., B. K. Rachford, M.D., P. S. Conner, M.D., Cincinnati; T. M. Rotch, M.D., F. Gordon Morrill, M.D., Boston; Wm. Osler, M.D., W. D. Brooke, M.D., Baltimore; S. S. Adams, M.D., Washington; Jerome Walker, M.D., Brooklyn; W. A. Edwards, M.D., San Diego; F. E. Waxham, M.D., Denver; C. G. Jennings, M.D., Detroit; Irving M. Snow, M.D., Buffalo; A. Van Derveer, M.D., Albany; Wm. T. Plant, M.D., Syracuse; James F. Goodhart, M.D., Eustace Smith, M.D., London; James Finlayson, M.D., Glasgow; J. W. Ballantyne, M.D., James Carmichael, M.D., John Thomson, M.D., Edinburgh; Thos. More Madden, M.D., Dublin; Henry Ashby, M.D., G. A. Wright, M.D., Manchester; A. D. Blackader, M.D., Montreal.

Such an eminent array of talent cannot but mean that all developments that are of interest, and useful in this important department of practice, will be fully noted in the pages of this journal. It will record progress in a wide range of subjects covering the entire field of Pediatrics, such as infant feeding and management, general and infectious diseases, general and orthopædic surgery, diseases of the eye, ear, throat, nose and skin; besides original articles, clinical lectures and memoranda, and society reports. A series of illustrated articles descriptive of the various children's hospitals is promised during the coming year. In addition, abstracts of every article of value appearing in American and European journals bearing on Pediatrics will appear.

It claims to be the medium through which the specialists reach the general practitioner, giving him a concise but complete review of the pediatric literature of the world every month.

Volume XIII begins in January, 1896. \$3.00 a year. E. B. Treat, Publisher, 5 Cooper Union, New York.

THE LOS ANGELES POLYCLINIC.

STATION D, LOS ANGELES, CALIFORNIA.

A monthly journal of Medicine and Surgery and the allied sciences, which was established in July last, and now circulates among several thousand Pacific Coast physicians, is edited by Dr. J. F. T. Jenkins, of Montreal, a graduate at Bishop's College in 1879, assisted by the staff of the Los Angeles Polyclinic as collaborators.

Dr. Jenkins is also Professor of Medicine in the Los Angeles Polyclinic, a school for graduates in regular medicine. We congratulate him on this evidence of ability and hard work in his profession.

The journal is in the best style of any of our exchanges and up to date in every respect, being replete with well selected abstracts and interesting original contributions and editorials, and printed with large type, leaded throughout. We will expect to be kept posted especially, in this journal with all that pertains to California as a health resort, a subject which is of great interest to the Northern physician, who often requires to be advised from a reliable source as to when to send, and what directions to give patients requiring the benefits to be derived from a sojourn in the dry, sunny, even-temperated climate of California.

THE AMERICAN MEDICAL REVIEW

Is the name of a new medical journal, the first number of which appears this month. Editor, Daniel Lewis, A.M., M.D. ; Associate, Geo. B. Bradley, M.D. ; Publishers, The R. N. Plummer Co., 106 Fulton Street, New York.

This new aspirant for a place among the two hundred odd medical journals of this continent enters with high aims and an ambitious mission, viz., to furnish the practitioner with the best, the broadest, the latest information on every professional topic. It seeks a place in medical literature of the day similar to that of the Review of Reviews in the world of letters, each number to present the month's life and work in the medical world. No original articles appear in the first number, but are promised in succeeding ones ; an extensive array of concise abstracts, epitomized from the leading medical journals, constitutes the greater part of the number. An exceedingly useful feature is the Index Medicus, which gives a list of all the articles appearing in American medical journals during the month.

It is printed on sixty-four double-column pages ; the headings of each abstract are arranged in a somewhat novel manner, occupying one corner of the article, thus economizing space. As a frontispiece there is an excellent cut of the late M. Louis Pasteur. The cover is of a novel design, pleasing and attractive, in black and red. The *American Medical Review*, with the improvements on the first number which will necessarily follow, in accordance with the programme laid out, bids fair to become a useful journal and a profitable enterprise to its publishers. Its price, one dollar a year, brings it in line with the recent ventures in literary periodicals where a reduction of price to one dollar per annum has led to vastly increased circulations.

ANNUAL DINNER OF THE GRADUATES, UNDER-GRADUATES AND FACULTY OF MEDICINE, UNIVERSITY OF BISHOP'S COLLEGE.

The annual Medical Dinner of the University of Bishop's College was held in the Queen's Hotel, Montreal, on the evening of the 12th of December. Dr. F. W. Campbell, Dean, occupied the chair, being supported on his right by His Honor Acting Chief Justice Tait, and on his left by the Rev. Dr. Kerr. The attendance was large, and much enthusiasm prevailed. The fact that the Medical Faculty were now holding their twenty-fifth session gave an additional importance to the occasion. In replying to the toast of the Dean and Professors, the Dean, Dr. F. W. Campbell, spoke as follows:

Gentlemen,—Permit me to thank you for the cordial—may I say enthusiastic—manner in which the toast has been received by this very large gathering, composed of the Undergraduates, Graduates and Friends of the Medical Faculty of the University of Bishop's College. The occasion of our meeting this evening is one of more than ordinary significance, inasmuch as it signifies the fact that we have completed the first quarter of a century of our existence. What memories rush through my mind as I mention, this fact! What faces rise before me of those who have toiled with me and passed over to join the great majority! As I look around this happy assembly, I see not a face of those who were present and participated in the birth of our Faculty—Sir Wm. Hingston, so lately honored by our gracious Sovereign; Dr. Perrigo, Dr. Leprohon, Dr. Baker Edwards, Dr. Wm. Gardner, Dr. George Wilkins and Dr. Tabb, my old colleagues, are absent. It is a source of regret to myself, as I am sure it is to you all, that circumstances have prevented them being with us. If upon this occasion I enter into some details connected with our birth and trace our subsequent life, I hope you will not consider me tiresome, or that I am overstepping the limits of legitimate congratulation. In after years, it becomes a matter of interesting history to be able to point out the actual spot where important events have occurred, and the ushering into existence of Bishop's College Faculty of Medicine in 1871 has proved of great importance to the Medical education of this city in particular and—I am egotistical enough to add—to that of the Dominion in general. To me it seems as if it was but yesterday, though it was on the 1st of February, 1871, that I was at Dr. David's house, No. 68 Beaver Hall Terrace, in company with that gentleman, and Drs. Hingston, Smallwood and Trenholme, and at which meeting Bishop's College Faculty of Medicine came into existence. Looking over the first Minute Book of the Faculty, I find that at that meeting the following telegram from Major Campbell, C.B., of St. Hilaire, was submitted:—

TO DR. HINGSTON,

“ More particulars of medical corporation required ; give them in person ; it will hasten matters.”

Accordingly, by late train that night, Dr. David left for Lennoxville, to lay before the authorities of the University a proposal to establish in Montreal its Faculty of Medicine. Three days later the same gentlemen met in the same place, when Dr. David reported that he had met with complete success. On the 9th of March following, a meeting of the Corporation of Bishop's College was held in the Synod Hall, Montreal, when the proposal to establish its Medical Faculty in this city was unanimously confirmed, operations to commence on the 1st of October, 1871. By the 1st of June, all the chairs were filled, and shortly after our first annual announcement was issued, a copy of which I hold in my hand, the Faculty being as follows :—

Professors :—Hingston, David, Godfrey, Leprohon, F. W. Campbell, Trenholme, J. Baker Edwards, Kennedy, Gardner, Wilkins and Tabb. Dean of the Faculty, W. H. Hingston, M.D., L.R.C.S.E., D.C.L. Registrar, Francis W. Campbell, A.M., M.D., L.R.C.P.L. Demonstrator, James A. Perrigo, A.M., M.D., M.R.C.S., Eng. Matriculation Examiner, Rev. R. W. Norman, M.A.

Its issue caused the medical sky to darken, the wind to blow a gale, which threatened to destroy our newly launched ship ; but it was strongly built, its crew had faith in the work laid out for them, and here we find it to-night, better fit for work than ever. We have ridden many a gale during the past 25 years, we have lost now and again a man overboard, and there has, in nautical language, been occasional crimping, but we have always been able to repair any loss sustained from such causes, and at this moment I have no hesitation in saying, we are, in proportion to our students, as well equipped as any other Medical school in Canada. Its first location was in the third story of Toupin's Block, on corner of McGill and Notre Dame streets, where two lecture rooms, a laboratory and dissecting room were rented, and on the 9th of October, 1871, the opening lecture was delivered by the late Dr. David. The attendance was not large, but among those present was the late Dr. Sutherland, Emeritus Professor of Chemistry in McGill College,—a life-long friend of the lecturer, who, in a few brief words, wished the bantling all possible success. The first name entered upon the registration book of Bishop's is that of Wolfred Nelson, who the following spring took his M. D. both from McGill and Bishop's. The trials we all met with during 1871-72 only fitted and inured us for those we had to encounter later on. I well remember lecturing for some two weeks to two students, only in the third week to find my class diminished 50 per cent., one of my flock had been led astray, evil counsels had prevailed, and he seemed lost to us. But my friend and fellow-professor, the late Dr. Trenholme, took the matter in hand. Before the week was

out he was again with us, took his full course with us, and graduated M.D. of Bishop's College in 1875. Although he has passed away, so satisfied were his family with the education he received, that they, to-day, are among the strong supporters of Bishop's College Medical Faculty in Montreal. The first Convocation of the Faculty took place at Lennoxville on the 4th of April, 1872, when the degree of C.M. M.D. was conferred upon the following gentlemen:—Wolfred D. E. Nelson, H. S. Cunningham, R. N. Webber, J. E. A. Lanouette, André Latour and Philippe Desilets.

During the summer of 1872, the building we at present occupy was built, and there for the past twenty-four years we have had our home. We have, I believe, set a most worthy example, one which is, in my opinion, *unique*, viz., that of the entire Faculty having lectured from its establishment up to the present moment without receiving the slightest money recompense. We have for many years had a money surplus, but instead of dividing it, we have expended it in the purchase of apparatus, and otherwise equipping the school with what is a necessary adjunct to every first class medical college. We have had great pleasure in watching the great success which has attended the majority of our graduates, one hundred and sixty in number, scattered throughout the world. While I draw no invidious comparisons in this respect, I cannot pass over this portion of my subject without alluding to a few who have prominently distinguished themselves: Dr. Wolfred Nelson, our first registered student, stands to-day among the first life insurance experts on this Continent; Dr. C. A. Wood, besides a graduate, was a member for years of our teaching staff. To-day, as an eye specialist—residing in the great city of Chicago—no man is better known throughout the entire Western States, and few, if any, have in so short a time contributed more to the literature of his specialty. If one goes to the city of Boston to-day, and enquires for the leading eye specialist, the name of Dr. Williams will be given. Two men stand next,—Derby and Chandler, both, I am told, considered equal—the last a Bishop's College graduate. If we pass to the beautiful city of Orange, N.J., we will find Dr. Tetreault, a Bishop's College graduate, filling the office of health officer, and occupying a leading position among the practitioners of that city. If we cast our eyes to the West and Southwest, to the Pacific slope, we find Bishop's graduates forging their way to the front, more than one man distinguishing himself as an operating gynaecologist, due to the facilities he found for practical instruction in the Western Hospital of this city. In the West India Islands the time is not far distant when Bishop's graduates will equal the number of all others combined. Coming nearer home, to our own great city of Montreal, I find over a dozen graduates, all doing well, and not a few of that number filling positions as teachers in our Faculty. We have indeed great reason to feel proud of the achievements of our alumni. Might I just for one moment speak of the facilities we possess as a school for the

teaching of obstetrics,—I believe it is unequalled in Canada. It must be a source of great satisfaction to our graduates to know that when thrown on their own resources in this important part of their profession, at the very outset of their career, their experience is equal to most men who have been for years in practice. We can with justice claim that we are indeed *the* Midwifery School of Canada. We deserve success—we shall have it in full measure before long. Twenty-five years ago we shook the dry bones of medical education in this city, and have contributed in no small degree to developing this city as the great Medical centre of the Dominion. But we need money ;—who is going to come to our aid to endow our Chair of Physiology, to-day filled by an Edinburgh University graduate—a man whose course is not equalled in Canada,—I might with truth say, not excelled, if equalled, on this Continent. I need hardly name Dr. Bruère. (Great applause.)

To-day we have 70 students in attendance, and these, I am sure, you will be pleased to learn will shortly be increased to over one hundred, by the addition of the students of the Dental College, with which Bishop's College has signed an agreement for affiliation, and granting the degree of D.D.S. I will not weary you with the details of what may be termed the Dental fight, but will content myself by saying that it is over. I thank God for it. The entire Dental body of this Province are to-day united in bringing our *Alma Mater* to the front. But why detain you longer? My task is done. I have as briefly as possible given you our history and our hopes. Ah! the last is that which fills me with joy. In the future I can see their fulfillment. I hope I may live to see it. It is hardly likely, though possible, that I might be alive on our fiftieth anniversary. If God should so permit it, I might even take a look in at such a social gathering as this ; and though my step might, and most likely would, be feeble, I trust my voice might be strong enough to speak of great success, of faith in our future, and my never ceasing love and devotion for the Medical Faculty of Bishop's College. (Great applause.)

Book Reviews.

Pregnancy, Labor, and the Puerperal State. By Egbert H. Grandin, M.D., Consulting Surgeon to the New York Maternity Hospital; Consulting Gynæcologist to the French Hospital, N.Y., etc.; and George W. Jarman, M.D., Obstetric Surgeon to the New York Maternity Hospital; Gynæcologist to the Cancer Hospital, N.Y., etc. Illustrated with forty-one (41) original full-page photographic plates from nature. Royal octavo, pages viii, 261. Cloth, \$2.50 net. Philadelphia: The F. A. Davis Co., publishers, 1914 and 1916 Cherry street.

We have in this volume a companion to *Obstetric Surgery*, forming together a very good practical and up-to-date work on obstetrics. This work avoids the mistake, made in so many books on this subject, of having a large portion devoted to Embryology, Anatomy, Physiology, etc., and we quite agree with the authors, that all this should have been mastered by the student before he begins obstetrics. We must especially commend the plates, which are all new and very practical, and which will enable the student to grasp the points intended to be taught at once, although both in this country and in England the back is not the position ordinarily chosen for confining a woman in, unless in cases of operative interference. This work is divided into three parts: I. Pregnancy, with three chapters, shorn of a great deal of the usual verbiage, and stated so that the student can readily grasp the different points. II. Labor, with four chapters, the first two being the mechanism and clinical course of labor, both very good; the third chapter, the management of normal and abnormal labor, the first part of which, the management of labor, which is really the *raison d'être* for the book, is not up to the standard of the other chapters, *e.g.*: the very slight notice given to the management of the anterior lip when capping the head, the want of the necessary knowledge being a fruitful cause of lacerated cervix. Again, in the care of the perineum, whilst it may serve the practitioner with experience, is not suitable for students. Again, the finger should avoid the rectum if at all possible; but the treatment of the placenta when extruded from the vagina as regards the membranes, and the theory of the cause of the retention of the membranes, are certainly to be condemned as not being founded on facts, any more than the statement about the use of iron in post-partem hæmorrhage, etc. Chapter four, devoted to the care of the newborn child, is decidedly good. Part III consists of two chapters on the normal and pathological puerperium, both of which are vastly better to anything we have yet seen in print. The work complete should be on every physician's shelf, and the student who possesses a copy will be able to post himself on everything new in Obstetrics.

The Practice of Massage, Its Physiological Effects and Therapeutic Uses. By A. SYMON ECCLES, M.B., Aberd; Member of the Royal College of Surgeons, England; Fellow Royal Medical & Chirurgical Society and Medical Society, London; Member Neurological Society, London, etc. Mac-Millan & Co., publishers, London and New York. For sale by The Copp, Clark Co., Ltd., publishers, 9 Front street West, Toronto.

During recent years remedial applications to disease other than the administration of drugs has received greater attention from the regular medical profession than previously, such as the use of electricity, hydrotherapy, special forms of exercise, etc. Among these means of restoring health, massage takes a prominent place, but as yet the methods of its proper application are not generally thoroughly understood, and, like most other forms of treatment, unless rightly used but indifferent results are obtained. Hence a work up to date in all the details of its practice by such a recognized authority as A. Symons Eccles should be welcomed by the profession. The author gives in the volume the results of his personal experience, and recommends no modes of employing massage which he has not thoroughly tested himself, he being, besides a practitioner of medicine, a practical masseur. In the first chapter, the five methods of applying the manipulations are described, viz., by *effleurage*, *pétrissage*, *tapotement*, *vibration* and *massage à friction*, and also how to apply massage to the different parts of the body, and what variety is best adapted to each.

In chapter II. the physiological effects of its application are described, and some rules for its administration given.

In chapter III. we learn that the therapeutic indications fulfilled by massage are: 1, Mechanically and directly, elimination of waste products from the tissues under manipulation is increased, the absorption of infiltrations and exudations is greatly favored, adhesions are attenuated, sometimes broken down, and even organized thickening may be reduced; 2, nutrition of the part is improved, vascularization is increased, and metabolism is augmented; 3, indirectly, massage acts as a derivative, relieving congestion of the internal organs by attracting the flow of blood to the surface and muscles. Molecular vibrations are set up, stimulating the nervous system, acting through it reflexly, thus exciting secretion, while, on the other hand, its sedative influence relieves pain and reduces over activity.

In succeeding chapters its uses are dwelt upon in the following affections: myalgia and rheumatism, arthritis, sprains, dislocations, fractures, relaxation of ligaments; in diseases of the stomach, liver and intestines, in anæmia, obesity, uricacidæmia, glycosuria, myxœdema, rickets, scoliosis; in diseases of the nervous system, such as sciatica, paralysis, occupation neuroses, chorea, hypochondriasis, neurasthenia, insomnia, hysteria, headache.

The last chapter describes its uses in diseases of the heart and asthma.

From a perusal of these pages it is evident that good results from massage depend very much on its proper application by manipulators skilled by long training, who may under the directions of the physician be trusted with the care of the majority of cases ; but Dr. Eccles, while having a high appreciation of massage as a remedial agent of special affectiveness that comparatively few know or recognize at present, thinks that the manipulations in difficult cases must be practised by the physician himself, more especially in diseases of the gastro-intestinal tract.

There are no illustrations in this book which would seem to be a fault in a work of this kind, but the descriptions are clear, and the perusal and study will enable any one to become familiar with the latest methods of applying this valuable curative means in the cases where it is indicated.

Pathology and Surgical Treatment of Tumors. By NICOLAS SENN, M.D., Ph.D., LL.D., Professor of Practice of Surgery and Clinical Surgery, Rush Medical College, Professor of Surgery Chicago Polyclinic, etc. (710 pages and 515 engravings and colored plates). W. B. Saunders, 1895. Price \$6.00.

Any work coming from Senn is sure to be well received the world over by the Medical profession.

The vast amount of clinical material, which he has collected and fully illustrated by photographs and original drawings, make the volume so valuable that no practitioner can afford to be without it. Senn is not only a skillful and experienced surgeon, but he possesses those qualities which go to make up the best kind of an author and teacher. He is systematic in dealing with a subject, and clear in his descriptions. The chapters on the Origin and Nature of Tumors, their Etiology and Pathology, are specially attractive. It is interesting to note how little he thinks of caustics, limiting their use to small benign tumors. He reports 12 cases of malignant tumors treated with the toxins of erysipelas, as advised by Coley and Bull without permanent benefit.

In discussing the etiology of malignant tumors, Senn somewhat reluctantly says that proof is not conclusive showing them to be of microbic origin. He teaches with Cohnheim that a tumor may be made up of embryonic cells, the offspring of embryonic cells ; but he goes a step further, and says they may also develop from "mature cells, which, for some reason, have failed to undergo transformation into tissue of a higher type, and which may remain in a latent, immature state for an indefinite period until growth is excited by heredity or other exciting causes."

Altogether, the general high standard of the work must secure for the volume a place beside that splendid book, the "Principles of Surgery," by the same author, which is so indispensable to every surgeon and teacher.

PUBLISHERS DEPARTMENT.

LITERARY NOTES.

Ex-President Harrison, of the United States, receives a larger sum for his articles on "This Country of Ours," which he is writing for *The Ladies' Home Journal*, than has been paid to any public man in America for magazine work of a similar nature. His first article, in the Christmas number of the *Journal*, sold over 100,000 extra copies of the magazine, of which 725,000 copies were printed as a first edition.

EDNA LYALL'S "DREAM CHILDREN."

The famous English authoress, Edna Lyall, writing of her life and early literary influences and work in January *Ladies' Home Journal*, says: "From the early days of my authorship up to the present time there has always been a story on hand, and writing has become so much a part of my life that it is difficult quite to understand what life without a vocation would be like, or how people exist without 'dream children.' They cost one much suffering, and bring many cares and anxieties; they are not what we could wish, and we are conscious of their faults. Still they are our 'dream children,' and when they cheer the dull or interest the overworked there comes a glad sense that it has all been worth while, and we are thankful that the gift was given us."

PROFESSIONAL OPINIONS OF INGLUVIN.

Edward Warren (Bey), M.D., C.M.:—

"Hereafter I shall prescribe 'Ingluvin' liberally and with great confidence in its therapeutic value."

Chas. Low, M.R.C.S.E., etc.:—

"Medical men will never regret using 'Ingluvin.'"

Edward Cotten, D.N., C.P.P., London:—

"'Ingluvin' is particularly efficacious in vomiting produced by pregnancy."

Waldo Briggs, M.D.:—

"I have used 'Ingluvin' extensively, and find it far superior to any remedies for Vomiting of Pregnancy, Dyspepsia and Indigestion."

A NEW VOLUME OF THE LIVING AGE.

The two hundred and eighth Volume of *Littell's Living Age* opens with the issue of the week ending January 4th. The beginning of a new volume is an excellent time for the beginning of a new subscription, especially when, as in this instance, it includes a new—a lower price. For 1896, the subscription price will be six dollars. Good news truly to its subscribers and to all others who appreciate and enjoy good reading, for no one who wants the best of choice literature should be without it.

The reduction in price means no reduction in size or falling off in value, or any lowering of the high standard which it has always maintained. Foreign periodical literature continues to grow not only in bulk but also in the variety, interest and importance of the topics treated; and it absorbs to a greater extent every year the works of the most prominent authors of the day.

For the amount and quality of reading furnished, the price (\$6 a year) is very low; to those desiring the cream of both home and foreign literature, the publishers make a still cheaper offer, viz.: to send *The Living Age* and either one of the American \$4.00 monthlies, or weeklies, a year for \$9, or any \$3 monthly for \$8. With *The Living Age* and one or other of our leading American monthlies, a subscriber will, at remarkably small cost, be in possession of the best which the current literature of the world affords.

LITTELL & Co., Boston, are the publishers.

It is difficult to predict the future work in the magazine field. No one would have conceived, ten years ago, that a thirty-five-cent magazine would ever contemplate the use of the expensive lithographic processes in printing. But a ten cent magazine has put in a large and complete lithographic plant, with the avowed purpose of furnishing a certain amount of color-work every month. The first result is the reproduction of a water color, drawn by Rossi for *The Cosmopolitan*, and redrawn upon stone by *The Cosmopolitan* lithographic artists, and printed upon *The Cosmopolitan* lithographic presses. Work upon even a more extended scale is promised for the January number.

CANADA MEDICAL · RECORD

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No. 4.

Original Communications.

ARTIFICIAL LIGHTING OF PUBLIC BUILDINGS AND PRIVATE HOUSES, AND ITS EFFECTS UPON THE HUMAN EYE.

In three parts, with Illustrations.

(Continued.)

II. VISUAL DIFFICULTIES.

By CASEY A. WOOD, M.D.,

Professor of Ophthalmology in the Chicago Post Graduate Medical School ; Oculist to the Passavant Memorial Hospital, Chicago.

Those who did me the honor of reading the first of these articles will understand that the use of the eyes for near work involves uninterrupted efforts at accommodation, and means the expenditure of a considerable amount of muscular and nervous force. Efforts of this sort, tiring as they are for the eyes and the nervous system, should be seconded by every appliance known to science, unless weak eyes and the near work are always to go hand in hand. From investigations of the subject I find that about one-third (rather more than less) of all bookkeepers, stenographers, clerks,

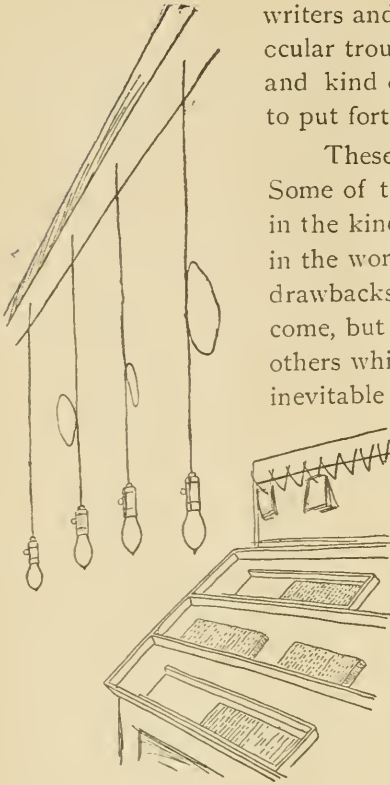


FIG. 1.

writers and other "near" workers suffer from ocular troubles brought about by the amount and kind of visual effort they are called upon to put forth.

These difficulties of vision are many. Some of them inhere in the eye itself, some in the kind of work undertaken, and others in the worker's surroundings. Most of these drawbacks may, with ordinary care, be overcome, but it is to be confessed that there are others which must be regarded in the light of inevitable evils. For example, as long as the

morning paper flourishes, just so long is it in the nature of things impossible to avoid the necessity of doing continuous near work on the part of printers requiring sharp vision, by means of artificial light. And yet even when this illumination is of the best, both as to quality, source and position, it never can equal natural light.

For it must be remembered that the retina and choroid are adapt-

ed to the peculiar rays of sunlight. The sun's rays are, indeed, the natural and proper accompaniment of normal vision. The absorbing powers of the dark pigmented choroidal coat and the average sensibility of the retina are adjusted, so to speak, to the diffused white rays from the sun. Fatigue of the retina, with all its evil consequences, may be equally induced by too much or too little light. One should neither look at the naked sun nor read fine print in a cellar. The writer well remembers a case of acute inflammation of the eyes produced upon a companion, who, unaccustomed to light reflected from snow, crossed the Mer de Glace on a bright summer day without the ocular assistance of tinted glasses. On the other hand, the small German schoolboy acquires most of his knowledge—and his myopia—by that (to us Americans) "light of former days," the "penny-dip." It is not too much to say that thousands of clerks, students, typewriters, compositors, proof-readers and other near workers on this continent persist in doing or are obliged to do their work in the presence of lights which are almost as hurtful to the vision as these. One may take as the standard of normal illumination diffused or indirect white sunlight



FIG. 2.

shining *not into the eyes*, but upon the work from over the head or either shoulder. Lights that approach this condition are the most valuable and least hurtful, while those sources of illumination are likely to induce retinal fatigue, weak eyes, headaches, inflamed lids and other ocular troubles to the extent that they deviate from it. Apart from sunlight, the illumination best adapted to the needs of the printing room is by all odds that produced by the incandescent electric lamp. Its light is white, steady and sufficiently intense. It gives out no disagreeable odors that foul the atmosphere, or unburnt carbon that besmirches the lamp chimneys like kerosene ; it does not flicker nor flare and overheat the room in summer and the worker at all times like gas ; it does not splutter and vary in intensity every few seconds like the arc light ; and, finally, unlike any of the foregoing, is capable of ready adjustment to any position at will.

The illustration (Fig. 1) shows how they manage it in one of the newspaper composing rooms in this city. Another printing house has naked gas jets liberally supplied to the top of the frame. These jets probably do a smaller amount of harm than the electric lamps, simply because they "worry" the choroid and retina less. I was tempted to advise a compositor working at a case lighted by a "converted" gas jet (see Fig. 2) to straighten out the latter so as to carry the light behind his head ; but he was the

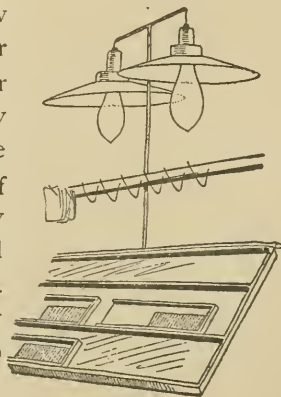


FIG. 3.

owner, evidently, of those priceless possessions, a youthful retina, a powerful accommodation, a strong constitution and healthy eyes, and might not have thanked me. When he has looked naked lights "in the eye" for a few more years, he may find that even these advantages do not always insure against weak eyes. Figure 3 shows a not uncommon form of light well adapted to illuminate the case or desk below it, but particularly damaging to the worker's eyes. Not only the direct rays from the lamp but the indirect rays from the reflector are thrown upon the case, but they are

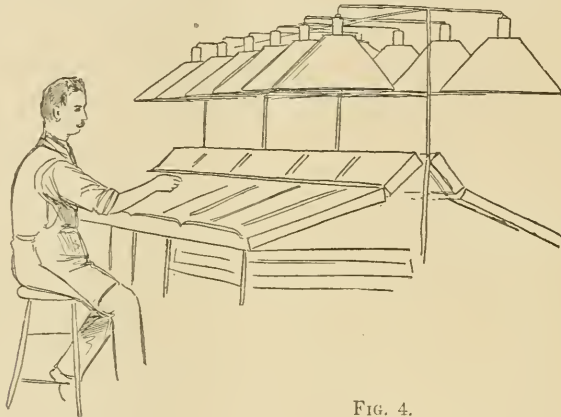


FIG. 4.

with equal certainty, always assuming he does not wear a shade, thrown into the compositor's eyes.

It sometimes happens that the same light may be injurious to one man and innocuous to another. This is often a question of stature, posture or height of stool or chair, and so on. Well marked examples of this may be seen in an office in this city. A medium sized clerk does not complain of his vision as long as he does his work on a high stool (Fig. 4), where, incidentally, he is out of reach of the bright electric lamps in front of him, but when he stands up and continues his work, the lights shine into his face and soon compel him to put on his cardboard shade.

In the next and concluding paper it is proposed to suggest some remedies for the foregoing state of things, and among other matters will be discussed that of eye-shades. Just here, however, it may be pointed out that these are only partially remediable agents in the presence of badly placed lights. It is a fundamental law of optics that *the angle of reflection is equal to the angle of incidence*. That is to say, for example, if a ray from the light A fall upon a plane surface, E B F, at B, it would make with a perpen-

dicular line, B D, the angle (of incidence) A B D, which is equal to the angle (of reflection) D B C. In other words, a light placed at A would be reflected from the surface E B F toward C. Making allowances for the imperfect drawing of Fig. 6, it is easy to understand how a paper placed in front of the compositor, and resting upon the upper case, may act as an annoying reflector, throwing

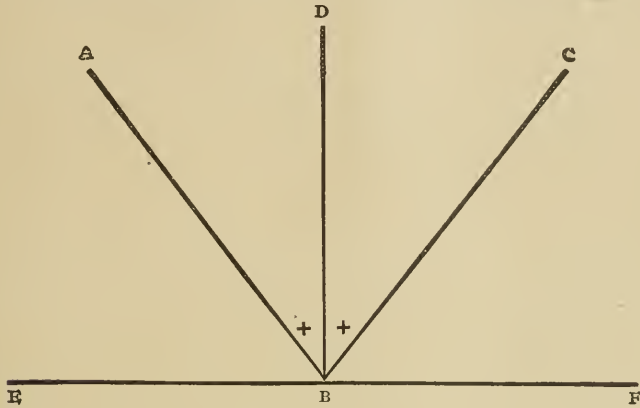


FIG. 5.

the rays directly into his eyes in spite of his eye-shade. But this is not all. The point of reflection on the manuscript or other document often covers or partially covers the particular line of the copy that is being set up, and makes it difficult to see, thus adding to the worker's troubles.

While on this subject of printing I cannot help thinking that the type-setter's eyes are not improved by the necessity for seeing almost instantly the shallow nicks on the side of the type. At any rate it must be very difficult for him to distinguish the first of the series shown in Fig. 7. The second is a little better, but it is a pity that every type cannot have nicks as plainly marked as are indicated in the lower samples. Another visual difficulty is illegible, or rather "dyslegible," copy. This arises not only from "bad" writing, but from the use of pale ink, glazed and colored paper, lead pencil, colored inks, thin paper, and, worst of all, from the employment of a combination of two or more of these.

However, the greatest obstacle the sufferer from ocular troubles has to deal with may reside in his own eyes. Aside from acute or chronic disease of the organ, the worst *form* of weak eyes is *hypermetropia*, or hypermetropia combined with astigmatism. This is a very common kind of ametropia, and the possessor of it sooner or later finds his eyes give out, even when his surroundings are favor-

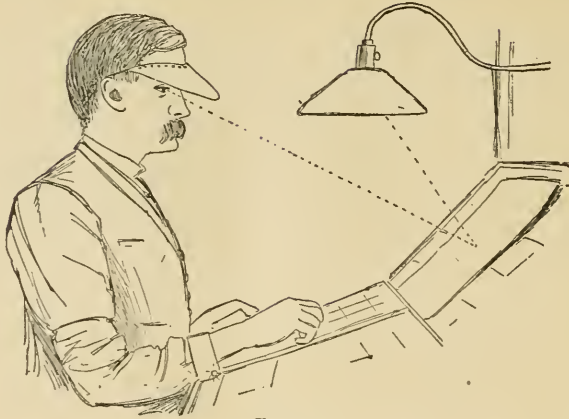


FIG. 6.

able to the preservation of sight. It makes his powers of accommodation less effective, and soon induces eye-strain with all its evil consequences. Myopia is perhaps not so hurtful to the printer, but as it, too, is often associated with astigmatism, it is frequently a great source of annoyance. When young myopes persist in using their eyes in a printing house, their original shortsightedness is often increased thereby. This is especially likely to be the case when the lights are insufficient or badly placed. Myopia is often associated with structural disease of the interior of the eye, and although the myopic eye does not need convex glasses to see close at hand as soon as the emmetropic and hyperopic organ, yet this advantage is largely counterbalanced by its constant liability to serious choroidal, vitreous and retinal disease.

At about forty or forty-five the emmetrope's (earlier for the hyperope) accommodative power fails, and the individual needs glasses to see distinctly at 10-14 inches. It may be, however, that he can distinguish the type in the upper case long after his lower case has become dim and misty, and it often requires all the oculist's care to fit him with glasses that will give him a sufficient "range" of accommodation so that the contents of both cases are fairly distinct. After fifty-five most compositors feel this difficulty

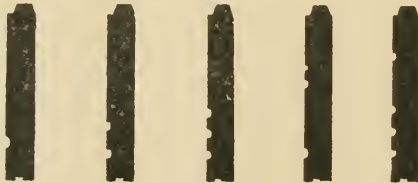


FIG. 7.

of vision acutely. At that age no glasses will enable them to keep their heads in one position in front of both cases and see *all* parts of the field with anything approaching distinct vision. They are obliged to approach and withdraw the head from time to time in their search for diphthongs and other unusual characters. For them more than for any others should spectacles, illumination, shades, manuscript, etc., be so arranged as to conserve the failing visual power.

(To be continued.)

Clinical Lecture.

CATARRHAL JAUNDICE.

A Clinical Lecture delivered at the Western Hospital, Nov., 1895.

By J. BRADFORD McCONNELL, M.D.,

Associate Professor of Medicine and Neurology, and Lecturer on Clinical Medicine, University of
Bishop's College, Montreal.

LADIES AND GENTLEMEN,

We have before us for consideration to-day a case of jaundice, which, as you are aware, is not a disease in itself, but a symptom, present in a number of distinct affections pertaining to the liver and its ducts, and their surroundings. Hence a correct diagnosis in any case of jaundice is of the first importance, and before coming to a conclusion, all the principal organs of the body must be interrogated. And I would here reiterate what I have not infrequently endeavored to impress upon you: on taking charge of any case of illness, make a thorough examination of every organ in the body before making and declaring your diagnosis. By doing so, you will do much to avoid mistakes, and often discover an unexpected condition, the early recognition of which may be of the greatest moment to the patient. This young man was admitted to the hospital about a week ago, and had been ill about a week before coming in. From the clinical report taken on Nov. 6th, we learn that the patient is 19 years of age, and has been occupied as a school teacher, has always been temperate, and takes good care of himself. He complains of a feeling of weight and soreness in the region of the stomach, with pains there at intervals which last sometimes for several hours; there is nausea and a sensation of dizziness on standing; he is dull and dejected, and feels in a condition of general malaise. Before coming in he had attacks of vomiting each time after taking food. These symptoms were accompanied by chilliness, frontal headache and anorexia, and jaundice appeared some 4 or 5 days before entering the hospital. The patient has always been healthy, not having

had any illness except measles and nasal catarrh. His father is living, but not in good health, has had growths of some kind removed from his neck a year and a half ago, and three times since; mother died of cancer, aged 54; two brothers and two sisters died in childhood, one brother and two sisters are living and healthy.

If we now inspect the patient, we notice the yellowish tinge of the skin, conjunctiva and mucous membranes. He is fairly well nourished, his temperature is subnormal, and has been so since he came in; pulse 60, skin is moist, and he complains of irritation and an itching sensation, and is very thirsty. There is a diffuse rash on the skin of the neck, upper part of the chest, and axillary region, on each side. This has appeared during the last week. Dr. Foley, Dermatologist to the hospital, states that it is erythema-papulatum, and hence will likely disappear spontaneously within a short time. The papules are somewhat large and flat, here and there aggregated together, others isolated. This is a somewhat unusual form of rash, the skin affections most commonly met with, usually only in chronic cases, are pruritis, lichen, urticaria and xanthalmia, the latter characterized by flat yellowish patches on the eyelids, and tubercles or raised masses elsewhere.

We do not find anything abnormal in the lymphatic, locomotor, vascular, respiratory or nervous systems.

The tongue has a brownish coating, there is tenderness over the stomach, liver is slightly enlarged, extending about an inch below the costal margin. Parkin's method of examining the liver is one which enables you to make a more certain diagnosis of its size and condition; the patient is in a sitting posture, with the body flexed as much as possible, so as to relax the abdominal muscles. The examiner sits behind him, and with one hand around either side is able more readily than in the prone position to make out in detail the condition of the gall bladder and surfaces of the liver. In examining the liver, be sure that a coil of intestine is not lying over its lower border, as sometimes happens in cases of enlargement. We find he still has occasional attacks of vomiting after food, indicating a certain amount of gastro-duodenitis; bowels are regular, stools slate gray in color, and contain undigested fat; splenic dulness is normal; urine from 35 to 40 oz. daily. The last specimen examined was acid in reaction, brownish in color, specific gravity 1008; contains four grains of urea to the ounce; no albumen nor sugar; a few granular hyalin casts were

observed, thrown down by the centrifuge ; no leucin nor tyrosin. If we now shake some of the urine in a test tube with chloroform, you notice as the chloroform settles to the bottom that it is tinged yellow,—a proof that bile pigment, which is soluble in this reagent, was present. A common test for bile in the urine is Gmelins. If we pour some urine on this white slab, and near it some fuming nitric acid, you will observe that as they come together a play of colors is produced—green, blue, violet, red, and various shades of yellow from the point of contact outwards in this order, each change representing progressive degrees of oxidation of the bilirubin. Other tests for bile pigment, such as those of Huppert and Ultzman, are sometimes employed. It is well to remember that bile can be detected in the urine some time before obstruction to its outflow into the duodenum is evidenced by the yellow coloration of the skin.

Jaundice, as already stated, is only a symptom, and may result from any cause which obstructs the flow of bile into the duodenum, when it is designated hepatogenous ; but it sometimes depends on destruction of the liver cells and suppression of their functions where no obstruction exists, as in acute yellow atrophy of the liver and certain forms of hypertrophic cirrhosis, and in malaria, pernicious anæmia, yellow fever, typhoid fever, epidemic jaundice, pyæmia, and such toxic influences on the blood as are exercised by snake-bites, phosphorus, mercury, chloroform, ether, etc., here more red blood corpuscles are destroyed than the liver, spleen and kidneys can dispose of, and hence their hæmoglobin changed into bilirubin accumulates in the tissues. The jaundice in such cases is said to be hæmatogenous.

Now, if we compare the history of this patient's case with that of any of this latter group, we will find that the symptoms do not correspond. In acute yellow atrophy, the disease is observed most commonly in the pregnant female ; there is an acute parenchymatous hepatitis, with rapid diminution in the size of the liver, the urine contains leucin and tyrosin, there is maniacal delirium and extreme prostration, death occurring usually inside of a week. In that variety of hypertrophic cirrhosis accompanied by jaundice, the cirrhosis being primary, the liver is very much enlarged, and the jaundice lasts for years, and the stools are normal in color, as obtains in most of this group. The color of the skin in all these cases is much lighter than in the obstructive form, being of a light lemon tint. The list of toxic influences are easily

eliminated, as possible causes of this attack of jaundice. Passive congestion cannot be a cause, as heart and lungs are in a normal condition.

Hence it belongs to the hepatogenous group, and depends on some form of obstruction.

This may be some form of foreign body in the common duct, such as gallstones, parasites, inspissated bile, ulceration of the common bile ducts, or duodenum, tumors, impacted fæces, pregnant uterus, enlargement of kidneys, aneurism of hepatic artery, etc. The passage of a gallstone usually means a sudden attack of biliary colic, followed by an attack of jaundice, which becomes permanent if there is impaction ; and, moreover, it is usually an affection of middle or late adult life, and is apt to run in families, and especially those of gouty tendencies who lead a sedentary life, live high, consume much sugar, carbohydrates or hydro-carbonaceous food, and take little exercise. Cancer of the bile passage or of the head of the pancreas or the pylorus, or when secondary in the lymph glands, and pressing from without, is a more or less chronic painful disease of late adult life.

Lumbricoid worms, liver flukes and echinococci are very rare causes, and might be considered if the case proved to be one of persistent jaundice and enlarging liver. There are no enlarged glands or tumors to be made out which by pressure on the duct would stop the flow of bile.

We must therefore regard this case as one of catarrhal jaundice, the variety you will most commonly meet with. This affection is usually the result of an attack of acute gastro-duodenitis, which closes the opening of the ductus communis choledochus in the duodenum by swelling of the parts, or by a plug of inspissated mucus in the diverticulum of Vater, and brought on by some error in diet, or possibly the result of exposure to cold, or, as some authorities have suggested, a specific pathogenic cause may act in some cases, especially when it occurs in epidemic or endemic proportions ; but it must be distinguished from Weil's disease, an affection known only during the last few years, and which is supposed to be undoubtedly a specific disease ; it occurs in the summer months, attacks mostly young and middle-aged men, and especially butchers. It begins suddenly with chills, fever, and headache, with jaundice on the third day, sometimes stupor and delirium, enlargement of the liver and spleen, albuminuria, diarrhœa and violent pain in the muscles, especially of the calves ; recovery occurs in from one to

two weeks. Sometimes emotional disturbances, such as a passionate outburst of temper, will lead to this form of jaundice. A sudden shock or fright is supposed to act as a cause by lessening the blood pressure in the blood vessels, to such an extent that the tension is greater in the bile ducts.

The symptoms of this affection are simply those of gastritis with jaundice, the latter occurring from the accumulation of bile in the ducts of the liver, which, when the tension becomes sufficient, is absorbed by the lymph vessels of the liver, and get into the blood from the thoracic duct, and is deposited in all the tissues of the body, except the cornea, peripheral nerves, and cartilages, and showing outwardly first in the conjunctiva.

The perspiration and urine contain the pigment and sometimes the milk. Dr. Dyce Duckworth states that he has squeezed milk as yellow as gamboge from the breast of a young mother; the tears, saliva and gastric juice are not discolored.

The slowing of the pulse seen in most cases is supposed to be due to the action of the cholate of sodium on the nervous supply of the heart.

The circulation of the bile acids in the blood accounts for the headache, muscular weakness and depression. In the grave nervous phenomena (cholæmia) observed mostly in chronic biliary retention, where there is delirium, convulsions, coma, and hemorrhage. Frerichs, who uses the name *Acholia* to represent this group of symptoms, believes they are greatly the result of the accumulation in the system of the substances which are usually transformed by the liver.

The formation of the clay-colored stools is interesting, and by recalling to your minds the physiological functions and character of bile, you will more readily understand how the modification is brought about. Bile is separated from the portal blood supply in the liver by the hepatic cells, and entering the intercellular biliary passages, passes along the minute channels and ducts to the gall bladder, and when needed in the intestines the gall bladder forces it through the cystic and common duct of the liver and pancreas to the duodenum, where it mixes with the chyme which has just left the stomach. The bile is made up of bile salts (taurocholate and glycocholate of sodium), cholesterin mucin fats and soaps. The yellowish red color is due to bilirubin, which when oxidized becomes the green biliverdin. Bile precipitates pepsin as well as peptone, parapeptone and bile salts, emulsifies fat, stimulates peristalsis, and

is to a certain extent antiseptic. Hence, when it is prevented from entering the intestine, we find symptoms arise corresponding to what we would expect to result from abolishment of the bile functions in the intestinal canal. Its aid in fat digestion is proved by the occurrence of the substance unchanged in abundance in the stools, giving to them their characteristic clay color; the constipation which is apt to be present in jaundice is a result of the loss of the bile stimulus, which, however, may be offset by the loss of the antiseptic functions, and owing to excessive fermentation and putrefaction, irritation of bowels, offensive stools, and looseness result. As soon as bile precipitates the pepsin, the action of the latter ceases, and the proteolytic action of trypsin begins. According to Kuhn, pepsin destroys pancreatin, which largely digests fat, so that even in cases where the pancreatic duct is not obstructed we have an explanation of the fatty stools.

Once you have excluded all the more serious causes of jaundice, such as gallstones, malignant disease, acute yellow atrophy, hypertrophic cirrhosis, etc., the prognosis of a speedy favorable termination can be given, catarrhal jaundice lasting only from three to six weeks. When jaundice persists for over three months, a more serious condition must be suspected. The first indication of recovery will be the change in the color of the stools, which on the passage of bile into the intestinal canal resume their normal yellowish tint, and lose their offensiveness.

The treatment required in these cases is not active. The cause has been some error in diet, hence the gastro duodenitis must be attended to. The patient should remain in the house and in bed, and be kept warm for four or five days at least; and a calomel purge given, and the bowels kept free by prophanate of soda. Any treatment that will draw the blood to the surface and extremities will prove beneficial, such as a hot bath, the Turkish bath, hot stupes or mustard poultices to the right hypochondrium and epigastrium. Light food only should be allowed; as fat cannot be assimilated, and undergoes decomposition, skimmed milk, buttermilk or whey may be given, and broth, tamarind water or lemonade. As the attack subsides, more solid food may be allowed,—fowl, oysters, steaks, soups, sweat-bread and succulent vegetables. Symptoms requiring treatment in the earlier part of the attack are nausea and vomiting, for which 1-10 gr. calomel triturates every hour, or a teaspoonful of the effervescent citrate of magnesia every hour or two, or bismuth. Then the alkaline mineral waters, Vichy or

Carlsbad water or salts, or the phosphate benzoate or bicarbonate of soda may be given in liberal quantities of warm water. The stomachic tonics, taraxacum or hydrastis may be added, or quinine in the malarial form, colchicum in gouty subjects, and pot. iod. if of syphilitic origin. An emetic in the beginning will sometimes remove the inspissated obstructing plug of mucus. Other hepatic stimulants, such as ipecacuanha, nitro-muriatic acid, the acid pack, etc. Kroll's method of forcing the obstruction by giving large enemata of cold water, 60° to 70° F., once daily, one to four pints, retained as long as possible, is highly recommended by some; it stimulates the peristaltic action of the duct, increases the secretion of the bile, and improves the general condition of the patient; and in a few days the stools indicate that recovery has set in. Gerhardt advises compression of the gall bladder; cases are recorded where the obstruction was thus suddenly overcome. In long continued biliary stasis, Alivia states that the secretion of the biliary acids is greatly diminished, and also the gastric hydrochloric acid secretion, and there is little or no loss of carbonate of sodium, the reaction of the contents of the stomach being usually alkaline, as is also the urine, in which the chlorides are increased, urea is diminished, and the aromatic products increased; and the more marked these characteristics the graver the affection. Hence the use of alkalies for this state is deprecated, and the effects of an acid treatment said to be very satisfactory as regards the restoration of these faulty conditions.

(The patient was discharged from the hospital on the 21st November, the duct became pervious two weeks after admission.)

Selected Articles.

RELATION BETWEEN THE INTESTINE AND THE LIVER IN PATHOLOGICAL CONDITIONS.

At the Congrès Français de Médecine Interne, Bordeaux, M. V. Hanot of Paris read a paper on the above subject.

In a complete exposition of the pathology of the liver, drawn from his own experience and the researches of his pupils, he offered the following conclusions : Physiologically, intimate relations exist between the liver and the intestines, through the nerves and the circulation. The liver is one of the fundamental wheels of the general nutrition, feeding all organic activity and defending against poisons. By creating the bile it maintains the nutritive equilibrium of the intestine, neutralizing the poisons which reach it or form in it during its action, and also aiding in the special work of digestion. The physiological services rendered to the liver by the intestine are more restricted ; it appears to be the vestibule of all toxic and infectious agents, alimentary poisons such as alcohol, digestive poisons such as acetic, lactic, or butyric acid, and microbes and their toxins. An injurious influence is exercised upon the liver by the intestine only when the former permits it. It is from these relations between the two organs that the doctrine of intestinal antiseptics springs ; and it will be easily understood that the term must not mean merely a direct action exercised on the intestine, but also an indirect action exercised on the liver. While the intestinal poisons are neutralized in the intestine itself, the antitoxic power of the liver must be maintained or strengthened, in order that it may contribute its part toward the destruction of the intestinal poisons, and at the same time defend itself from the poisons which enter it by other channels. In short, intestinal antiseptics is not really efficacious unless it is hepato-intestinal.

In the discussion of this paper, Teissier described some experiments made with Guinard upon dogs, which demonstrated that certain microbial toxins, probably those with great diastatic power, when introduced through the portal vein, acquired an increased virulence in the liver, and, although retained there for a certain time, produced symptoms much more rapidly fatal than if the same toxins had been introduced in equal amounts into the peripheral venous system. Contrary to what has hitherto been supposed, therefore, the liver would appear to be capable, under certain circumstances, of aggravating the action of such toxins as those of the pneumobacillus and the diphtheria bacillus, by increasing their

virulence and not by the addition of symptoms due to the destruction of the hepatic cells in which no marked alterations could be observed. This new function of the liver would explain the suddenness and gravity of certain intestinal affections, as dysentery and cholera.—*Universal Medical Journal*.

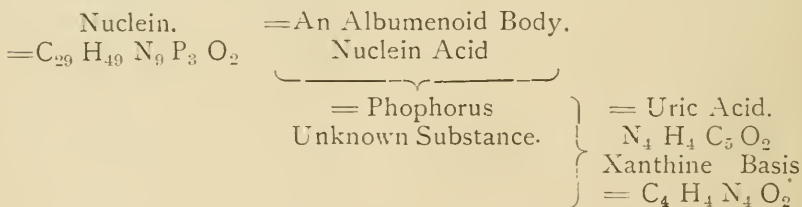
THE NATURE AND TREATMENT OF GOUT.

By PROF. KOLISH, M.D.,

UNIVERSITY OF VIENNA.

(From our Austrian Correspondent.)

This is a problem that may be properly placed under the head of pathology, and to which Claude Bernard has contributed much by his normal physiology which has been demonstrated by him in his laboratory experiments. It is now generally acknowledged that any disturbance in the physiological function of nutrition is a potent factor in the disease. A large number of theories, such as abnormally diminished alkalinity of the blood, high acidity of the urine, a morbid condition of the kidneys, or a disturbed state of the nerve system have all been in turn accused of the morbid condition. It is undeniable that a urate diathesis exists in the gouty condition, but the preceding morbid changes in the physiological disturbance appear to be due to the breaking up of nucleïn ($C_{29} H_{49} N_9 P_3 O_2$) and the formation of alloxurine bodies ($C_4 N_2 H_2 O_4$). This complex chemical change may be briefly sketched in the following manner :



This chemical diagram shows the final products of nucleïn to be uric acid ($C_5 H_4 N_4 O_3$), and xanthine bases ($C_5 H_4 N_4 O_2$), which are comprehended under the term alloxurine bodies, and which has been shown by earlier investigation that a disease of the kidneys and a combination of uric acid increases the elimination of these alloxurine bases. It has been shown that when these bases are found in the urine in other morbid conditions they are characteristic of a nervine inflammation. It would appear from closer examination, however, that in every one of these urate diatheses a greater amount of nucleïn is broken up or decomposed, which increases the fragmentary products or lower bodies of the series. We may therefore look on nucleïn and its decomposition as the chemical body that produces the characteristic symptoms in gout from a diseased kidney.

Levison first drew attention to this affection of the kidney, and was so convinced of its connection with gout that his explanation was at once accepted ; but it was shown by other observers that there was a reduction in the uric acid elimination in all cases of nephritis. We have now arrived at a point when a clearer hypothesis can be put forward by experimental proof in showing the analogy between this and the lead kidney.

It has been clearly demonstrated that the gouty kidney and the lead-poisoning kidney are both laboring to eliminate poisonous substances, and have morbid changes in common. For experiment, the poison of gout was selected from the alloxurine bases, which was the probable cause of the urate diathesis. Tandler injected 0.01 gramme of xanthine, which produced in animals changes in the kidneys, and which Prof. Paltauf and Dr. Albrecht declared to be identical with the lesion of the kidney familiar in gout. The alloxurine bases, therefore, appear to be the problematic poison that produces the renal lesion which bears a close relation to lead-poisoning in experimental demonstrations. Instead of the present uratic diathesis applied to the gouty condition, it would be more appropriate to call it the alloxurine diathesis.

The lecturer is of opinion that different authors have established names in accordance with the stage at which the gout was presented to them. Each one found a different quantity of uric acid, which he elucidated according to the theory he had most at heart. It is clear to the casual observer that the alloxurine bodies would vary according to the stage of disease, and constantly change the quantity of uric acid eliminated, which is the characteristic symptom of the disease. The proportion of uric acid would alter according to the base with which it combined. As long as the kidneys performed their function in a normal manner, they would produce more uric acid in proportion to the nucleïn reduced. In this we have an explanation of Neusser's perinuclear granulation kidney, which appears at one of the stages of the disease. After a certain point is reached, the kidney appears to become exhausted, the uric acid is reduced in the urine, while the decomposition of the nucleïn remains normal. At this stage, if the urine be carefully examined, it will exhibit the gouty acid character with increased alloxurine bases in the usual gouty symptoms. By the lesion of the kidney, the transudation of the poisonous basis reduces the elimination of uric acid. This *circulus vitiosus* still proceeds till the uric acid almost disappears, giving all the appearance of a shrunken kidney.

The development of the urate diathesis may also assume the following disposition :—Increased nucleïn decomposition in a congenital condition ; it is expressed in the appearance of perinuclear basophil granulations and increased elimination of alloxurine bodies.

In the beginning, the increased destruction of the nucleïn in the organism produces intermediate substances which assists to

form the poisonous agent of the kidney. In the course of time the abnormal transposition seriously injures the function of the organ till the *circulus vitiosus* is formed, which may be described as a typical example of auto-intoxication. From this idea, all the symptoms of gout may be explained in the chronic condition, while the acute attacks cannot be accepted as a new disease, but rather an outburst of the chronic process with the acute phenomena and a large decomposition of nucleïn. The outcome of this is increased elimination of alloxurine bodies, and the appearance of albumen and leuco-cythosis in the urine.

The therapeutic treatment of gout, according to this view, would not encourage us in entertaining an application of specific drugs. On the other hand, the therapist should endeavor to increase the breaking up of the nucleïn, and favor, as far as possible, the transformation of the decomposed products to uric acid. The latter part points to the use of alkaline therapeutics, because it promotes the formation of uric acid, which encourages the innocuous function of the kidney. In cases where the kidneys are already functionally injured, guiding must be our care. With regard to the diet, the excess of albuminoid food must be carefully guided against, as this form of diet rapidly increases the leuco-cytosis in the alimentary canal that finally augments the nucleïn product. A moderate use of albumen is not contra-indicated, yet tissues rich in cellular matter, such as nucleïn, should be avoided. Boiled meat may be allowed, as the kidneys eliminate the noxious extractive material, but the soup prepared from the liquid it has been boiled in should not be used. Carbohydrates are innocuous, and as a substitute for albumen fat may be prescribed. Milk and egg in some form is also good, because the nucleïn does not split up into alloxurine bases. Of the vegetable kingdom, all may be allowed except asparagus, which should be strictly forbidden. Alcohol should be also prohibited. In daily exercise of the body, over-exertion should not be encouraged, but carefully guarded against, as this greatly increases the splitting up of the nucleïn. An early diagnosis of the disease is essentially necessary before a satisfactory therapy can be established. To accomplish this the blood should be examined, and the increased elimination of the corpuscles with an outbreak of the usual symptoms may enable the observer to check its progress or correct the morbid process.

—*Medical Press and Circular.*

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

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SEXUAL CRIMES BY INEBRIATES.

By T. D. CROTHERS, M.D.,
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Dr. Crothers relates a number of instances of sexual crimes committed by chronic and periodical inebriates while under the influence of alcohol, in all of which he clearly recognizes and points out the existence of a form of insanity. The following are the facts brought out by a study of these cases:—

1. The use of alcohol on the brain centers, by paralyzing and disturbing their harmonious action, is most likely to be followed by manias and delusions.

2. The several nerve centers may suffer by irritation and exaltation, or depression and paralysis.

3. In the former case, they dominate all other centers, and either act explosively or by continuous irritation and demand for relief.

4. The facts of using spirits, coupled with wild sexual conduct, is strong evidence of mental weakness and disease.

5. Sexual crime in an inebriate is always some form of insanity. The want of control, and the absence of rational judgment of the effect of the act, and the consequence from it, are usually very clear in every case.

6. Reasoning and cunning to conceal the crime never implies sanity by itself, or preparation to commit the crime; both are the workings of an abnormal mind, dominated by a morbid impulse.

7. Acts of any kind showing these impulses, or in a case of sexual mania, are open to question, unless they are rational and along lines of reasonable motive and conduct.

8. The explosive character of sexual crime, at its final culmination after a series of acts that lead up to it, should always receive the closest medical study.

9. Sexual crime and questions of legal dispute among inebriates should receive careful medical study before they come into court, and the facts of the crime and criminal be brought out clearly before any legal decision of the final disposition of the case be made.

Medical & Surgical Reporter, December 21. 1895.

THE CIGARETTE HABIT.

Dr. J. C. Mulhall, of St. Louis, read a paper on this subject at the 1895 meeting of the American Laryngological Association, which appears in the *Medical & Surgical Reporter*, Dec. 14th, 1895.

He has been a cigarette smoker himself for 25 years. Different methods of using tobacco, he states, produce a distinct form of pleasure. The cigarette smokers are divided into those who inhale the smoke—which is drawn in as far as the large bronchi—and those who do not.

The pleasure in cigarette smoking, therefore, as compared with other tobacco habits, may be said to be a pleasurable irritation of the laryngeal and tracheal sensory branches of the pneumogastric nerve. The increased surface exposed to the smoke means increased absorption of nicotine, hence the danger. He could not himself smoke three cigarettes inhaled without nausea or vertigo, or a rapid pulse. The constitutional effects are quite the same as those produced by tobacco, as they are not adulterated by the addition of any other narcotic. The result of their general use is to impair the health in the young, and up to 21 years of age it tends to handicap those who use it in all intellectual and physical efforts. Smoked without inhaling, the cigarette is mild, hence its capacity for doing harm in that it teaches the use of more injurious methods. This mildness explains its fast-spreading use among young women. The local effects upon the upper respiratory organs are as a rule not injurious, at most it produces only a slight hyperæmia, or insignificant catarrh. Owing to efforts made by manufacturers, this habit is spreading widely, and as the inhabitants of this Northern Continent have now a greater proportion of nervous and mental diseases than formerly. If the pernicious nerve-destroying effect of the cigarette habit is added, great solicitude may wisely be shown for the youth of this country.

SURGERY.

IN CHARGE OF

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SEVENTEEN CASES OF CHRONIC RELAPSING APPENDICITIS TREATED BY OPERATION.

By HUNTER MCGUIRE, M.D., LL.D.

Virginia Medical Monthly, Dec., 1895.

Dr. Hunter McGuire is a man of large experience, and his views regarding so important a disease as appendicitis, all should be familiar with. His method of dealing with these cases is clearly and fearlessly stated in the series of cases reported.

Operations were performed in the interval between the attacks, when all or nearly all of the inflammatory symptoms had disappeared. The only fatal case was operated on in a private house. Dr. McGuire thinks the death might have been avoided had the operation been done in a modern hospital.

As a rule, Dr. McGuire is not in a great hurry to operate; he is inclined to wait for the more acute symptoms to pass off, and operate, if at all, after suppuration has taken place, or during the quiescent stage, between the attacks, as advised years ago by Frederick Treves.

He says there are cases of appendicitis so slight that they belong to the doctor and not to the surgeon, that very often they are not recognized as appendicular trouble, but put down to bilious colic, kidney colic, etc.

Under rest, purgation, local application and opium, these cases recover, and in many instances stay well, and are therefore not cases for operation. In his own words he says: "A man's usefulness is not impaired, nor his life usually shortened by it; indeed, he often gets on through life better than the man with a crippled leg, or the poor fellow who lives for years with a crippled heart. I wish my voice was strong enough, just here, to call a halt to the men who say 'Operate at once—not this afternoon or to-morrow, but now,' in all cases where the disease is recognized." In cases where pus has formed, Dr. McGuire says even now, "I am not in all cases in a hurry to operate," because he has seen such cases recover without operation. They have usually lasted for some time. It is true that delay in operating may end in a rupture of the abscess, and general septic peritonitis result, but he has never seen this occur after the 3rd day, though the matter may burrow down towards the pelvis and upwards towards the liver. These abscesses are often attached to the parietics, where to operate is only to open an

abscess, the general peritoneal cavity is not opened, the finger is carefully introduced, the appendix felt for, and if found, and free, it is to be removed ; if attached by adhesions, let it alone. Drain the abscess cavity with rubber tube and gauze.

In cases of *acute perforating appendicitis*, he says one cannot operate too soon to prevent diffuse septic peritonitis. These are frightful cases, and an early operation alone gives a chance for life. In these cases, the appendix is to be removed, the peritoneal cavity washed out with warm normal salt solution, and free drainage secured with gauze or tubes, or both.

Dr. McGuire says of these desperate cases of so-called *fulminating appendicitis*, the whole tale is told usually in forty-eight hours ; nevertheless, he denounces the doctrine held by so many surgeons advocating immediate operation in all cases of appendicitis.

Dr. McGuire holds that it has been almost conclusively demonstrated that the *Bacillus Coli Communis* is the essential cause of a large number of cases of appendicitis ; that these microbes undoubtedly become more virulent and hurtful when certain morbid conditions of the bowel exist,—constipation, inflammation, obstruction, strangulation, diarrhœa ; constipation existing in a large proportion of the cases of all kinds of appendicitis.

Medicines, from the pathological conditions found, can be expected to help but little if at all.

Persulphate of iron is recommended to prevent reunion of separated adhesions.

The operation, incision over the prominent part of tumor, if any, or beginning near anterior superior spine of ileum, and carried inwards and slightly downwards towards the inner border of the rectus : the incision is not more than two inches long. After the abdomen is opened, Trendelenburg's position is of great assistance. The general cavity is protected, the adhesions separated, the appendix freed and removed with all infected omentum ; iodoform dusted freely over injured places, drainage of gauze or tube introduced. The peritoneum is closed separately with fine silk continuous suture, the muscular fascia and skin with silk worm gut.

GYNÆCOLOGY.

IN CHARGE OF

A. LAPHORN SMITH, B. A., M. D., M. R. C. S., Eng.

Fellow of the American Gynæcological Society, Gynæcologist to the Montreal Dispensary and Samaritan Hospital, Surgeon to the Western Hospital ; Professor of Clinical Gynæcology in Bishop's College.

In many of the three last numbers of the various gynæcological journals, much space is devoted to the consideration of the question : *Shall the abdominal or vaginal method be employed for the removal of pus tubes, fibroid tumors, cancer of the uterus, and other diseased conditions of the pelvic organs ?* Notwithstanding the wave of opinion in favor of the vaginal method, which started in France

a few years ago, and which received such an impulse from the visit of Jacobs of Brussels to America last summer, the majority of recent American writers are not at all in favor of it. The more the writer sees of this procedure the less favorably is he impressed with it. An operation which would be fairly easy if performed by the abdominal route, with the patient in the Trendelenburg position, becomes exceedingly difficult when performed in the vagina, especially if it be a narrow one. As regards mortality, the very lowest that has been claimed for it by Jacobs was over four per cent., while the mortality of hysterectomy, with removal of the appendages, is less than two per cent. in the hands of Howard Kelly. The writer has seen these two operations performed a number of times by two operators of world-wide celebrity, and it was the general opinion of all who witnessed them that there was no comparison between them, the abdominal route receiving the preference. In the case of cancer of the uterus, especially, the abdominal method allows us to keep much farther away from the uterus, and consequently renders the operation much less likely to be followed by recurrence.

The early recognition of cancer of the uterus has also been receiving a good deal of attention, but certainly not any more than it deserves. All gynæcologists are agreed, that in the great majority of cases the patient does not come under our care until the disease is already so far advanced that there is very little hope that even total removal of the uterus will be successful in eradicating the disease. Is there any remedy for this unfortunate state of affairs? Several recent writers place a great deal of dependence on the microscope and recommend, when there is the slightest suspicion of cancer being present, to remove a small piece of the cervix under cocaine, and have it submitted to microscopical examination. Others again have no faith even in the microscope for this purpose, maintaining that many cases were eventually proved to have the disease in which the microscope failed to detect it. The truth lies in the fact than on one day it may be absent, while a few days later it may be present. We have one means of diagnosing cancer long before the microscope can detect it, and as it were, before it is actually present, namely, when there is no other lesion than a badly lacerated cervix with eversion of the lips of the os uteri and cystic degeneration of the glandular structures. This is the stage when one of the simplest and safest operations known to gynæcology will remove the danger of cancer altogether. All the leading authorities agree that cancer of the cervix uteri without the presence of a laceration is a very rare exception; Emmet says he has never seen it, while Kelly says he has only seen it once or twice. All are agreed that as far as cancer of the cervix uteri at least is concerned, its prevention and cure depend entirely upon the recognition and repair of lacerations of the cervix. The family physician is urged to make it a rule to examine every woman whom he had confined within three months

of her confinement, and if a tear is discovered, he should take immediate steps to repair it. Apart altogether from its saving the woman from the risk of cancer, the operation is one of the most satisfactory in its results, curing the discharge from the cervix and the pain in the head and back as well as the disorders of digestion. The application of nitrate of silver to the everted lips of a lacerated cervix is especially deprecated by several writers as contributing to the formation of the cicatricial tissue in which cancer finds its most suitable hot-bed. In his recent article in the *American Journal of Obstetrics* for Nov., p. 664: Munde says, "I have made up my mind most positively that in no case will I ever again remove the uterus for cancerous disease, whether of the cervix or body per vagina or by abdominal section, unless the organ is so movable that any possible extension of the organ to its surroundings can be absolutely excluded."

The treatment of retroversion and prolapsus of the uterus is the subject of at least half a dozen papers. While admitting that many cases can be temporarily and even permanently cured by the use of a suitable pessary, all are agreed that in cases where the uterus is fixed by adhesions, and even in cases in which it is easily replaced, but in which it fails to remain in its proper position, some kind of operative treatment is advisable. For several years the various methods of shortening the round ligaments were given the preference. Munde and Cleveland each read a paper at the recent meeting of the American Gynæcological Society, advocating the claims of the Alexander operation which they had performed nearly a hundred times. But the majority of operators on this continent to-day are in favor of ventrofixation, which has many advantages over shortening of the round ligaments, the latter operation being sometimes exceedingly difficult and sometimes impossible, owing to the fatty degeneration of the cords, rendering them too weak to bear the weight of the uterus. Single or double inguinal hernia is known to have followed the operation in the hands of one of its ablest exponents. Ventrofixation is comparatively easy, and if properly performed entirely devoid of danger, while the result is exceedingly satisfactory. Many cases of pregnancy going on to a happy termination after the operation have already been reported, while, owing to the smallness of the incision required, ventral hernia is a rare exception after it. It has another great merit, that we are enabled to introduce a finger into the abdomen, and carefully break up adhesions which might not have been detected before performing an Alexander, but which would completely prevent the latter operation from doing any good.

Is so called conservatism in gynecology conducive to the best results to the patient? is the title of an excellent article by Praeger of Los Angeles, in the December number of the *American Journal of Obstetrics*, p. 891, in which he defends gynæcology from the attacks of those who do not believe in operations. These latter would never

sew up a badly lacerated cervix or perineum, but on the contrary would allow the woman's nervous and digestive systems to be ruined by reflex irritation of scar tissue in the angle of the tear. They do not believe in total removal of the cancerous uterus, even in the few cases in which the disease is recognized while it is still limited to that organ. They do not advise removal of ovarian tumors as long as they are not big enough to cause much inconvenience. They do not believe in removing pus tubes, but would rather allow them to break into the rectum or bladder or vagina, or at the most they would approve of opening them into the vagina where they will keep up a foul smelling discharge and a septic condition for months until the woman is exhausted, while they consider it nothing short of criminal to remove contracting sclerotic ovaries, which never allow their owner a moment's respite from pain while she is conscious, and cause her menstrual periods to be dreaded more than a labor. Retroversion of the uterus, causing obstruction of the bowels and irritation of the neck of the bladder they consider a condition of no importance, or at most deserving of replacing with the sound, when if the tubes are diseased, and the fundus fixed, a fatal peritonitis often rapidly ensues. It is the experience—it might be said, the bitter experience—of the writer that gynæcologists are rather too conservative, some of the most unsatisfactory results he has ever had being due to his conscientious but mistaken desire to leave one ovary, when his judgment told him that both should have been removed. And, strange to say, it is the patient herself who thanks him the least for his well-intentioned mistake. Nearly if not all our failures are due either to waiting too long before doing anything, or when we do take action, to not making our operation sufficiently radical. Many a woman in this city and in this province is dragging out a miserable existence by the aid of morphine, who might be restored to health and usefulness by the removal of useless because hopelessly diseased ovaries and tubes.

PHARMACOLOGY AND THERAPEUTICS.

IN CHARGE OF

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THE TREND OF MODERN THERAPEUSIS.

It would seem as if the untiring efforts of the physiologists, in directing attention to the importance of the individual cell-metabolism, as distinguished from the results of metabolism of the cell-community, and the importance of the secretions of the individual cell in health and disease, were bearing fruit, as evidence the attention devoted these last few years to the part played in the human economy by the blood-serum, leucocytes, and altered secretions of the animal cells seen in some of the acute exanthems, diphtheria, and tuberculosis,—leading up to the brilliant but short-

lived "tuberculin" of Koch; the later but more successful "antitoxine" serum of diphtheria (Behring and Kitasato); and of tetanus, and of the inoculation of attenuated virus as practised for rabies (Pasteur); the "nuclein" treatment, with its nucleinic acid rich in phosphorus, based on the supposition that resistance to infection and destruction of the individual cell depends on some substance within or secreted by the cell itself, or contained within its nucleus, the "nuclein" injected entering the circulation, and taking the place of that which should have been supplied by the debilitated cells, thus bringing the organism into the condition of healthy and normal resistance. This latter bordering closely on the method of treatment which has been called "cellular therapy," where, in selected cases, the flagging individual cells have been stimulated—whipped up, as it were—to perform their functions by the administration of minute and graduated doses of irritants, and thus not only getting rid of the *materies morbi*,—the debris and toxic products of the disease—but enabling it the better to resist the active cause. Leibreich, of Berlin, in his treatment of lupus and tuberculosis with milligramme (grs. $\frac{1}{100}$) doses of cantharidate of soda, is but acting on this idea. (It is well to remember, however, that in speaking of "cellular therapy," the only new thing about it is the name.)

Then, again, the importance to human life and health of the secretions of the glands was, perhaps, never so much appreciated as at the present day, nor were they ever so closely studied and experimented on; not but that the value of the ordinary secretions has been recognized, but the fact that the glands secrete something more than the usually accepted and recognized fluids, the "internal secretions" of Schäffer. Life is quite consistent with absence of the bile in the intestinal canal, as where fistulæ have discharged it for months, but total disease, or extirpation, of the liver results in death due to altered metabolism. Diversion of the pancreatic juice will produce amylaceous indigestion, but total disease or extirpation, causes death through diabetes melitus, obviated by transplanting a portion of the gland. Transplantation of the thyroid, or its internal administration, with its marked effect on cretinism and myxœdema, its effect on the vasomotor apparatus, apart from any in the heart, and its effect on the normal resistance to lowered temperatures, all point to some internal secretion of paramount importance to the life and health of the animal. The Pituitary body, long the source of endless conjecture, is claimed to secrete a substance which contracts the cardiac arteries, while disease of this gland is associated with the deformity known as acromegaly. The adrenals, always abnormal in Addison's disease, also furnish an internal secretion, which, according to Schäffer and Oliver, is of great power, $\frac{1}{100}$ grain causing an intense but evanescent rise of blood pressure, increased heart action, and activity of skeletal muscles in the adult, and that it is the medulla, and not the cortex, which is active.

Well might we say with Hare that "In these sources lie materials for scientific investigation and therapeutic discovery, which may give us more than coal-tar has afforded us in remedies for the relief of pain and fever, and enable us to effectually battle with diseases which hitherto have been a mockery to our boasted advances."

Of necessity, the general practitioner is always a certain distance behind the pioneers of thought and investigation in the realms of new treatments for diseased conditions; but at this end of the century, when it costs a mere bagatelle to keep in touch with the investigations of the great minds of the world, and when we are just beginning the return swing of the pendulum from the German school of treating our patient to a diagnosis—and resting there,—there is no excuse for not keeping in the vanguard of medical progress, and giving our patients the results of the latest advance in treatment as well as diagnosis. The tendency to-day is less and less to a multiplicity of drugs, with empirical use, and more and more to a rational treatment of the individual, with a good reason to offer for every step taken. It is something to be thankful for that the days of the stock prescription are fast dying out. It is the duty of every physician to avail himself of these new methods of treatment; and not only so, but it is also his duty to report the results of his experience. Statistics are only useful when carried out under approximately similar conditions with equal care and observation, and in vast numbers. Hence, keep notes—brief as you like, but *keep notes*, and give others the benefit of them when opportunity offers.

American Therapist, Vol. VI., Nos. 4 and 5, 1895.

Therapeutic Gazette, Vol. XIX., No. 12, 95.

THE LOCAL TREATMENT OF DIPHTHERIA.

Those who read the report of the Eighth International Congress of Health at Buda-Pesth, (1894) where the subject of the serum treatment of diphtheria was fully discussed, cannot fail to have noticed the stand taken by Lœffler, who stated that, while not wishing to disparage the serum toxine Therapy, preferred to attack the disease *in situ*, and recommend the solution since bearing his name (*i. e.*, menthol, 10 grains; Toluol 30 cc.; creolin [or solution of iron, as preferred], 2 cc.; alcohol, 100 cc.), to be used on a swab, applied for 10 seconds twice in succession, every 3 or 4 hours. Since then, the serum has had a most extensive trial, and has come out with flying colors; but the fact remains that Lœffler's method is also remarkably successful, though not so easy of application; and now, Schwartz of Constantinople comes forward with the results of his experience with topical applications in this disease. In an original article contributed to the *American Medico-Surgical Bulletin*, November, 1895, Dr. Schwartz, after giving antitoxine serum credit for reducing the mortality from 62% to 25-15%, urges

against it the fact that it is efficacious only in pure diphtheria; that where there is mixed infection, it is much less efficacious; that it takes at least 48 hours for the febrile decline and separation of the membrane; that the immunity conferred, either by an attack of diphtheria successfully treated with serum, or by immunization-injections of serum, is short lived—a few weeks only; that the albuminuria is not benefited by the serum, but in some cases it is said to have produced a violent nephritis, and, lastly, that it produces a cutaneous eruption, which, however, is without pernicious effects on the general condition. Schwartz claims that years before Loeffler discovered the specific bacillus of diphtheria, he had considered this disease as of microbic origin, and had directed treatment to the site of infection, seeking a remedy which would destroy the parasites in loco, without injury to patient even after long application, and in a manner calculated not to increase the already weakened condition of the heart. Swabbing, sprayings, and irrigation were given up as too exhausting. His remarks are perhaps but too little heeded. "I am convinced," he says, "that no small number of the fatal cases of diphtheria in children are directly referable to exhaustion produced by swabbing,"—and he might have added, by want of tact on the part of the attendant. The insufflations of a powder thus seemed the only and most advisable method, and was adopted, with the happiest results; he claims for insufflation that: (1) The vital energies of the child are not taxed to any significant degree, for the insufflation only lasts a few seconds, and is only repeated every 4 hours. (2) Even though it be not applied directly to the infected surface, it mixes with the saliva, reaches the membranes, liquifies and thus enters the deepest lacunæ of the tonsils, which it disinfects. (3) The whole oral cavity, where innumerable bacilli reside, is disinfected. (4) The manipulations are so simple, anyone can carry them out with ease. There can be no objection to some of the powder entering the larynx, even should that happen. After trying various antiseptic powders, he determined on sulphur, and his own experience with the non-injurious effects of the sozo-iodol preparations, added to the result of Langaard's* experiments on the bactericidal action of sozo-iodol on the pyogenic cocci and those of Luebbert † on the staphylococcus aureus, and pyocyaneus, led him to use these preparations in diphtheria, with signal success.

Dr. Schwartz' formula is as follows: for children under and up to 2 years,—sodii sozo-iodolici, grms. 3; flor sulphurus, grms. 6; saccharini, grms. 1½. For 2 to 4 years,—equal parts sod. sozo-iodolate and sulphur, with a little saccharine. 4 years and over,—the pure sozo-iodolate rubbed up with a little saccharine, small rolled tubes of paper are used, and, after insufflation, burned. The patient's strength is kept up with "tonics *and merciful treat-*

* Therapeutische Monatshefte, 1888, No. 9.

† Fortschritte der Medicin, 1889, Nos. 22 and 23.

ment," and, at the outset, to offset any tendency to paralysis. Nux Vomica, thrice daily, in suitable doses, and every 4 and 5 hours a tablespoonful Malaga or Cognac, with cinchona, while soups, eggs, milk (with or without brandy); must be administered.

Both Dr. Boehm of Ratibor (16-2-94) and Dr. Mordtman, physician in chief, German Hospital, Constantinople, have used the method extensively, and report most favorably. The mortality (without going into figures extensively) is quoted as—malignant and advanced cases in bad hygienic surroundings, 8 to 10 per cent.; cases treated immediately after appearance of disease, 2 to 3 per cent. The nose is insufflated in every case, as a precautionary measure, and others in the house either use the insufflation as a preventative, or use a gargle of a 2 per cent. solution of sodium sozo-iodolate as a mouth wash for adults, or both; and troches of 0.3 grm. (5 grains) of the salt, several times daily. Where it is not possible to isolate from other children in the house, then insufflations are practised as well. Dr. Schwartz says: "I do not recall ever having seen any of the children thus protected come down with the disease."

Under this treatment, the disease is said to run a rapid course. "After the first, sometimes after the second, insufflation, the temperature falls to 37° — 37.5° c. ($98\frac{3}{5}^{\circ}$ — $99\frac{1}{2}^{\circ}$ F.), and even "in the most sad cases never goes above 38° c. ($100\frac{2}{5}^{\circ}$ F.), the "patients feel better, and gladly take nourishment. the fetor "of the breath disappears entirely after 8 to 10 hours, and the "membranes loosen and exfoliate within 24 to 48 hours, leaving "a healed ulcer surface behind. Complete cure is established after "the expiration of 3 or 4 days." As a rule, the insufflations are continued for 8 to 10 days beyond this period; relapses have never been noticed or reported. The treatment is absolutely without result on the kidneys—on the contrary, with the subsidence of the general symptoms, albumen, if present, disappears from the urine. Pernicious action on the body is out of the question, the most severe toxic symptoms yielding to the treatment, while if taken sufficiently early, toxic symptoms rarely develop.

The *modus operandi* of the treatment is explained by Dr. Schwartz as analagous to the immunization accomplished by Behring through producing an antitoxine in the blood by the previous inoculation of the subject with attenuated virus, obtained: (1) either by inoculating with large quantities of attenuated cultures, (2) inoculating with small quantities of virulent cultures, (3) inoculating with cultures modified by the addition of trichloride of iodine or chloride of gold and sodium, (4) infecting with diphtheria and injecting trichloride of iodine, (5) or by previous treatment with peroxide of hydrogen; and believes that the treatment with the sozo-iodates produces at the site of the lesion an attenuated culture, which, absorbed by the mucous membrane,

reacts on the organism, producing an antitoxine in the blood, neutralizing the toxic products of the bacilli,—not only of the specific bacillus of diphtheria, but in the case of mixed infection, of the streptococcus and staphylococcus also. His closing argument in favor of his treatment is certainly a strong one: the general practitioner, who has not always the time or the accessories to determine a bacteriological diagnosis, may use serum in a mixed infection, or an infection where the Lœffler bacillus is absent altogether, yet whose clinical picture is that of true diphtheria, the case will certainly not react to the serum, and may end disastrously, thus tending to throw discredit on serum therapy in the absence of bacteriological proof of the presence of true diphtheria. Schwartz's closing sentence is worthy of attention: "In my opinion, diphtheria is not a disease which can be treated by one-sided methods—*i.e.*, a specific..... therefore it is desirable that those physicians who have fresh serum and every scientific means at their command should employ antitoxine in combination with insufflations of sodium sozo-iodolate,—a method of treatment which can only contribute to the benefit of humanity."

In my own practice, I have treated 10 cases of diphtheria within the last 13 months, 5 with serum and stimulants alone, of which 1 died; a (laryngeal case involving the right lung and necessitating intubation for 2 days,) 3 with Lœffler's reagent, with stimulants alone, and two mild cases, with exudate on the uvula and pharynx, with the following insufflation, being unable to obtain sodium sozo-iodolate in town: Flor Sulph. ʒii ; Carbo lig. ʒi .; Acid Phenic. crystals, grs. v., insufflated every two hours, with Tr. Nux Vomica, Mi every 4 hours, and have been unable to notice much difference in the time of recovery, with the difference, if any, in favor of the Lœffler's reagent.

CREOSOTE PILLS.

Neron (*Pharm. Ztg.*, vol. XV., 1895) recommends that a paste be made, formed of equal parts of creosote and powdered soap, and adding enough licorice root powdered to form a full mass, *e.g.*:—

Creosoti,	10 grms. ($2\frac{1}{2}$ fl. dr.).
Pulv. Saponis,	10 grms. ($2\frac{1}{2}$ dr.).
Pulv. Rad. Glycerrh,	5 grms. ($1\frac{1}{4}$ dr.).
—to make 100 pills.	

In this way the author claims comparatively small pills may be made to contain large quantities of creosote (0.1 grm., $1\frac{1}{2}$ grains) each; they keep well, do not harden, the creosote does not exude, and are easily soluble in the gastric juice. Pills of guaiacol, terpinol, etc., may be made in a similar manner.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, November 15th, 1895.

A. D. Blackader, M.D., President, in the Chair.

Drs. W. W. Alexander, of Lachute ; Robert Reddick, of West Winchester, Ont. ; A. G. Murphy, of Lachine ; A. E. Garrow and J. J. Ross, were elected ordinary members.

RECOVERY FROM PERFORATED GASTRIC ULCER.

Dr. W. G. M. Byers read the report of this case, successfully operated on by Dr. G. E. Armstrong.

Dr. James Bell, after congratulating Dr. Armstrong on the success of his case, asked if there had been any attempt at limitation of the inflammatory process in the abdominal cavity, and if Dr. Armstrong had flushed out the cavity with water or saline solution. He agreed that there was great difference in virulence between the contents of the stomach and those of the intestines ; the contents of the stomach did not contain the same pathogenic microbes as the lower tract.

Dr. J. G. Adami said that Dr. Armstrong's view that the virulence of microbes varied was quite true, and for this reason, that in the stomach there was, as a general rule, an acid secretion or acid contents, conditions under which pathogenic organisms did not thrive. Lower down in the intestinal canal the alkaline secretions and broken down proteid matter furnished much more suitable conditions for their growth. There was not much proliferation of pathological microbes in the stomach and a great deal in the intestines—that is to say, that in a given cubic centimetre of stomach contents there was a much smaller number of pathogenic micro-organisms than in a cubic centimetre taken from the intestine. Probably for the same reason tuberculosis did not often infect the stomach walls as compared to the frequency with which it was found in the intestine.

Dr. Lafleur pointed out that the easiest proof of virulence had been neglected in not making culture experiments. It was known that if there was an anatomical lesion of the peritoneum, a chemical irritant produced a peritonitis, which would be very much less virulent than one caused by micro-organisms.

Dr. R. C. Kirkpatrick had assisted Dr. Armstrong, and could bear out all he had said relative to the size of the perforation, which he had measured at the time, and it had seemed to him scarcely possible to bring the edges together. Recovery, he felt, had been largely due to the fact that the glass drain had been inserted into the pelvis, and the fluid collecting had thus been drawn off. As an instance of variability in the virulence of infection, Dr. Kirkpatrick related a case on which he had operated for appendicitis two weeks before, where cultures had been made from the pus with a negative result, but he had had to open up the abdomen again on account of pus having collected beside the track of the drainage-tube.

Dr. Armstrong, in reply, said that there had been no limitation of the inflammatory process, and that he did not flush out the cavity, but wiped it out thoroughly with gauze pads. He did not know why cultures had not been taken at the time of the operation.

TRANSPOSITION OF VISCERA.

Dr. T. P. Shaw showed a case.

SOME MORBID CONDITIONS OF INTESTINES.

Dr. Adami exhibited the following series of morbid conditions of the intestines, obtained recently in the post-mortem room of the Royal Victoria Hospital.

(1) TWO CASES OF MECKEL'S DIVERTICULUM.

Of these, one was of the usual type, and was brought before the Society purely for comparison with the other. It was obtained from the body of a male patient aged 15 years, and was given off from the ileum 103 cm. (about 3 ft. 7 in.) above the ileo-cæcal valve. The diverticulum (about 4 in. long) passed off roughly almost at right angles to the general direction or axis of the intestines. There was no sign of obstruction associated with it.

The other case showed an unusual complication. In this the diverticulum presented itself most clearly as a continuation of the upper portion of the ileum 63 cm. above the valve. It was short and broad (4 cm. by 4 cm.), and provided to its extremity with a very definite mesentery. The lower part of the gut was given off from the upper at an angle greater than a right angle, or, to put it more correctly, the angle formed by the mesenteric aspects of the two portions of the intestine was less than a right angle; and while the diameter of the diverticulum and the gut immediately above it was 4 cm., that of the lower continuation of the ileum was only 2.5 cm. Thus the relationship of the parts had very evidently led to a partial obstruction. The passage from the upper to the lower part of the ileum assumed a slit-like or valvular character. The arrangement of the part, in fact, closely copied, although in a reverse direction, the relationship of ileum to cæcum. This case occurred in the body of a girl aged 8 years.

HEALED INTESTINAL ANASTOMOSIS.

Dr. Adami exhibited this specimen in order to show the perfect condition of healing of the intestinal wall and the condition of the wounded portion of the intestine three weeks after operation. The specimen was taken from the body of a female patient aged 51. The case presented some points of considerable interest, and Dr. Adami was indebted to Dr. Shaw for the notes in reference to it. For ten days the patient had shown signs of intestinal obstruction, with vomiting and ineffectual action of purgatives. Upon October 5th she vomited stercoraceous matter, and was admitted into the Royal Victoria Hospital under Dr. Bell. Here she presented a distinct abdominal facies, and a small resistant mass was to be felt in the right inguinal region. Dr. Bell operated the same day, and discovered that there was a Littré's hernia, a small loop of the intestine without the mesentery being caught in the internal abdominal ring. Through gangrene along the edge of incarceration a small perforation had resulted, without there being any gross escape of fæces. He cut out a wedge of the wall of the ileum, including the necrosed area, and sutured by Lembert's suture. At first the patient progressed very favorably, but

eventually symptoms of partial obstruction supervened, followed by those of acute peritonitis, and the patient died twenty-one days after the operation. At the autopsy there was found evidence of old adhesive peritonitis in the shape of well organized bands in the hinder portion of the abdomen. This represented a condition much older than the final illness. There was, in addition, a sub-acute adhesive peritonitis around the operation wound, and besides this localized condition there was generalized peritonitis. In separating the cæcum, a drop of pus was found between the viscus and the abdominal parietes, and there was in addition an adhesion between a loop of the ileum and the right Fallopian tube. Here again on separation some pus exuded, and upon opening the right Fallopian tube there was found a condition of pyosalpinx of moderate extent. It was difficult to explain the setting up of acute peritonitis and subsequent death of the patient, save on the supposition that the slight degree of obstruction, brought about by the developing organized adhesions in the neighborhood of the wound, had led to a lowered vitality of the intestines and abdominal contents in general, and thus had led to conditions favoring a second infection of the peritoneum.

CONGENITAL ABSENCE OF THE APPENDIX VERMIFORMIS.

The specimen exhibited had been obtained from the body of a male child $3\frac{1}{2}$ weeks old. The cæcum was continued 11 mm. beyond the lower border of the junction of the ileum to the large gut, anteriorly the lower extremity of the cæcum had the appearance of a truncated cone; posteriorly the appearance was that of a blunt cone turned upon itself for 10 mm., the portion thus turned round having a blunt rounded extremity, and being fused to the body of the cæcum. From the blunt terminat on, a fine fibrous filament 9 mm. long passed upwards along the postero-internal border of the cæcum. It was attached to a continuation of the mesentery, just as is the true appendix. But while possibly this might be said to represent the appendix, it was merely a solid fibrous thread, so thin as to be almost unrecognizable, and the appendix as such could only be spoken of as being absent. In other respects the shape of the cæcum closely resembled Treve's picture of the cæcum of the Mangaby ape.

CHRONIC PERITYPHLITIS, CAUSING INTESTINAL OBSTRUCTION.

Dr. Adami exhibited a specimen, prepared and dissected by Dr. C. F. Martin, of this condition, which, but a few years ago, was thought to be not unusual, but which now-a-days as an uncomplicated condition is regarded as being distinctly rare as compared with typhlitis or appendicitis, with its sequelæ.

The specimen was obtained from a man about 35 years old, in whom symptoms of intestinal obstruction were first noticed upon October 3rd, 1895. The patient died six days later. While the patient himself gave the history of continued good health up to the time of the last attack, his wife stated that since he was nine years old he had been subject to abdominal pain, at intervals. The notes (by Dr. Colvin) are of necessity very brief. On admission to Dr. Bell's wards at the Royal Victoria Hospital, the patient presented an abdominal facies, the abdomen was distended and tympanitic, and so tender as to prevent examination. There was frequent vomiting in gushes, and the patient died within a few hours before the operation, for which he had entered the hospital, could be performed. At the autopsy, veil-like organized adhesions were found between the omentum and the abdominal parietes, as also between the large intestines and the abdominal wall. Besides this evidence of chronic and

old peritonitis, there was a general condition of acute early peritonitis, with great injection and dulling of the serous coats of the viscera, slight dry exudation between the coil, and relatively very little fluid present. In the right iliac fossa the following parts were found adherent by old dense adhesions, viz., the transverse colon, the second part of the duodenum, and coils of the ileum. These adhesions had led to narrowing of the lumina of these viscera, the narrowing was greatest at two places along the ileum, and here evidently, judging from the diameter of the intestine of the uppermost of these, the obstruction had taken place; it was, however, noticeable that the obstruction was incomplete, and as a consequence it would appear that the actual complete stoppage was due to kinking at the sharp bend of the adherent coil. There was no sign of gangrene anywhere or of perforation, and in this case, as in that first previously mentioned this evening, the acute peritonitis must be regarded as having been due to the obstruction bringing about such a condition of the coats of the intestines as to lead to the infection of the serous surfaces. Here presumably by passage outward of bacteria through the intact walls. All the adhesions met at the cæcum round about the attachment of the appendix, and here thick fibroid tissue held all the parts firmly together. The appendix, however, situated in the midst of this fibroid area showed in itself no signs of disease, save that it was bound down in a somewhat coiled fashion by the surrounding adhesions. There was no sign of constriction of its lumen at any point, of inspissated contents, or of dilatation. Its coat, when the surrounding moderately loose adhesions were removed, was smooth, and presented no cicatrices or evidences of old perforation. I have already examined not a few appendices, removed in cases of so-called appendicitis, in which, while there was abundant evidence discovered at the operation of acute inflammatory disturbance around the appendix, sections from the organ itself showed but little that was specially noticeable beyond the dilated and influenced condition of the vessels of the outer coat. The specimen here shown would seem to be an example of a possible sequela to such cases as these.

TORSION OF AN APPENDIX EPILOICA.

Dr. Adami brought this specimen before the Society, not because of its importance, but because it exhibited a condition which might reasonably be expected to be more frequent. The appendices epiloicæ vary greatly in extent and in arrangement. Often they are present as more or less fan-like or finger-like fatty masses given off at right angles to the circumference of the gut in the plane of the transverse axis, often, however, they are isolated pedunculated masses, as in the present instance which showed several such appendices. Here the pedicle of one had become twisted, and as a consequence there was venous arrest; the organ was turgid, hæmorrhagic, and, when first obtained, of a dark, blue-black color. Such a condition might, in the presence of any wandering suppurative micro-organisms, be the origin of a localized or indeed of a generalized peritonitis.

Dr. James Bell, speaking of the last case, said that he had been called to the country to see the patient on October 4th. There had been symptoms which set in suddenly and acutely nine days before, and a mass could be felt in the abdomen on deep pressure, which was thought by her physician to be a uterine fibroma. Just before he arrived at the house the patient fell into a condition of collapse, and no operation was then performed. She, however, rallied, and was brought down to the Royal Victoria Hospital the next evening. The abdomen was then opened, and a

Littré's hernia found. There was free pus in the peritoneal cavity, but no fæces. A perforation had taken place, probably when the collapse occurred, thirty-six hours before operation. The bowel was closed by a double layer of Lembert's sutures. For two weeks the patient did well, then for a week there was vomiting, but without other signs of obstruction; fæces and flatus passed freely. Calomel was given, which produced a copious evacuation of the bowels. The cause of death was not obstruction in the ordinary sense, and the only explanation he could offer was that suggested by Dr. Adami, viz. : that on account of the long obstruction the vitality of the tissues of the bowel wall was lowered, as well as the general vitality of the patient, and thus allowed the colon bacillus to escape into the peritoneal cavity.

NOTES ON THE MEDICAL EXAMINATION AND MEASUREMENT OF
ATHLETES.

Dr. R. Tait McKenzie read a paper on this subject.

Dr. T. D. Reed thought that the work done by Dr. McKenzie was very valuable, and should be encouraged. He had himself done work of a similar kind, but of a more elementary character, among the lady pupils at the McGill Normal School. The average age he found was 19, the height for the present year 5 feet 3 inches, which was an inch more than the generally accepted average for the age; the weight 123 pounds. The length between the finger tips with the arms stretched out to the fullest extent was half an inch less than the height, on an average. The spirometer gave an average vital capacity of 133 cubic inches, the extremes being 100 and 180 cubic inches. One pupil in nine he had found myopic; hearing and color sense invariably good, thus in 200 tested he had found no instance of color blindness, and this condition, he thought, must be very rare in women. The muscular power of the hand averaged 33 for the right hand, and 30 for the left, varying between 11 and 80. In the whole 200, at the average age of 19, only one had perfect teeth, and she had not yet erupted her wisdom teeth.

Dr. Shepherd congratulated Dr. McKenzie on a paper that introduced a subject new to the Society. It was of the highest importance that every school and university should insist on a medical examination of the pupils and students. Many boys were totally unfit to play games, especially violent games like football. As a rule, he thought that athletes did not succeed in medicine, they were shorter lived than others, and did not seem to have the reserve force that those who led a more sedentary life possessed.

Dr. J. G. Adami disagreed with Dr. Shepherd's remarks regarding the place of athletes in medicine, for two reasons: First, because of all classes, the medical profession had the shortest lives, even shorter than prize fighters; and, secondly, it was noticeable that in every university having a medical school, the "meds" led in strong sports like football; that strong men with strong vitality naturally tended to study medicine; that strong, athletic men were required for our profession, and we got them.

Dr. Shepherd said that he did not refer to the average student, but to the extreme athletes. It was not the great book-worm nor the great athlete, but the man of medium type who would succeed.

Dr. J. C. Cameron thought Dr. McKenzie was to be very much congratulated upon his interesting and important paper. He thought of even greater value was the suggestiveness of the paper. While all were agreed that exercise is useful and often essential, its value as a therapeutic

agent had not been realized or properly utilized. With regard to diet, most physicians would not deal in generalities merely, but would consider it necessary to indicate what particular articles should be taken and what should be avoided. But with regard to exercise, they were too often content to advise their patients to take more exercise, or to avoid violent exercise, without specifying the amount and kind of exercise which should be taken or avoided. But in order that suitable exercises may be prescribed for different pathological conditions, physicians must have clear ideas respecting the various convenient combinations of movements and their therapeutic effect. In this respect the paper of the evening was of great value on account of its suggestiveness. He hoped that Dr. McKenzie would continue his investigations, and that the University would recognize their importance, and provide him with a well appointed gymnasium and proper facilities for carrying on a work for which he had hown himself to be so eminently fitted.

Dr. J. B. McConnell said that this paper opened up a large subject much neglected by the medical profession as a whole, and he was glad to see that one of the members was devoting his attention to it. It was of importance in our Universities to have the physical training of the students looked after, but of even greater importance to have it looked after in the public schools, and a perfect system of exercise, he felt, would bring a great change in the standard of health; of equal importance also would be a proper physical examination of each pupil in regard to the condition of all the more important organs of the body, especially those of sight and hearing. He also congratulated Dr. Reed upon his work, as he thought that the need of proper exercise was more felt among women than among men. The female sex suffered from want of it, and they were thus often improperly developed.

Dr. R. T. McKenzie, in reply to Dr. Morrow, stated that he had classified cycling among the moderate exercises, as it did not require the prolonged strain on the heart, which holding the breath, as during heavy lifting, entailed. It was not within the power of a wrestler or a football player sometimes to avoid a severe strain, but the rider could at any time relax his efforts.

TWO CASES OF RENAL CALCULI.

Dr. J. A. Macphail showed for Dr. J. A. Springle, specimens of renal calculi removed during the previous week at the Western Hospital. The first was an oxalate stone weighing two ounces, taken from the kidney of a man aged 65 years, who had suffered from it for over thirty years. The second specimen was a right kidney removed from a woman of 28 years who had complained of colic and other symptoms of kidney stone for five years. Peri-renal abscess existed, with protrusion of a calculus through the pelvis of the ureter. The kidney substance was considerably injured by four other calculi in the sinus of the organ itself. The stones consisted of oxalates and phosphates, and weighed three ounces.

Dr. Springle was not altogether satisfied that the removal of the kidney in this case was above all criticism, yet the condition at the time of operation seemed to give no other alternative.

CARCINOMA OF THE LIVER.

Dr. J. A. Macphail showed two specimens obtained at an autopsy upon the body of a woman 67 years of age in the practice of Dr. McConnell. The one was a liver weighing twelve pounds, thickly sown with nodules of alveolar carcinoma, the other a virginal uterus carrying four sub-serous fibromata.

Dr. Macphail thought it worthy of note that this patient was unconscious by sign or symptom of either of these conditions until they were related to her by her physician four days before death.

Dr. A. L. Smith referred to a case which he had had a year or two before, in which a cancerous liver had grown to such a size that it reached down to the edge of the pelvis and almost filled the abdomen. Although the case was hopeless, he had called Dr. Finley in consultation, in order to verify the extraordinary size of the organ.

Stated Meeting, November 29th, 1895.

A. D. Blackader, M.D., President, in the Chair.

Dr. D. A. Hart, of St. Lambert, Que., and Dr. L. C. Prevost, of Ottawa, Ont., were elected ordinary members.

ADDITIONAL CASES OF PYOCYANEUS INFECTION.

Dr. J. G. Adami exhibited cultures made from these cases, and gauze dressings showing the characteristic blue color, and Dr. Kenneth Cameron reported the history of one of the cases.

TUMOR OF THE LUNG.

Dr. J. G. Adami exhibited the specimen.

SIX YEARS' EXPERIENCE IN ABDOMINAL AND PELVIC SURGERY.

Dr. Laphorn Smith read a paper on and presented a list of all the abdominal sections he had performed up to the 20th November, 1895, to the number of 143, with 11 deaths. Of these, all but eight, which were performed at the patients' own home, were done in public or private hospitals.

The death rate was shown by comparison of the statistics of each year to have been gradually reduced from 17 p.c. in 1892, to 3½ p.c. in 1895; the number of cases operated on had increased very considerably. The rate for the whole time was 7½ per cent.

These abdominal sections were performed for the following reasons :

	Cases.	Deaths.
Removal of large tumors of the kidney by the abdomen.....	2	0
Extra-uterine pregnancy.....	3	0
Large ovarian tumors.....	8	1
Abdominal hysterectomy.....	11	3
Ventral or umbilical hernia.....	7	0
Obstruction of bowels of long standing.....	2	2
General peritonitis following miscarriage.....	1	1
Tubercular peritonitis.....	2	0
Large cancerous tumors of ovaries.....	1	0
Puerperal septicæmia, cleaning out pelvic abscess.....	1	0
Ruptured pus tubes.....	1	0
Removal of appendages for fibroid tumors.....	4	0
Pus tubes.....	42	3
Cystic ovaries and chronically inflamed tubes.....	9	1
Hydrosalpinx.....	6	0
Ventrofixation, including rapid dilatation, curetting, repair of lacerated cervix and perineum, and in some cases removal of dermoid tubes and ovaries.....	43	0
	143	11

He then gave a detailed account of each case that resulted unfavorably, showing how several of them would probably have been saved if he had at that time known about the Trendelenburg posture, which has completely revolutionized pelvic surgery and converted disasters into brilliant results. Four of the deaths would have been prevented if the patients had been sent for operation earlier, the death rate being due to longer anæsthesia required in dealing with adhesions, and greater hæmorrhage when tumors had been allowed to become larger before being removed. One of the deaths was due to drainage tube infection; and one to infection by iodoform gauze packing. He no longer uses either of these devices, because they are no longer necessary, for by means of the Trendelenburg posture he was able to tie all oozing points and cover all raw surfaces with peritoneum. Three of the eleven deaths had no connection whatever with the operation, but eight of them were due to the operation. The remote results were then gone into carefully. Three cases of the 132 which recovered from the operation died from the progress of their disease within four months. Of the remaining 129 cases, one is not cured, having still an acrid discharge from the uterus, which may necessitate the removal of that organ, and 3 cases of ventrofixation are only partially cured, because they had only one ovary and tube removed when both were diseased. The latter patients now regret having insisted upon keeping an ovary in, and intend to have a second operation eventually. The remaining 125, which have nearly all been seen within the past year, are apparently cured, and many of them are in robust health. The most gratifying results were obtained from the six combined operations at one sitting, including ventrofixation, performed on 43 women. The removal of the appendages for fibroid was also highly satisfactory; the reader thought that the operation should be preferred to hysterectomy in all cases in which, by reason of the size of the tumor, the total removal of it promised to be extra hazardous. The two women whose abdomens were opened for puerperal septicæmia—in the one case the septic uterus being removed, and in the other a large pelvic abscess, walled in by omentum being cleaned out and a large piece of omentum being removed—made excellent recoveries, and are now alive and well. The former was the first case recorded in Canada of removal of the uterus for puerperal septicæmia. The removal of pus-tubes also gave excellent remote results, women who had been chronic invalids for years regaining their health and strength in a few months after the cause of their trouble had been removed. The operations, which had always been very difficult, did not, however, prove to be so fatal as he would have supposed. Two of the patients were brought to the hospital in an ambulance, with an attack of peritonitis in full blast, and yet they made excellent recoveries after removal of the pus sacs. Even many cases in which the pus tubes ruptured during removal, as well as one case in which the tube ruptured at the patient's home several times before operation, also made good recoveries. One of the extra-uterine pregnancy cases walked out of his private hospital against advice on the twelfth day, and another from the Western Hospital on the fourteenth day, and yet made perfect recoveries. He felt convinced that if all these cases were operated on before rupture, or soon after the first rupture, they would all recover.

As far as the effect upon the sexual feelings of the women was concerned, the patients might be divided into three almost equal categories: First, those who, after the operation, gradually lost all the sexual feeling which they had previously possessed; second, those who never experienced it either before or after the operation; and third, those who had never

known sexual pleasure before the operation, but gradually experienced it more and more after the diseased ovaries had been removed. About half of the latter have now strong sexual appetite several years after the removal of both ovaries. Although his experience in abdominal section for removal of large diseased kidneys was so limited, he was very much in favor of this route, because it enabled the operator to ascertain whether the patient had another kidney, and also because it allowed him plenty of room to see what he was doing and to do good clean work. One of the patients was 65 years old at the time of the operation, and is now nearly 70 years old and in perfect health. He strongly advocated leaving in the silk-worm gut sutures which close the abdomen, for thirty days, since he has been doing this, now some three or four years, ventral hernia following operation has almost become a thing of the past. He attributed his increasing success and diminishing death rate: 1st to the Trendelenburg posture; 2nd, to the A.C.E. suture and quick operating, requiring less anæsthetic; and 3rd, to his assistants and nurses being better trained and more thorough believers, as he was himself, in *absolute asepsis* from beginning to end.

THE ST. JOHN'S AMBULANCE ASSOCIATION.

His Honor the Lieutenant-Governor of Ontario presided at a meeting held at the Military Institute, November 25th, 1895, to consider the formation of a branch of the St. John's Ambulance Association for the Province of Ontario. Amongst those present were Lieut.-Col. Otter, D.A.G.; Lieut.-Cols. Mason, Hamilton and Davidson; Lieut.-Col. Macdonald, Guelph; Major Mead, Commander Law, Dr. Meyers, Dr. Elliott, Dr. King, Dr. Chas. O'Rielly, Dr. Stuart, and Dr. Ryerson.

This Society is the Ambulance Department of the Order of St. John of Jerusalem in England, which has its headquarters at St. John's Gate, Clerkenwell, which is now all that remains of the ancient priory of the Order, built in 1504, and recently restored. This order is a revival and a continuation of the old Hospitaller Order of Rhodes and Malta. Its history has been an eventful one, both in England and abroad. It was suppressed in England at the time of Reformation as a Roman Catholic fraternity, and at Malta when Napoleon took possession of the island. In England, however, it was never annihilated; for after the suppression referred to, its members continued in communication with the headquarters at Malta, and, passing through many vicissitudes, continued without state recognition as a fraternity devoted to hospital and charitable work. In 1888 Queen Victoria granted a Royal charter of incorporation, and graciously became its sovereign head and patron, the Prince of Wales at the same time taking the place of Grand Prior. Among the many services which the Order has rendered to the public is the establishment of an ambulance society, which has now been formed here. Since the inception of this Association in 1877, upwards of 300,000 certificates of proficiency have been awarded, hundreds of detached classes have been formed, one among the police in this city, and over 300 "centres" established.

It is spread over the entire Empire, having branches in Australia, South Africa, West Indies, Madras, Bombay, Ceylon, Hong Kong, New Zealand, and at Halifax. Its objects are: The instruction of persons in rendering first aid in cases of accident or sudden illness, and in the transport of the sick and wounded in peace or in war; instruction in the elementary principles and practice of nursing, also of ventilation and sanitation; the formation of ambulance depots in mines, factories, and railroads; the organization of ambulance, nursing, and invalid transport corps; and generally the promotion of works for the relief of the sick and injured in peace and war, independently of class, nationality and denomination. It should be distinctly understood that its object is not to rival, but to aid, medical men, and with a view of qualifying pupils to adopt such measures as may be advantageous pending the doctor's arrival or during the intervals of his visits. Some idea of its necessity may be learned by the statement that in London alone in ten years, 28,071 were injured in the streets, and in England and Wales there are annually lost 2,000 to 3,000 lives by drowning, and in the mines over 1,000.

It was decided to form local centres through the province, as the opportunity may arise, and a local centre will be formed in Toronto at an early date. The formation of these centres is being promoted by Dr. Ryerson, Deputy Surgeon General, an honorary associate of the Order of St. John. Classes of not more than thirty persons are to be formed, to whom a course of lectures are to be delivered by one of the lecturers of the Association. At the conclusion of the course an examination will be held, upon passing which certificates of proficiency will be issued to those entitled to them. On no account will mixed classes be permitted, nor will a lecturer be allowed to examine his own class, so that the certificates may be awarded as an evidence of knowledge apart from any influence which may affect the lecturer.

The following officers were elected: President, his Honor the Lieutenant-Governor; vice-presidents and members of Council, Sir James Grant, K.C.M.G., Ottawa; Senator Gowan, C.M.G., Barrie; Judge Weller, Peterborough; Sheriff Murton, Hamilton; Rev. Canon Richardson, London; Lieut.-Col. Macdonald, Guelph; H. Corby, M.P., Belleville; Judge Hughes, St. Thomas; Dr. R. T. Walken, Q.C., Kingston; Wm. Mulock, M.P., Toronto; Surgeon-General Bergin, M.P., Cornwall; Henry Cawthra, Toronto; W. R. Brock, Toronto; Medical Director, Deputy Surgeon-General G. S. Ryerson, M.L.A., Toronto; lecturers and examiners, Drs. Strange, Grasset, E. E. King, Stuart, Dame, Nattress, Ellicott, Myers, W. H. B. Aikens, and O'Reilly; assistant secretary-treasurer, Dr. Campbell Meyers.—*The Canadian Practitioner*.

THE
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Editorial.

SYMMETRICAL DEVELOPMENT.

Those who take an interest in the proper evolution of children into well developed adults concede the necessity of well regulated and constant physical exercise. Good results only follow courses of training which bring equally into action all the muscles of the body, and in such a manner that both sides of our dual organization are equally exercised. It has only been the result of generation and centuries of habit, that in the majority of people the dexterity of the right hand supersedes that of the left, and education of these limbs equally from childhood up would doubtless, in a generation or two, lead to a condition in which the individual would be normally ambidexterous. It is not only necessary that both sides of the body should be equally exercised, but of the greatest importance that absolute symmetry in shape, size and proportion should be aimed at. Hence the necessity that all physical training should be regulated by those properly qualified for such work, not only by a knowledge of the various exercises suitable for general development, but also by the possession of an intimate acquaintance with the structures and functions of the human body. It should be impressed on our school boards, and those who govern the education of our youth, that the importance of physical education is scarcely less than that of the mental; every muscular fibre has its corresponding nerve representative in the brain, and the exercise of the former means a simultaneous incentive to growth in its associated neuron, and thus indirectly muscular exercise contributes to expansion of the brain, and it need scarcely be stated that a strong, robust physical constitution is absolutely necessary

for enabling the individual to accomplish in life the possibilities of his full mental capacity. We do not doubt but that the greatest benefit would accrue to the present and coming generations, were a medical committee to constitute part of the governing organization on our educational board, who would arrange for proper individual physical examination of children on entering school, and from time to time, and which examination should extend not only to skeletal and muscular conditions, but to the various organs of the body. In this way, defects, congenital or acquired, would be early recognized and put in the way of appropriate treatment in their incipient stage. The duties of such a board would also tend to securing for each pupil the proper kind of exercise and the requisite amount indicated in each case.

But our intention in starting this article was to draw attention to an evil which will at once be manifest to anyone giving it a moment's consideration. We refer to our skating rinks, and the practice which seems to be general in this city, and probably elsewhere, of skating always in the same direction. Skating is one of the best exercises, and has possibilities in the many different movements and intricate gyrations of the accomplished skater of bringing into play all the muscles of the body, and requiring such a nicety in balancing as to tend towards symmetrical growth. But the largest of our rinks permits only of moving around in a continuous circle, with the body always inclined to the centre. As skating is possible here for some four months during the year, when it is indulged in, the continual oblique leaning in one direction brings into unequal play the muscles on each side of the body, and when it does not lead to actual deformity, undoubtedly means unsymmetrical development of the muscles and nerves. It might astonish some adept skaters to find how awkward they would feel were they to try skating around in the reverse direction. We think it very advisable that in all our rinks, at least on alternate days, the direction of skating should be reversed. Skating is one of the most advisable forms of exercise; it is so extremely fascinating that it becomes an easy means of inducing our youth to indulge in the activity which results in increased muscle, brain, lung and heart power. And hence, it should be regarded more than it is in the light of a gymnastic exercise than a pure recreation, and each rink should have a competent instructor, to direct in the various possible movements and varieties of skating, which are so comprehensive as to

meet every requirement of exercise, besides developing gracefulness of carriage, and, when indulged in in the open air and sunlight, becomes the most healthful of our recreative pastimes.

ANATOMY AND HISTOLOGY.

A separate section for Anatomy and Histology was instituted at the meeting of the British Medical Association in July-August, 1895. At former meetings anatomy was included under physiology a few times.

This is an honor for anatomy, and will tend to disperse the idea that human anatomy is a finite and will nigh exhausted science. Henry Morris, F.R.C.S., was elected president of the Section, and in his eloquent opening address, touched on many interesting points. After speaking of the deficient knowledge of the anatomy of infancy and childhood, and the late advances in the anatomy of the nervous system, he prophesies much light from the further study of comparative anatomy and embryology. From the fact that the arterial system is developed from a network of connective tissue cells, with its branches growing from the periphery towards the centre of the body, thus explaining why the blood vessels follow the connective tissue septa, and enter the organs at their sulci and fissures, he shows that so-called abnormalities of blood vessels are caused by the departure of other structures from their usual arrangement in the body. He reasons that conditions at present considered as abnormal will be explained by the students of these branches. Of morphology he speaks as follows: "So likewise it is certain that as morphology comes to be more and more pursued, it will be found to yield more and more about disease; and that in this direction the minute and accurate observation of variations in form and texture will take rank with, if not in front of, the chemical analysis of solids and fluids of the body, and the new science of bacteriology which, indeed, is a branch of morphology.

"It is impossible to foretell the extent of knowledge which may be gained by this study, and I should no doubt be accused of speaking in folly or irony if I were to predict the time would come when, by a morphological examination of the placenta, not only much of the tissue conditions of the parents at the time of impregnation and conception would be ascertainable, but that the physical, mental and moral attributes of the offspring will be fore-

“told ; so that it will be possible, in anticipation, to classify him
“with the athlete or cripple, the genius or the idiot, the total ab-
“stainer or the inebriate. Yet things quite as improbable have
“happened.”

G. F.

The *American Journal of Surgery & Gynecology* has been removed to St. Louis, Mo. Dr. Emory Lanphear, Professor of Surgery in the Women's Medical College, has been appointed Editor-in chief.

The *Medical News*, which has for more than thirty years been published in Philadelphia by Henry C. Lea and his successors, Lea Bros. & Co., has removed its editorial and publication office to New York city.

The *College and Clinical Record* will be hereafter known under the name of *Dunghlison's College and Clinical Record: a Monthly Journal of Practical Medicine*.

Book Reviews.

A Manual of Syphilis and the Venereal Diseases. By James Nivins Hyde, A.M., M.D., Professor of Skin and Venereal Diseases, Rush Medical College; Dermatologist to the Presbyterian, Michael Reese, and Augustana Hospitals; and Consulting Physician to the Hospital for Women and Children, Chicago. And Frank H. Montgomery, M.D., Lecturer on Dermatology and Genito-Urinary Diseases, and Chief Assistant to the Clinic for Skin and Venereal Diseases, Rush Medical College; Attending Physician for Skin and Venereal Diseases, St. Elizabeth Hospital, Chicago. Publishers, W. B. Saunders, 925 Walnut St., Philadelphia.

This is a book of 618 pages with 44 illustrations in the text, and 8 full page plates in colors and tints. It "has been prepared with the intent of meeting the special needs of the student and of the practitioner, rather than the expert." Containing "in compendious forms, and with detail, all practical facts connected with the study and the treatment of syphilis and the venereal diseases."

The subject of syphilis especially is one that cannot be too thoroughly understood and carefully studied by the general practitioner, manifesting itself as it does at all ages, and in every organ of the body. Its symptoms and injurious results are extremely varied, and are often not recognized as to their true cause, unless the physician is thoroughly posted in regard to its immediate and far reaching possibilities. The numerous and varied methods and avenues by which the virus may gain admission and infect the organism need to be thoroughly appreciated by the physician, who exposes himself to such imminent danger in attending such cases, and cannot be too widely taught to the community around us. Hence a work like the one before us, which gives us in a lucid, terse style and in sufficient detail everything known to date, in regard to this subject and the other venereal diseases, such as gonorrhoea, which is said to destroy more lives annually than syphilis, should be heartily welcomed by the Profession, and extensively purchased and read. Two hundred and ninety-two pages are devoted to syphilis; acquired syphilis is first dealt with. The chancre and everything pertaining to it is described, and its treatment fully given. In the evolution of syphilis, four types are given, and the stages usually described as primary, secondary, and tertiary are not accepted as representing the true chronological scheme of its course. Considerable space is devoted to syphilis of the skin. The syphilodermata being grouped under five headings, hereditary syphilis is then fully considered. Then follows an extended chapter on the treatment of this affection.

Mercury and iodine, in various forms, are recommended in numerous prescriptions, formulæ suitable for every variety of indication. In syphilis of the nervous system the hot bath, fumigation and the Turkish and Russian baths are to be avoided, being apt to produce congestion of the nervous centres. We see no reference to the Aachen method of treatment in Germany, or the benefits of treatment at the hot springs of Arkansas. An interesting chapter then follows on syphilis in relation to the family and society as to whom such patients should marry, duties of man and wife when infected, the regulation of public prostitutions, etc.

In the article on chancroid, a lengthy detailed list of symptoms are given, comparing them with chancre in parallel columns, and with Herpes Progenitalis and other disorders of the skin and mucous membranes, which will be found exceedingly useful for reference. The chapter on hypochondriasis is full of interest, and refers to a number of subjects such as impotency, the various sexual psychopathies, syphilophobia, etc., upon

which important information is given and useful suggestions made for their management. The remainder of the book (some 250 pp.) is taken up with the consideration of acute and chronic urethritis, and their complications and treatment. The latter is full, but does not recognize the possibility of cure in from one to two weeks, claiming that all abortive measures are failures.

This is not in accordance with Janet's special methods of irrigation with solutions of permanganate of potash, by which it is claimed by numerous investigators that cures have resulted in about an average of 15 days.

Altogether this Manual will be found a safe guide in this important branch of medicine, and will prove a valuable addition to the library of the active physician, who requires just such condensed but comprehensive and practical works for ready reference.

The Structure of Man, an Index to his Past History. By Dr. R. WIEDERSHEIM. Professor in the University of Freiburg and Baden. Translated by H. & M. Bernard. The translation edited and annotated, and a preface written by G. B. Howes, F.L.S., Prof. of Zoology, Royal College of Science, London. Publishers, MacMillan & Co., London and New York. The Copp Clarke Co., Ltd., 9 Front st. West, Toronto.

This is an exceedingly interesting book, brimful of interest to the advanced anatomist, as well as the medical student and graduate, and the educated public generally. It is only supplementary to the classical treatise of Darwin & Huxley, but aims at giving a general idea of the type of animal structure, and more especially the salient features in the anatomy of man which link him with the lower forms, and in that of the lower forms, which shed special light on parts of the human organism.

In the preface, the author suspects that some of the classificatory systems are erroneous from the principle of convergence not being recognized, which teaches that essentially similar definitive conditions may be independently reached, under advancing modification, along parallel lines by members of different groups of animals, and suggests the possibility that some of the characters which modern man and the higher apes have in common may have been independently acquired.

He refers to the work of the "Collective Investigation Committee of the Anatomical Society of Great Britain and Ireland," in regard to variation in man. Subjects chosen for investigation year by year are taken in hand in the leading dissecting rooms throughout the kingdom. The work of the student, becoming thus a research work, is ennobled; and the reports embody a mine of accurate information, which, edited and tabulated, is of great service to both the surgeon and the scientific anatomist.

In the introduction the progress of the views promulgated in Darwin's "Origin of Species," by means of natural selection, is traced "the theory of descent, in spite of opposition, has steadily gained ground, and its advance has been especially favored by new and surprising results attained in the three closely allied branches of science,—palæontology, comparative anatomy and embryology."

Man is proven to be one link in the chain of organic nature, and is not, as taught in the Mosaic Cosmogony, the result of a special act of creation. Although palæontological discoveries have not traced time further back than diluvial times (no certain proof of tertiary man having been obtained), this break in the record cannot in the least impair the evidence of morphology as to the real ancestry of man."

Then follows a consideration of the various portions of the animal body, beginning with the tegumental organs. The development of the

hair is traced from its first appearance in the embryo about the 12th or 13th week. Instances of hypertrichosis are mentioned and illustrated by some striking wood cuts. The greater number of these cases, he states, "appear to be due to a temporary arrest in the development of the hairy covering, and the persistence and subsequent growth in post-embryonic life of the foetal woolly covering, or lanugo."

The homology of sebaceous and mammary glands is pointed out, and the consequent possibility of all parts of the skin being capable of producing mammary glands. The existence of supernumerary mammary glands and teats, polymasty and polythety is discussed. In a similar way the development, variations and relation to similar parts in the lower vertebrates is considered in regard to the skeleton, muscular system, nervous system, sense organs, alimentary canal, circulatory and urino-genital system.

In the concluding remarks, he states that "in the course of philogeny, the body of man has undergone a series of modifications, which still in part find expression in his ontogeny. There are indications that changes in his organization are still continuing and that the man of the future will be different from the man of to-day, brought about by degeneration of superfluous organs and the acquisition of increased functional efficiency in others."

A glossary of technical zoological terms occurring in the text is placed at the end of the book. There are one hundred and five illustrations, and in the book two hundred and twenty-seven pages.

It is an intensely interesting book, containing the results of the most recent investigations in this branch of science, and written in such an attractive style that one is rivetted to its pages as to a fascinating tale of fiction.

Manual of Gynæcology. By HENRY T. BYFORD, M.D., Professor of Gynæcology and Clinical Gynæcology in the College of Physicians & Surgeons of Chicago; Professor of Clinical Gynæcology in the Woman's Medical School of North-Western University; Professor of Gynæcology in the Post Graduate Medical School of Chicago. Containing two hundred and thirty-five illustrations, many of which are original. Philadelphia, P. Blakiston, Son & Co., 1012 Walnut street. 1895. Price \$2.50.

This book differs from other books on this subject in several particulars: First, it presents it from a distinctly clinical point of view;—there are no long discussions with endless references, which, while they might show the erudition of the writer, would diminish very much the student's interest in the book; second, it is printed in two kinds of type,—a large type for essentials such as the student should master, and a small type for such amplification and addition of practical detail as may be of advantage for the practitioner, but which would burden the student's mind unnecessarily. The smaller type is appended to the paragraph, in such a way that it can be omitted or included in the course without creating confusion; third, the chapters on gynæcological technique and the principles of gynæcological treatment are more minute in their detail than is usual in such books, even to the description of many of the duties of nurses for the purpose of enabling the student to understand, and the young practitioner to conduct, the preparation and after-treatment of patients operated upon by professors or consultants,

One has only to read a few chapters of the book in order to surmise that the author is a man of large practical experience in teaching, for he seems to know just what the student needs, and in this surmise one is correct, for Dr. Byford is recognized as one of the ablest teachers of this subject in the West. We welcome it to our library, and feel sure that to the student and practitioner both it will prove of valuable service.

PUBLISHERS DEPARTMENT.

EUGENE FIELD'S LAST STORY.

In 1884 Eugene Field wrote a story which he called "The Werewolf." When it was finished he laid it aside, and a year afterward entirely rewrote it. In 1886 he again took it up and revised it, and during the nine years between that time and his death, in November last, he rewrote it eight times. His last revision pleased him, and he decided to print it. But death came too suddenly, and the story was found unpublished, among his effects. Mrs. Field, concluding to have the story appear, gave it to the editor of *The Ladies' Home Journal*, in which magazine all of Mr. Field's work, outside of his newspaper articles, was presented to the public. The story will be printed in the next issue of the *Journal*, strikingly illustrated by Mr. Howard Pyle.

The January issues of *Littell's Living Age* contain many papers of more than usual interest and value. Among others may be mentioned "Lord Salisbury," by Augustin Filon; "Matthew Arnold in his Letters," by Alfred Austin; "Kashmir," by Sir Lepel Griffin; "The Air Car, or Man-Lifting Kite," by Lieut. B. Baden Powell; "Corea and the Siberian Railway"; "Muscat," by J. Theodore Bent; "In the Wild West of China," by Alicia Bewicke Little. "1920," from the *Contemporary Review*, is a thoughtful forecast of the future growth and importance in the world of the Anglican race, and furnishes much food for thought.

Other articles worthy of prominent notice are "The Peasant Life of South Russia," from *Blackwood*; "Purcell and the Making of Musical England," by Frederick J. Crowest; "William Blake," by Alfred T. Story; "Fighting Thurlow, his Foes and Friends," by W. P. Courtney; "The Lost Ambassador," by Margaret Howitt; "Recollections of Thomas Carlyle;" with many others of scarcely less value.

Fiction is well represented by short stories from the pens of M. B. Hardie, John Habberton, I. Hooper, etc. A page of the best current poetry accompanies each number.

The busy men and women of to-day, who demand the best that the literary field can supply, will find *The Living Age* as fresh, timely and indispensable as ever. LITTELL & CO., Boston, are the publishers.

Six Hundred (\$600) Dollars in Prizes.

The special attention of our readers is called to the advertisement of the Palisade Manufacturing Co., with the above title on page 1 of this issue.

The prize contest which this well-known firm announces will no doubt attract a great deal of attention, and result in the submission of many articles of merit on "The Clinical Value of Antiseptics both Internal and External". The prizes are extremely liberal, and the well-known professional and literary eminence of Dr. Frank P. Foster, the talented Editor of the *New York Medical Journal*, who has kindly consented to act as judge, is a sufficient guarantee of the impartiality to be observed in the awarding of the prizes.

We are assured that there is absolutely "no string" attached to the provisions of this contest, and any physician in good standing in the community is invited to compete on equal terms with every other competitor.

Further particulars as to conditions, etc., can be obtained by addressing the above-named firm.

CANADA MEDICAL · RECORD

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VOL. XXIV.

FEBRUARY, 1896.

No. 5.

Original Communications.

ARTIFICIAL LIGHTING OF PUBLIC BUILDINGS AND PRIVATE HOUSES, AND ITS EFFECTS UPON THE HUMAN EYE.

In three parts, with Illustrations.

(Concluded.)

III.—REMEDIAL SUGGESTIONS.

By **CASEY A. WOOD, M.D.,**

Professor of Ophthalmology in the Chicago Post Graduate Medical School; Oculist to the Passavant Memorial Hospital, Chicago.

Those of my readers who remember my last article will recollect that one of the chief difficulties which near workers, whether students, typewriters, bookkeepers, stenographers, etc., may have to contend with lies in defective illumination. I pointed out that all kinds of near work, whatever they may be, should be pursued under conditions most favorable to the conservation of sight, and that these conditions ought to approach as nearly as possible that of diffused sunlight so shining upon their tasks that neither direct nor reflected rays fall upon the retina. I feel inclined to put the

illuminants as ordinarily used in offices in order of merit as follows : diffused or indirect sunlight, incandescent electric light, gas, kerosene, electric arc lights, direct sunlight. Evidence of the in-



Fig. 1. injurious effects of lights allowed to shine directly into the eyes of workers may be found in the attempts which clerks in banks, compositors and others frequently make to defend themselves from their own or surrounding lights. Apart from eye-shades and peaked caps (and even peaked caps supplemented by paper attached to their projecting fronts), the lamp shades of electric lights are often provided with home-made protectors of opaque paper so disposed as to cut off the irritating rays of light. The evolution of an effective light may be studied in many a counting house. Fig. 1 shows the first stage.

One man, whom we may designate as A, finds that the light in front of him affects his not over-strong eyes, and requires a shade, which he ingeniously pastes over against *his side* of the desk. Should his opposite neighbor, B, have stronger or healthier organs, or if he relies upon an eye-shade for protection, *the other side* of the electric lamp may remain undecorated for a time, but sooner or later a second eye protector is added, and then we find the second evolutionary stage as depicted in Fig. 2.

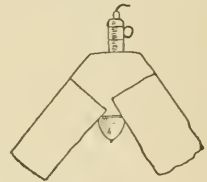


FIG. 2.

In the composing room of one of our best-known daily papers, and forming part of a building to which everybody connected with the establishment justly points with pride as the largest, newest and best-equipped of its kind in this part of the country, the superintendent lately removed there inartistic eye protectors as an offence against the æsthetics of the place! And yet they will surely reappear, unless the still more offensive stationary and semi-naked lights are better arranged. I have seen one or two examples of a further stage (or sub-stage) of eye-protection, where a third piece of paper was added, by C, to keep the light out of a third and more distant pair of eyes.

Last of all come attempts to remedy the evil effects of the *reflected* rays. The near worker often finds it necessary to "prop" up his book or papers at such an angle as will remove the annoying spot or line of light caused by the reflection of the rays from the lamp against the paper into his eyes.

A rather ingenious eye protector, calculated when properly placed to surmount the difficulties of illumination, is represented in Fig. 3. It may be seen in a large Chicago newspaper office, and is, so far as I know, the only successful attempt yet made upon a large scale to meet the requirements of the case. The shade of the incandescent lamp is prolonged into a lip, which effectually cuts off the light rays from the eyes of the worker in front of it. This device works admirably when employed for single cases placed against a wall. Here the light cannot annoy the compositor in front, and is usually sufficiently large to cut off the lateral rays. It also allows the light to be thrown equally upon all parts of the case. However, it presents

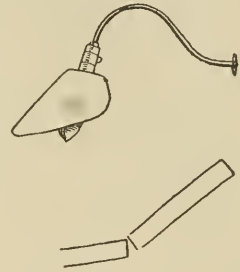


FIG. 3.

much the same weak points as the other lamps, when employed upon double rows of cases—as depicted in Fig. 4—because, as may readily be seen, men working upon one of these cases must of necessity receive into their eyes some direct rays from opposite lamps. Doubtless the posterior half of these double lamps will in time receive their quota of home-made shades.

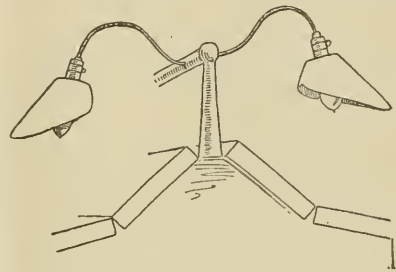


FIG. 4.

The ideal illumination then, if necessarily artificial, ought to be that from an incandescent electric lamp of sufficient and constant candle power, so placed that while it lights or can be made to light with equal effect all parts of the desk, does not throw any of its rays directly or indirectly into the worker's eyes. Such a light should (having in view the men's difference in height) be so made that it can be raised or lowered at will, and for the sake of the presbyopes and the myopes ought to be capable of being swung directly over all parts of the desk, table or case. Finally, it should be simple in construction, easy of management, and provided with a perfectly opaque shade. A search among the electric supply stores has resulted in the discovery of more than one such lamp. Figure 5 illustrates what seems to me to fill all these requirements. I do not know its name or the name of its inventor, but it will serve to prove that efficient and harmless lights are to be had—if one only looks for them. The incandescent lamp proper is suspended from a projecting

arm by means of a cord which passes through two hard rubber or wooden balls. The lower ball is so arranged that the cord may be readily pulled through the hole in the former with just enough friction to retain the lamp at any desired distance above the worker's

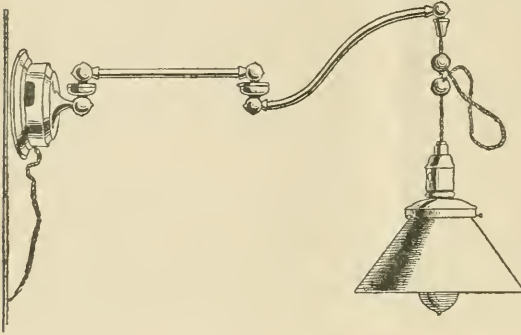


FIG. 5.

head. If desired to lower it the full length of the cord, the lower ball may be unhooked from the upper. These simple movements are supplemented by two double joints in the arm, so that the lamp can be moved in any direction horizontally, and be made to illuminate at will any particular portion of the work. The lamp shade is made of opaque material with a white porcelain lining.

The rude, glaring, naked and altogether abominable electric and gas chandeliers and powerful single lights, most commonly seen in theatres, concert halls, hotel dining rooms, churches, etc., need only be mentioned to be condemned in the strongest terms.

I know it is difficult to place lights in large rooms so that they shall be at once powerful for illumination, and innocent so far as vision is concerned; but it is altogether unpardonable not to put some apology for a cover or shade on that side of a naked electric light, or a collection of gas jets, whence the offensive light rays are projected into the eyes of an audience.

The furniture and decorations of a church speak for little intelligence on the part of the architect, and even the service itself is likely to be as "a sounding brass and a tinkling cymbal" in the ears of the thoughtful man, so long as his eyes are insulted during service by a great mass of retina-irritating gas branches or bunches of shameless electric lights!

For evening reading in private houses, or for the illumination required by one or two persons in private offices, my preference is for a good student's lamp, and the illuminant may be kerosene or it may be gas. The conditions under which reading and writing can be healthfully carried on by the aid of this form of argand burner are practically the same as those required for a more general illumination; *the lamp should be so placed that its rays fall on*

the book or paper, and never directly or by reflection upon the eyes of the reader.

For the reasons previously given, also, the ideal method of lighting rooms in private houses is one that imitates, as far as possible, the soft, diffused light of day. I have seen parlors, dining and bedrooms treated in this way, and the effect is soothing and pleasant even to sensitive eyes. Sixteen candle-power incandescent lamps were placed near the ceiling, hidden by the cornice or by a suitable reflector. The electric rays were projected upon a white ceiling, or one painted or papered in light shades, and thence they reached the observer equally from all the illuminating points.

This is not an economical plan, but it is an effective one, and is not open to the accusation of irritating tired eyes or of producing disease.

To return to the subject of printers and their eye troubles, the commandments which the writers of "copy" are usually enjoined to keep might, in these latter days, be summed up in the single injunction to write upon one side of the paper only, and yet in view of the eyesight of the unfortunate copyreader—and his companion in misery the long-suffering compositor—I would add (2) "thou shalt not destroy thy neighbor's optic nerve with pale or colored ink ; (3) thou shalt not blind him with illegible handwriting ; (4) thou shalt not war against his nervous system with such weapons as a lead pencil ; finally, (5) thou shalt not use, to the detriment of thy neighbor's eyes, any sort of paper except that which is opaque and white, and avoid that which is evil, namely the colored, the glazed and the thin."

With some slight modifications these injunctions might be extended to all classes of the community.

I fancy that reforms in the making of type are hardly to be expected. I have talked with many authorities on the subject, and cannot see any rational way out of the difficulty, although I am convinced that it would be better for the eyesight of printers were some indicator provided more easily seen than, for instance, a single nick in the edge of a type.

Turning from external difficulties I have to discuss those that result from errors of refraction (hypermetropia, astigmatism, myopia, etc.), weakness of the eye muscles, and other diseases of the eye itself. I have already discussed this subject pretty freely in the preliminary chapter on first principles. I must again emphasize what I there said about the advisability of having all optical

errors corrected, muscles strengthened and other ocular ailments properly attended to before pursuing any calling that makes constant demands upon the ocular, nervous and muscular energy. It must be remembered that hypermetropia and astigmatism are chiefly responsible for most of the cases of chronic inflammation of the lids, pain in the eyeballs, red eyes, headaches and nervous troubles that are found among near workers.

I have not referred to all the difficulties (any more than I have spoken of all their remedies) that occur to me in connection with the illumination of public and private buildings. There is, however, a matter which, in closing, seems to call for a passing mention. During my visits to various establishments of the city, I was struck by the differences in the provisions made for ventilating the working rooms—from the proprietors' offices to the engine room. Some were abundantly and scientifically supplied both with exits for the hot and foul air as well as with entrances for a cool and fresh supply. Some, on the other hand, were painfully deficient in these matters, so that, apart from other and possibly more serious considerations, the man with weak eyes, inflamed lids or congested choroid and retina might continue to remain in that condition if for no other reason than that his imperfectly aerated blood could give only a defective supply of nourishment to the diseased organs as long as he attempted to use them in a room foul with carbonic dioxide and rebreathed air.

I do not know that the use of tobacco and alcohol is any more common among those habitually following a sedentary occupation than among other classes in the community—doctors, for instance—but there cannot be the least doubt but that it is, in all its forms, not a good thing for the eyes. Especially in rooms which are incompletely ventilated, tobacco smoke adds greatly to the irritant qualities of foul air. In consequence, eyelids smart, an undue flow of tears obscures the vision, and incipient inflammations of all parts of the eye are encouraged to burst out in full force and compel the sufferer to abandon work. Indirectly, too, tobacco-chewing and alcohol add to ocular troubles by their dulling effect upon the nervous system. After forty-five, both these narcotics are liable to bring on disease of optic nerve, and produce a form of blindness that may persist long after whisky and tobacco have been abandoned.

It appears to me that a recital of a few cases of eye disease, directly and indirectly resulting from certain abnormal conditions under which many persons who use their eyes much do their work,

might be of interest in view of the fact that they illustrate and may emphasize, possibly, what I have been insisting upon in my previous articles. They are not hypothetical instances, but are all taken from my case books, and I know that similar cases come under almost the daily notice of other oculists.

A. R., aged twenty-four, has always had excellent vision, both in the distance and near at hand. He has been engaged in proof-reading for two years. Noticed a week ago that the print became confused and indistinct after an hour's reading, and if persisted in the eyes fill with tears. In the evening his eyes ache, and in the morning there is sometimes smarting of the lids. An examination revealed the fact that this patient had a marked degree of hyperopic astigmatism, which when corrected with proper glasses (for use during working hours) gave him entire relief from his annoying symptoms.

W. C., fifty-two years of age, has been a compositor of twenty years' standing, and although his vision in the distance has never been very good since he went to school as a boy, he has always been able, until quite recently, to read and see close at hand without glasses. Now he finds that types "blur," and that he can see the more distant types more easily than the near—just the opposite condition from that which obtained in earlier years. This proved to be an ordinary case of myopia, and with suitable glasses (which I advised him to wear constantly) Mr. C. can do his work and see as efficiently as ever.

I. G., aged seventeen, came to me on the advice of his father, to get my opinion as to whether his eyes are sufficiently strong to allow him to learn and practise the compositor's art. He has always had trouble with his eyes, especially when attempting to study. He discovered a year ago that there is a considerable visual difference between them—one eye having one-fourth normal vision and the other one-half only. An examination showed that the defective vision was due to a congenital deficiency, and was consequently incurable. He was accordingly advised not to engage in a business that would require such perfect vision as composing.

A short time ago I was asked to prescribe for a very intelligent printer, whose eyes were quite hypermetropic and astigmatic. He was wearing glasses prescribed by another oculist, which, in my opinion, were correct, but owing to the strain upon his visual organs they gave him continual trouble. Acting on my advice, he abandoned typesetting, and engaged in the work of a reporter, and since

that time has been comparatively free from eye strain and its attendant worries. I have no doubt but that many a compositor or proof-reader suffering from weak eyes will find the only permanent cure of their troubles to lie in a change of occupation.

G. P. R., forty-seven years of age, consulted me for a gradual loss of sight. He had only one-sixth normal vision in either eye, could read only the coarsest print, and was naturally much alarmed about his condition. He had tried all sorts of glasses without getting much help. A fog seemed to have settled down over his eyes, and both distant and close vision was "misty." On testing him I also found that he was color blind. He was an incessant smoker and took daily drinks of whisky, although, as he informed me, he was never "the worse of liquor." He also suffered from indigestion and loss of appetite. His was a well-marked case of tobacco-alcohol amblyopia, and, after a month's abstinence from these poisons, and other appropriate treatment, recovered his vision and was able to resume work.

E. C. C., twenty-seven years of age, came to me complaining of almost incessant headache, sometimes with and sometimes without pain in the eyes. The pain often started above his eyes and spread over the forehead and temples. He had never complained of defective distant vision, and his eyes appeared quite healthy until after an attack of typhoid fever a few months before. Now the pain sets in an hour or so after beginning his work as a compositor. Finding that one of his eyes was astigmatic and the other hypermetropic, I ordered him to remain away from work for a time, after which, provided with suitable spectacles, and bearing in mind my injunctions about the proper arrangement of light, etc., he was able to resume work with only an occasional return of his headache.

The last case I shall refer to is, in my experience, not uncommon among all classes of near workers. A young lady, copy-reader, consulted a physician friend of mine about her eyes. The lids were inflamed and painful; they smarted and burned after a few hours' work. Although not an oculist, the doctor was a man of sound judgment and good common sense, and at once made inquiry regarding the ventilation of the room in which she worked and the sort of light she did her reading by. He became convinced from her answers that neither of these was what it ought to be. He called upon the proprietor of the establishment where the lady worked, and was able to convince him that radical changes in these

particulars were necessary, not only for the health of his own patient, but for the sake of his other employes. Her troubles shortly disappeared as a result of these changes, and I was able, subsequently, to bear witness to the correctness of the doctor's diagnosis, for on examining his patient's eyes I found them in every respect normal.

A PLAIN TALK ON THE TREATMENT OF CONSUMPTION.

By A. D. STEVENS, M.D., DUNHAM, QUE.

Such is the mortality from phthisis in all the civilized nations with which I am acquainted, and such is the depth of the interest and attention that is being given to its prevention and treatment, that anyone who has anything to say, any contribution to our literature upon the subject, whether clinical or otherwise, any light that can be let in upon it, no matter how feeble the effort or humble the source, should be, and *is* given a hearing and a welcome. At all events, such thoughts and meditations as these furnish the cover or excuse I have to render for presuming to tread in the over-worn paths of the many who have preceded me—suggest, I repeat, the apology I have to make for attempting to follow, if not to lead, where men of better opportunities have had to acknowledge disaster and defeat—to rise again, it may be, with a renewal of energy, to beat back somehow, somewhere, or some time, the matchless destroyer.

Having said thus much in justification of a doubtful position, or, better perhaps, as a sort of preliminary skirmishing, I will endeavor to get down to work—to turn back some of the pages of my “book of remembrances” in treating consumption, such as they are.

Early in my professional career—it was in my first year—I was a witness to the treatment of a couple of cases of phthisis that made a lasting impression upon my mind. The one I was called to attend professionally, the other I saw simply as a spectator, but each was attended by a medical man of more than ordinary natural ability,—in fact, there were none who stood higher in the estimation of the public than the two medical gentlemen I refer to. Well nigh a generation and a half has since passed, and Time, the great leveller, has wrought its work, its changes in men,

as well as in things. It is true, the laboratory was silent—the pathology, the real, essential and initial features of tuberculosis were not as well sifted or determined as they are now; but what would the younger men of to-day say if they were to see, as I did, a couple of patients suffering from advanced phthisis whose food was chiefly sweets and dainties, and who had been, and were still thoroughly ptyalized by mercury—ptyalized *secondem artem*? I shall not undertake to answer for them; I will only say, that I was at the time fresh from the school and the hospital, and had been taught, as I then thought, and still think, the better way. This locality is a comparatively healthy one, with favorable soil, air, drainage and water; but there was in the days of our innocence and want of knowledge, as there is now, all too many evidences of the fact that the disease was at home among us, and that the death rate was anything but encouraging, as one may well infer.

Whether it was from the vision of two patients just alluded to, or from some natural, instinctive or constitutional tendency or fondness for tubercular disease, or both, I do not pretend to say, but I have all along contested every inch of ground for the cases that have been entrusted to my care to the best of my ability and with interest and feeling; and although I am not by any means a specialist, I think I can safely say that as many cases of consumption have passed through my hands during the last four decades as have fallen under the care of any *one* of my neighbors.

It is not necessary—certainly not my intention—to give particulars or statistics of any kind, and I could not do so if I would. What I have to say must be accepted in a general way, and not supported by details or statistics, whatever may be the value your readers place upon them. The outlines or plan of treatment I have from the first been in the habit of following, if not the ideal one, according to some, has proved as satisfactory in my hands as any whose account has reached me, and yet there is nothing really new or startling about it. It is verily the old, old story once more repeated. It may be said to consist in strengthening the native forces, or fortifying the citadel at all points of exposure, sustaining and raising the vitality or capacity for resistance, by all and every means in our power, in the hope, so to speak, of forcing or crowding out the offending bacillus. There is not much room for doubt that the disease is one of mal-nutrition or mal-assimilation and defective elimination, and that, acknowledged,

it is of supreme importance, in the first place, to see that the appetite is good, or made good, and the digestive and eliminative organs able and willing to do their best work. This done, the way is made clear to get on to more solid ground—to supplement the work thus performed with what are known to be tissue-build-ing foods, our most strengthening medicines, and all the pure air, exercise, cleanliness and sunshine that can be procured and en-dured. In other words, all, everything to exalt, to aid, to sus-tain, and nothing to oppose the processes of construction or re-construction and repair. If both science and experience are agreed that it is essential to the well-being of the average man in health, that his food should contain all the elements in perfection that go to make up a healthy body and mind, it is of paramount concern that we insist upon something of the kind for the con-sumptive. Of all the signs that have a right to inspire us with confidence in ultimate success, there is not one, it occurs to me, that possesses greater significance, that gives more hope, than the one we have when the patient eats, digests and assimilates satis-factorily—clearly, neither drugs nor anything else can take the place of substantial food in such a wasting disease; the man who, in other words, eats and digests well has the key to the situation; he is in possession of the greatest factor in the whole field. And among the best of the tissue repairers and constructors upon the bill of fare must be placed beef; it stands at the head of the list. This is closely followed by milk and fresh animal foods of nearly all kinds, in fact, the whole proteid or highly nitrogenized class is a close competitor, and must be drawn upon—eggs, cheese, fresh fish, game, poultry; almost any kind that the appetite craves and the digestive organs can manage are in demand and should be prescribed. These, in view of the danger of tiring the stomach and perverting the sense of taste, as well as for other reasons, should be re-enforced by the best of the vegetables; but pastry and other delicacies, with the exception of fresh, ripe fruits, are better, perhaps, held in reserve for a man of more robust health.

If there is any prescription at all approaching a specific for tubercular phthisis—and I know of none—it is the old-fashioned tinct. ferri perchlor. with a dash of quinine in it,—say, fifteen or twenty drops of the former to one-half grain of the latter, to be taken in one-fourth tumbler water before or after meals. What-ever may be thought of this, a variety, a change of prescription, once a fortnight or so, is good practice, but, in the meantime,

violence is not to be done to the tonic basis or principle of treatment. No one kind of tonic should be given continuously, and, of these, there is happily a large number to choose from. There is the citrate of iron and quinine, strychnine and iron, or iron, quinine and strychnine. Then, there is phosphorus, nux vomica and iron. A very efficient change may be found in phosphoric acid, tinct. ferri perchlor., tinctures of columbæ and nux vomica diluted with water, or, preferably, with glycerine, syrup of orange and water. The sulphate of iron and quinine often do very well, and so does a prescription of arsenic, quinine, strychnine, gentian and iron, and some others of a similar character, which will readily suggest themselves. If the patient is of a well marked bilious temperament and in possession of a fair amount of vigor, the syrup of the iodide of iron will, for short intervals, do good work.

When, as sometimes happens, one has been forcing things for a long time and desires to call a halt—to give his patient a well earned rest, the compound syrup of the hypophosphites supply the want; but, after all, one's eyes in these modifications are the most reliable guide to reach a conclusion. Of cod liver oil, what shall I say? I know I am treading upon sensitive ground when I question its time-honored utility or application, and I almost fear to trust myself with a reply. I have so often noticed that its use was unfriendly to digestion that that fact alone negatives some of its supposed advantages. In any case, it seems to act more as a food than anything else, and, when it agrees with the patient, is of undoubted value as such, given immediately after meals in not larger quantities than he can well take care of. Pepsine and other digestive agents taken with meals are not to be lightly looked upon. The preparations of malt may also be useful to the same end. If constipation exists, a pill made of cascara, aloin, strychnine and belladonna, taken at night, meets the difficulty. Hardly have I met with a case that required either an astringent or an intestinal antiseptic to control diarrhœa. Owing to the stuffing process going on, the liver requires close watching, and, when it does get torpid, a pill made of podophylin, leptandrin and colocynth, to which may be added extract of belladonna or hyoscyamus, or both, will be found equal to the emergency.

Who has always been satisfied with the effect of cough medicines? My experience with those containing morphia, ipecac, squills, cherry and the like leads me to believe that they often do

more harm than good in more ways than one. The cough, like the night sweats, is only an effect—the smoke that escapes from the chimney and not the fire. If, however, a cough mixture seems necessary, a pill or a mixture made of hyoscyamus, valerian and camphor answers fairly well, and has the further advantage of not interfering with the digestion. Then, there are those who appear to cough more than is necessary to expel the secretions, and these may be *taught* to control the act to a certain extent.

The treatment by beechwood creosote, which has found favor for some little time past with some very good men, may be all right theoretically, but is it all right practically? I think not. If it is given, as I suppose, as a germicide; if its object is to attack directly the arch enemy at all points — “to carry the war into Africa,” or, in other words, to destroy all the micro-organisms by a continuous attack of much force, I should be afraid the patient himself would be the first victim. For the pyrexia and the night sweats, many more remedies have been suggested than have borne fruit—many more than, I think, can be successfully defended, and looking upon these, as I do, as merely symptoms or indications of weakness or adynamia, I prefer to put my trust in a well devised, all around tonic and hygienic treatment, rather than in any one or all of them.

When hemorrhage of much account occurs, there is no better way of arresting it than to give ergot freely, and cooling drinks, to be followed by twenty drops of tinct. ferri mur. in water every four hours. The danger of recurrence being past, we may feel our way back to the position we were occupying previous to the attack. Residence in certain elevated situations, such as those found among the foot hills of the Rocky and Adirondack Mountains, where the air is supposed to be abundantly rarified,—in fact, a change almost anywhere from a damp to a dry soil and atmosphere is often thought to be of advantage; but the man who lives much of his time out of doors in almost any dry locality—and if at home all the better—will derive as much help as can be expected from environment anywhere. And in addition to all this, if at home, he will be in a better position to observe the necessary hygienic conditions, and let us not forget that much of the secret of success in these cases lies very near here.

When at all convenient, it seems a good precautionary rule, if nothing more, to disinfect the house, both during and after treatment; to destroy, by burning or otherwise, the sputa, and to cleanse,

antiseptically, all dishes and other articles the patient is or has been in contact with. Long before the science of bacteriology was born, or, at all events, before it was much more than a respectable mist, a haze, a dream, men who have had much to do with pulmonary phthisis must, like myself, have noticed that it was and is in some way infectious—that there was and is a mysterious entity or something (now well understood to be the bacillus tuberculosis) which was the pathogenic cause, and through and *by* which it is transmissible and passed around, to perform its deadly work.

Of Dr. Koch and his methods I know nothing beyond what I have read. There is a unanimity of opinion, I think, that his tuberculin has proved a good friend to the veterinary surgeon, if not to ourselves, and let us not be afraid to entertain the hope, that time and perseverance in the researches and theories his name stands for will open out a brighter future for mankind; that finally he who stilleth the storm and openeth the eyes of the blind will, in the good time to come, show us how to deliver the race from one of its most dangerous and daring foes,—consumption. The procedure advanced by him failing, isolation seems to offer about the only alternative; but is it practical? Until something more is revealed than has yet appeared above the surface, we may as well possess our souls in patience—make up our minds that we will be able to cure as large a percentage of cases by adopting some such practice as is herein indicated as by any other agencies now known. At any rate, I have very good reasons for believing that many cases *are* curable in this good, old-fashioned way.

Selected Articles.

THE INFLUENCE OF THE BACILLARY THEORY OF TUBERCULOSIS ON THE TREATMENT OF PHTHISIS.*

By J. EDWARD SQUIRE, M.D., M.R.C.P., D.P.H.,
Physician to the North London Hospital for Consumption, etc.

Within the last few years all sorts of antiseptics have been recommended in phthisis: some as medicines; others of subcutaneous injection; others, again, for use as inhalations, or even to be injected *per rectum*. Injections direct into the lung tissue were also practised. Some of the drugs employed had long been used in the treatment of phthisis, and had already gained a certain repute. Of these, creasote and iodine may be taken as examples.

Creasote and its derivative, guaiacol—both used in the form of the carbonate—are now, perhaps, the most fashionable. Theoretically, the attempt to kill or to prevent the growth of the bacillus tuberculosis within the body, by means of antiseptic or germicidal substances introduced direct to the affected part or carried there by the blood stream, is admissible. But the practical carrying out of this object is attended with great, and apparently insuperable, difficulty. No doubt if creasote, guaiacol, or corrosive sublimate (and many other substances) could be made to reach the bacilli in sufficient quantity, the result would be the destruction of the microorganisms and the arrest of the disease. This, however, would be at the expense of lowered vitality of all the tissues and a consequent predisposition of the individual—a matter of some importance to those undergoing treatment in a special hospital for consumptive patients.

The quantity of any germicide required to make the fluids of the body antiseptic is a bar to complete success. Estimating the amount of the blood at one-thirteenth of the body weight, this would give for a man weighing 9 stone nearly 10 lbs. of blood. To make a 5 per cent. solution, about half an ounce of the antiseptic must be dissolved in the blood, and this quantity must be maintained in spite of rapid excretion. Hölscher showed that we cannot effect this, although both he and Cornet succeeded in rendering guinea-pigs partially immune against tubercle infection by injections of creasote.

But supposing we can get sufficient antiseptic dissolved in the blood, will it reach the bacilli? The pathological changes which

* Read in the Section of Medicine at the Annual Meeting of the British Medical Association held in London, July-August, 1895.

occur in the immediate vicinity of these organisms result in early obliteration of the blood vessels of the part, and the consequent cutting off of the blood stream from the disease focus. This necessarily prevents any blood-borne antiseptic reaching the bacilli in the tuberculous centre. True, the margin of the tuberculous area still receives its blood supply, and extension of the mischief might presumably be checked. But the bacilli in the centre of this area, secure from flushing by an antiseptic blood stream, thrive and multiply; and when, in the natural course, the bloodless mass softens and breaks down, myriads of bacilli are suddenly let loose to be carried to other parts. Were it possible to have the whole body so impregnated with antiseptics as to ensure the immediate destruction of these micro-organisms, wherever they may be carried, we should soon clear the body of the bacilli. But how would the living cells of the body thrive on such an antiseptic liquid? These living cells are our natural protectors against the attacks of pathogenic organisms, and we want to promote their vigor and not to poison them with antiseptics.

We must be content with a less strongly antiseptic fluid in the blood vessels, and at the best the bacilli will be "scotched, not killed." Antiseptic remedies cannot be relied upon as curative agents in pulmonary tuberculosis. Nevertheless, these drugs have a certain value in the treatment of consumption; and one object of this paper is to assign to these remedies their proper position, so that they may not be entirely discarded when the inevitable reaction against the antiseptic treatment of phthisis sets in.

Several observers have recorded beneficial results from certain of these antiseptic remedies, and this may in part be due to their possessing some action in destroying and nullifying the effects of secondary products of the growth of the bacilli, thus restraining the noxious agents which produce septicæmia. In this way they may prevent hectic, and the distressing symptoms which accompany high temperature. But perhaps the two great uses of antiseptics in phthisis are to prevent secondary infection by the air passages, and to destroy bacilli which have been expelled from the body. The latter object is attained by disinfecting the sputa; the former is, to a certain extent, possible by using antiseptic inhalations. In my opinion, inhalations are better for this purpose than antiseptic medicines which are excreted by the lungs; for, with the latter, in order to affect one organ, we flood the whole body with antiseptics.

The best means we have for destroying the tubercle bacillus within the body exist in the action of the living cells and fluids of the body—the natural safeguards against deleterious germs. If we drench the tissues with antiseptics, we may diminish the vitality of the bacilli, but at the same time we impair the vitality of the "phagocytic" cells, and this not only at the disease centres, but throughout the body. We are then interfering with the natural means of cure, not assisting Nature; and whenever medicine is opposed to the natural process of cure, it is likely to do more harm

than good. I have at different times given a fair trial to most of the special drugs which have been found successful by others ; but in looking through my hospital records, I have not found one that gave results which justified expectations held out by their advocates.

The hospital to which I am attached is surrounded with pure air, of which we encourage the patients to take full advantage ; a dietary is provided which is so generous that it is the despair of the Finance Committee ; and as much comfort and cleanliness are maintained as is possible with the class of patients admitted. With such hygienic advantages, medicines are chiefly required to help the patients to get the full benefit of these, to stimulate appetite, to aid digestion, and to ease cough—especially so as to give a fair chance of a night's rest. In the ordinary case, a simple tonic (acid and bitter), an expectorant when needed, perhaps cod-liver oil, and an antiseptic inhalation from an oro-nasal respirator worn for an hour twice or three times a day, give better results than any of the antiseptic drugs which we have tried.

The good effects recorded by so many observers from the use of creasote, guaiacol, and other antiseptics prove that these remedies are beneficial in some cases. But there is hardly a drug which has not been used in phthisis with more or less success. There is much significance in the following remark of one who records his success with creasote carbonate. Dr. Chaumier writes : " Those of my patients who obtained fresh air to the largest extent, and who tired themselves least, derived the greatest benefit from my treatment with creasote carbonate. With those, however, who lived in bad hygienic surroundings, and, in spite of the disease, were obliged to work the whole day, the condition remained the same, or became worse." The lines would, I believe, apply equally well to any drug treatment of phthisis.

Hygienic means furnish the most reliable treatment for phthisis, and the medicines employed should help the patient to derive the fullest benefit from these. The essential importance of strengthening the resisting power of the tissues may be overlooked in attempts to kill the tubercle bacillus by antiseptics.

It is impossible here to quote cases in support of the views I have expressed. These views are, however, the outcome of careful observation of several hundreds of cases, and of a dozen years of special hospital experience.—*British Medical Journal*, Jan. 25, 1896.

THE TREATMENT OF CHRONIC PROGRESSIVE RHEUMATISM.

This condition, commonly known as rheumatic gout, arthritis deformans, and rheumatoid arthritis, is far more distressing to the patient than it is interesting to the physician. As a potent cause of many kinds of suffering, however, it is raised of necessity to a position of dignity, and one worthy of careful study. A little

paper by Cantagrel, *Médecine Moderne*, October 16, 1895, emphasizes the importance of certain well known facts, and brings into view others less generally recognized. Rheumatic gout or chronic progressive rheumatism is a disease of general nutrition, and thus differs widely from acute articular rheumatism, now believed to be an infectious process. It occurs at all ages, in all climates, though its most marked influence appears between forty and sixty. Women suffer more often than men. Heredity, direct or indirect, is a powerful factor in its production. It is found in families where there has been gout, phthisis, or Bright's disease, and is called into activity by damp and cold, by exposure and hardships, by overwork and strain. The first necessity is perfect hygiene: warm clothing, flannel next the skin, woollen sheets, and possibly a change of residence and also of climate. Diet must be arranged to suit special requirements. Above all, the patient must not be forgotten in the study of the disease. Massage and rubbings with alcohol are of service.

Of remedies, cod-liver oil is the best, together with iron, arsenic, and the iodo-tannic wine of Nourry. For pain,—antipyrin, salol, salophen, and colchicum are of chief reliance. Charcot gave large doses of alkalies combined with quinine—thirty or forty grammes daily of bicarbonate of soda for weeks at a time. Between the intervals of acute painful attacks, general nutrition should be improved by means of iodides and arsenic. This is the only real treatment, this improvement and modification of nutrition, and it should be begun early and continued late for a very long time, indefinitely. The iodo-tannic wine of Nourry possesses special advantages. Tannin acts as a powerful tonic, and enables the stomach to assimilate readily the dose of iodine. Arsenic does not always give such good results, for it sometimes increases the pain. To obviate this difficulty, M. G. de Mussy has devised a plan of arsenical baths to be used upon the subsidence of acute symptoms. One to eight grammes of arseniate of soda and one hundred or one hundred and fifty grammes of bicarbonate of soda are dissolved for each bath. At the same time, tonics are administered—quinine, iodide of potassium, or vin de Nourry. Baths seem to be of benefit because of their heat; hot mud baths are equally serviceable. The writer Cantagrel considers that this very hopeless disease is not without hope: iodide inwardly, arsenical baths outwardly. Pain may be made to disappear at the end of two or three weeks. Deformity and stiffness under the influence of the internal iodide and the external arsenic, together with the prudent use of massage and rhythmical movements, cannot be expected to show much improvement earlier than three or four months. It must be remembered that rheumatic gout (chronic progressive rheumatism) is a condition that is partly degenerative and partly inflammatory. It is possible to arrest it and prevent acute attacks.
—*Medical Record*.

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

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NIGHT TERRORS (PAVOR NOCTURNUS).

J. A. Coutts, M.B. Cantab, M.R.C.P., in the *American Journal of the Medical Sciences*, February, 1896, writes an article on this affection.

This subject, he states, has received but scant notice from English writers, more from those in French; it has had still more attention from German writers, and some able articles have been written on it by physicians in the United States.

A great divergence of opinion exists as to the nature of the affection: it has been attributed to digestive troubles, naso-pharyngeal affections, others suppose them to be of the nature of somnambulism and nocturnal incontinence, others link them with epilepsy, hysteria, rheumatism, etc.,—these causes ranging themselves in two classes: those due to interference, with respiration, and those due to central brain disturbance, having the common symptom of fright in the early part of the night. The author distinguishes two classes of cases: In one, the most frequent, the cause is reflex and due to abdominal or nasal trouble, and of little import; in the other,—rarer, and more various,—the cause is in the central cerebral nervous system. He suggests the name of nightmare for the first group, and night-terrors for the second, corresponding to Silberman's divisions into symptomatic and idiopathic. The distinction between the two affections are, in night-terrors, the patients "see visions," in nightmare, they "dream dreams". In the first, the attacks occur mostly between the age of 2 and 8 years; no such limits in nightmare. In night-terrors there is a history of neuroses, such as epilepsy, hysteria or chorea, in the other members of the family, none in nightmare. Infantile convulsions are not infrequent in night-terrors, and the attack comes on suddenly in a healthy child, and one attack only occurs in the night. In nightmare the child has chronic digestion or nasal troubles, and there may be several attacks during the night. A typical attack of night-terrors is thus described:

“The first thing that calls attention to the child is almost invariably a sudden, agonizing scream of terror. On entering the room, he is found, seemingly wide awake, sitting up in bed or crouching in a corner. With flushed face, and in a state of wild excitement, he converses with, or vehemently protests against, some imaginary person or thing that he sees close to him. The vision is always something of a threatening or terrifying nature, such as a horrible negro, a black statue, and the like. I have been much struck, too, with the large part the color red plays in these hallucinations, and Gowers has pointed out the same fact in the visual auras of epilepsy, and soldiers, blood, and fire figure prominently in the accounts furnished to me by parents. Whatever be the nature of the vision, it is repeated again and again of exactly the same feature in each attack, even after the passage of months in the interval between them. Although seemingly wide-awake in the attack, the child cannot be made sensible of his surroundings, and generally after being laid down goes off into a deep sleep without recognizing those about him. In the morning he has usually no recollection of what occurred during his sleep. Care has to be exercised in ascertaining this point, as children are apt to appropriate as their own experience occurrences that are often talked of before them, and are ready to detail them with parrot-like precision when questioned.

“It is not, of course, essential that all these characteristics should be present before determining as to whether a given attack was one of night-terrors or not. I have, however, thought it well to give in detail the lines that are useful for guidance in this direction.

“Contrasting nightmare with night-terrors, I think important differences are not hard to find. In the former the sleep is often disturbed from the outset, and the attack is merely a culmination of the state of unrest. On going to the child on his crying out, he is found wide awake, and not merely seemingly so. He generally complains of some vague terror, the result of his awaking alone in the dark. If he complain of persons or things being in the room, it will be found that his fancies are merely the remnants of a troubled dream, and he does not see them in the presence of a light. The objects of apprehension, too, are generally such as a has come across in his waking moments. It is perfectly common for a child that has been terrified by a person or some animal in the daytime to have such terrors repeated in his dreams at night. In contra-distinction to night-terrors, the same objects of dread are not presented with unchanging fidelity, but may vary with each separate attack. Although the child may be almost demented from extreme terror, and it may take some time to soothe him from it, yet he is from the first aware of the presence of those in the room with him. When his fears are allayed, he so dreads the return of them that hours of wakefulness may be the result of the attack. In the morning he has usually a perfect recollection of the occurrences of the night.”

The similarity of the attacks of night terrors to epilepsy is then pointed out, and a number of authorities quoted, who regard then in the light or as the proclamaunt of the neurotic temperament, and often followed by hysteria, migraine, chorea, insanity, somnambulism, etc., as well as epilepsy.

In regard to the treatment of night-terrors, general principles must be applied, and the avoidance of undue mental or nervous strain ; in severe cases bromide of potash will control the attacks.

THE "DIAPHRAGM PHENOMENA" AND ITS IMPORTANCE IN CLINICAL MEDICINE.

By MORITZ LITTEN, M.D.,

Professor in the University of Berlin.

Medical Record, Dec., 1895.

Dr. Moritz in this article adds a new method in physical diagnosis. He made the discovery of this diaphragm phenomena in 1891, and has found it since in every case examined, unless some abnormal condition is present. He defines it as "the visible expression of the gradual detachment, during its inspiratory descent, of the diaphragm, from the walls of the thorax, and its gradual apposition to the thoracic walls while it rises during expiration." This alternate apposition and separation is plainly marked on the thoracic wall by the regular rising and falling of a peculiar shadowy line caused by the motion of the diaphragm, and denoting its momentary position ; excursions of the diaphragm are seen as a horizontal, wavy undulation, starting on either side at about the sixth intercostal space, extending from the axillary line to the margin of the sternum, and descending several interspaces, sometimes as far as the costal margin during a deep inspiration. The medium distance of the excursions being about 2 2-5 to 2 4-5 inches, best seen when patient is lying on his back or in the kneelbow position, with a good light, the observer being about 3 or 4 feet away. The organs above and below the diaphragm move up and down, to the same extent as the movement of the latter hence the expansion of the lungs ; their vital capacity can thus be gauged, and interference by diseased conditions recognized. The organs below, by palpation, are seen to move in accordance with the visible movement of the diaphragm. Its use as a sign is best observed in unilateral disease, when there is dullness in the lower part of the chest and the phenomena still visible above it, and the liver and spleen not affected. We have good evidence of subphrenic abscess. It is present low down in mediastinal and pulmonary tissues, and higher up in tumors of spleen and liver. It is absent in ascites, diffuse peritonitis, or ileus with meteorism and in pneumothorax or unilateral paralysis of the phrenic nerve. Dr. Moritz claims his method to be of great service in judging of the action of the lungs, after pleuritic effusions and injuries.

THE USE OF ANTITOXIN SERUM FOR THE PREVENTION OF DIPHTHERIA.

By HERMANN M. BIGGS, M.D.,
New York.

Dr. Biggs in the *Medical News*, Nov. 30th, 1895, states that the antitoxin produced by the New York City Health Department has been employed for the immunization of a large number of children, both in public institutions and private families, to control outbreaks and to protect inmates when there was evidence of possible or previous exposure to diphtheria. 50 to 600 antitoxin units were used, according to the age, and the protection lasts from 3 to 4 weeks.

In the New York Infant Asylum having about 400 inmates, an epidemic of diphtheria lasting some nine months was progressing, unchecked by the usual means; the inmates received their immunization doses of Behring's antitoxin, with immediate arrest of the epidemic. A few cases appearing during the next six weeks, 245 children again received a somewhat larger dose each. A few mild cases appeared, when the epidemic was totally stamped out.

A similar result was obtained in four other institutions. In the House of Reception of the New York Catholic Protectory, where the children of destitute parents are kept for three weeks, special observations were made. It was found that when the injection was given in the morning, towards evening there was an elevation of temperature of from $\frac{1}{2}^{\circ}$ to 1° . In 32 cases, 1 had traces of albumin before injection, none after; four, none before, but from a trace to 16 per cent. after; 1 had 30 per cent. before, 60 per cent. after; in all, the albumin had disappeared two days later. In families where a case of diphtheria occurred, the immunizing injections prevented the disease occurring in other members, even in cases where Loeffler's bacillus was found in the throat when treated. In no instance has there been any serious result from this application of antitoxin serum.

THE PREVENTIVE TREATMENT OF SEA SICKNESS.

Dr. A. D. Rockwell of New York, in the *Medical Record* of 25th January, 1896, has a paper on this subject. He endorses the theory that seasickness is dependent upon a functional disturbance of the central nervous system, consequent upon the constant series of mild concussions of the brain that are attendant upon the rolling, pitching and tremor of the ship. Hence a remedy that will obtund the sensorium, rendering it in a measure anæsthetic and insusceptible to slight molecular change, is indicated. He claims satisfactory results from the use of the bromides first

suggested by the late Fordyce Barker ; they are capable of preventing even a suggestion of seasickness, and are successful in the great majority of cases when properly used. These results, however, depend on its proper administration. Bromization is necessary for 3 or 4 days before sailing, and to be kept up for several days after. The bromide of sodium is to be given in from 20 to 40 grain doses three times daily. He found it successful in his own case, and in a number of other instances related in the paper. No undesirable effects are produced by this quantity of bromide, and sleep on board was rendered more sound and refreshing.

THE BACTERIOLOGY OF EMPYEMA IN CHILDREN.

Henry Koplik, M.D., of New York, in *Archives of Pediatrics*, February, 1896, states that the advance in our knowledge of the nature of the pleuritic exudates is due almost entirely to studies in their bacteriology. The source of the infection may be the lungs, a simple tonsillitis, or retro-pharyngeal abscess, from tubercular foci and intestinal sepsis. The infections are either pure or mixed. The metapneumonic empyemas are more frequent in children here, the pneumococcus has invaded the pleura either in the first instance or from the pulmonary infection. Netter found this cause in 53.6 per cent. of his cases, and the author in 60 per cent. Metapneumonic pleurisies have a mortality of 2.3 per 100 (Netter) as compared to empyema from other causes 25 per 100. The effusion in a second group contains either the staphylococcus pyogenes or the streptococcus, or both combined. The majority of these cases are not infected from the lungs, but from amygdalitis, retro-pharyngeal abscess, osteomyelitic processes, and occurs especially with la grippe, also with scarlatina and other septic affections of children.

The tubercle bacillus is the cause in a third group, it is usually difficult to find in the exudate. There is great thickening of the pleura in these cases, and is less frequent than the other varieties ; only a few cases finally recover. The putrid empyemas constitute the fourth group, and either follow staphylococcus or streptococcus empyema, and in the foetid pus is found a bacillus resembling the communis coli, or lactis aeroginis, or it is a primary tubercular empyema which has been further infected. Some cases are on record where the typhoid bacillus or the bacillus communis coli were causative agents. Compared with adults, it is found that in the latter only 17.3 per cent. of empyemas are metapneumonic as compared to 53.6 in children, and while in the adult 53 per cent. of cases give the streptococcus, it is found only in 17.6 per cent. in children ; but many of the streptococcus empyemas in adults are tubercular. It is said that 68.5 per cent. (Netter) of adult pleurisies are tubercular, while 2-3rds of pleurisies in children are metapneumonic, and these are mostly purulent.

SURGERY.

IN CHARGE OF

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THE MURPHY BUTTON.

Dr. A. Vander Veer, in a paper read before the Southern Surgical Gynæcological Association, at Washington, D.C., in November, 1895, reports seven cases of abdominal surgery, in which the Murphy Button was employed. The results obtained were very satisfactory. Dr. Veer says: "It is difficult to understand some of the unfavorable reports made by English and German surgeons, when we contrast the very successful results obtained by so many American surgeons in the application in a practical way of this mechanical contrivance."

He points out that in cases of abdominal surgery where intestinal anastomosis is called for, the patient is not infrequently in a serious condition as regards strength, and all things being equal, that method which gives the most rapid and safe manner of procedure is the one that is to claim our attention. Time alone in some cases is the one great desideratum, which cannot be secured by some of the other methods.

His series of cases cover a wide range of pathological conditions. In two cases the long drainage-tube-button was employed to attach the gall bladder to the parietes.

One case of gastro-enterostomy, attaching the greater curvature of the stomach to the jejunum for carcinoma of the pylorus. Three cases of intestinal resection, where a number of inches of the intestine were excised, end to end anastomosis. One case of cholecystenterostomy for obstruction of the ductus communis chole-
dochus. In the case of gastro-enterostomy, the patient, though comfortable after the operation, died on the third day from exhaustion. On examination, the button was found in excellent position, union quite pronounced, and all surroundings favorable. Dr. Veer is not favorable to any operation in these desperate cases when not taken in an early stage before the patient is cachectic, weak and emaciated.—(*Mathew's Medical Quarterly*, January.)

ERYSIPELAS INOCULATIONS FOR LUPUS.

M. Hallopeau presented a case before the Société Française de Dermatologie et Syphilographie, showing the curative effect of erysipelas in lupus. The patient was a woman who had been cured of grave lupus of the face six years previously, after an attack of erysipelas, and who had presented no sign of relapse

since that time. The inoculation of erysipelas is perhaps a daring treatment, but in such a terrible disease every promising measure should be tried. Hallopeau suggested opening an isolation clinic for the treatment of lupus by inoculations of benign erysipelas, only intervening in case the erysipelas appeared to be taking a serious form, either by the use of inoculations of erysipelas toxins or by applications of ichthyol.—(*Bull. Médical*, December, 1895.)

HYDROCELE.

On the ground of seventy cases of hydrocele treated at Krœnlein's clinic at Zurich, by various methods during the past fourteen years, Dr. Sparger (*Beitr. z. Klin. Chirurg.*, XII) concludes: That the method of treating hydrocele by injection of iodine, is, as a rule, preferable to incision, in spite of rather frequent recurrence, inasmuch as recovery is more rapid, while it is free from certain inconveniences such as the persistence of fistulæ. Incision should, therefore, not be resorted to, except in cases of hydrocele with complications, or recurring after injection of iodine.

RECTAL STRICTURE.

Dr. Matthews' observations have been that benign rectal stricture is very seldom met with. When found, it is simply an annular constriction of the mucous membrane, which is easily dissipated and does not require excision. When the surgeon introduces his finger into the rectum and finds a stricture, it betokens one of three serious diseases—syphilis, tuberculosis, or carcinoma—and the patient should not be turned aside with a jesting remark that he has a rectal stricture. Dr. Matthews maintains that sixty per cent. of the cases of stricture of the rectum arise from syphilis, or are the result of it. He had asked his professional friends to investigate this matter, and make known their investigations. The responses he had received were nearly all in the affirmative. He regards syphilitic stricture of the rectum as more frequent than either carcinoma or tuberculosis.—*Med. News*.

COLECTOMY.

Mr. Mayo Robson (*Brit. Med. Jour.*, Oct. 19, 1895) reports five cases of colectomy—three for malignant tumors and two for fecal fistulæ due to stricture—with four recoveries. He states that after using and seeing used all the methods and contrivances for establishing anastomosis, he has returned, in enterectomy, to the use of the decalcified bone bobbin, which he prefers on account of its simplicity and safety, and because it can be employed quickly, secures an immediate patent channel, leaves no foreign body permanently in the passage, avoids stricture by securing continuity of mucous surface, and can be adapted to any of the operations on the intestinal canal.

RENAL SURGERY.

Dr. J. M. Jackson concludes : Marked pathological conditions of the kidneys may exist without any of the usual diagnostic symptoms, and without serious physical results until late in the case. Exploratory incision becomes, therefore, a necessary procedure. The abdominal incision gives good access to kidney for inspection, and permits easy removal without danger of stretching and rupturing either ureter or vessels.—*Med. Fortnightly*.

SURGERY OF THE URETER.

After briefly reviewing the progress made in the last few years in the surgery of the ureter, Dr. Harvey Reed draws the following conclusions :—

1. That, where it is possible, a traumatism of the ureter should be repaired by a plastic operation which has for its object the union of the distal and proximal ends of the ureter.

2. Where it is possible to reach the superior portion of the bladder, it is advisable to implant the proximal end of the ureter into the bladder.

3. Where it is impossible to either unite the distal or proximal end, or implant the proximal end into the bladder, we would advise, as a matter of choice, the implantation of the ureter into the alimentary canal, rather than into the vagina, or the making of a fistulous opening through the skin.—*Columbus Med. Journal*.

OBSTETRICS.

IN CHARGE OF

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Abstract of a Paper entitled

THE PROPHYLACTIC TREATMENT OF ECLAMPSIA GRAVIDARUM.*

By H. W. LONGYEAR, M.D.
DETROIT, Mich.

The author recognizes two varieties that may occur as a result of the pregnant or puerperal condition, viz.: first, those of a purely nervous character, which usually occur in women of neurotic habit, and those who are predisposed to epileptic attacks; and second, convulsions which occur as a result of some change in the blood and tissues of the patient, due to renal disease, as specially indicated

* Read before the Amer. Soc. of Obstet. & Gynæc., Sept., 1895.

by the presence of albumen in the urine. Cases of the first class are comparatively rare, and when occurring the prognosis is generally good. Such, however, is not the case with the second class. Here we have a definite and uniform pathological lesion, which indicates clearly the direction at least of the course of treatment. Early diagnosis is of the utmost importance to the success of any preventive treatment, and to insure this the urine of every pregnant woman should be systematically examined by the physician at least every two weeks after the 6th month. The percentage of albumen present in the urine should not be considered the only test as to the patient's danger from eclampsia, as many patients have considerable quantities of albumen, and still are in no danger if the constituents of the urine otherwise indicate good renal functionation.

On the other hand, a very small percentage of albumen—often only a trace—may be present in scanty urine of low specific gravity, which condition, if at all persistent, portends serious trouble for the patients. The prophylactic treatment may be divided into dietetic, medicinal and operative, the latter to be adopted as a last resort in case of failure of the others. In simple cases of albuminuria without scanty urine, an exclusive milk diet may tide the patient along to safe confinement without medication. If the urine is scanty, diuretics should be used, also baths and repeated purgations, also more tonics given. The patient's mind should be kept tranquil. In strong plethoric patients, venesection should be promptly used as soon as any eclamptic symptoms appear. For the iron tonic, Basham's Mixture is recommended. Where the urine is scanty and the medicinal treatment fails, if the child is viable, premature labor should be induced. During parturition the accoucheur should watch closely the progress of labor, and do all in his power to prevent or modify the various causes of dystocia. It will be necessary, as far as possible, to keep the pains regular and normal in type, and allay, as far as possible, pain and irritability of the nerve centres by the use of such remedies as chloroform, chloral, warm baths, venesection; and, finally, if pains are weak, finish the labor with forceps. Keep the uterus contracted by pressure of the hand after the placenta is delivered, to prevent large clots forming on the uterus, as their expulsion might set up convulsions.

Prof. Parvin says eclampsia, occurring in a pregnant woman before labor, is fatal in about fifty per cent. of the cases, while if it occurs after labor it is fatal only in about eight per cent. of the cases.

*Abstract of a paper on***A NEW POSTURAL METHOD OF TREATING PRO-
LAPSUS OF THE UMBILICAL CORD.**

By A. BROTHERS, B.S., M.D.
NEW YORK.

Prolapsus of the funis is a serious complication of labor, chiefly because of the increased dangers to the child. The mortality is placed at 37.6 per cent. by Hecker, 53 per cent. by Scanzoni and Churchill, and 79 per cent. by Charpentier, 28 per cent. by the New York Bureau of Vital Statistics. The nature of the presentation, the shape of the pelvis and duration of labor are modifying prognostic circumstances. The early discovery of the prolapsed cord before the rupture of the membranes offers a far better prognosis for the child than the case in which a considerable portion of the cord is found prolapsed after the waters have escaped. The greatest danger to the child is offered by a prolapsed cord and a vertex presentation. The genu-pectoral posture method was first suggested by Thomas. This position causes the cord by gravity to sink down towards the fundus. But this position is an arduous one for a woman in labor, especially if kept up for any length of time. The author suggested over a year ago the Trendelenberg position.

The author has tried it successfully since that time on three cases. He places the patient in the Trendelenberg position, replaces the cord, and keeps it back with a sponge that has been boiled, turns, which is much more easily done in this position, and rapidly delivers.

**SUGAR IN THE TREATMENT OF UTERINE
INERTIA DURING LABOR.**

It remained for Mr. Bossi, of Genes (*Rev. Illust. Polytechnique Médicale*), to make practical application of a theory propounded by Drs. Paoletti and Mosso, that sugar taken internally might be found to exhibit as stimulating an effect upon the group of uterine muscles as it has on voluntary muscles. Bossi administered a dose corresponding to an ounce of sugar in about eight ounces of water. A most excellent effect was observed after the dose in all but one of the cases, the ecbolic action showing itself in from twenty to forty minutes, and nearly always lasting till the birth of the child. In the other case, a second dose had to be given. The contractions were always quite regular and free from any tetanic tendency.

STRYCHNINE IN PREGNANCY.

Olenyn (Protocol of the Medical Society of Tombow for 1894) has successfully used strychnine in sixteen cases, for the correction of weak labor pains, in doses of $\frac{1}{32}$ to $\frac{1}{25}$ grain twice daily, at intervals, during the last 6 or 8 weeks of pregnancy. Four of these cases were anæmic, Ipara from 19 to 32 years of age with weak muscles; three multipara under 30 with habitual weak labor-pains; the others had chronic metritis; small uterine fibroid; flabby uterus and relaxed abdominal wall; tertiary syphilis; general debility; diseased appendages with hysteria. In two of the cases forceps had to be used, and in one the child was dead; but in all the other cases delivery was rapid and regular, and the children lived. The third stage lasted ten to twenty minutes, and post-partum contraction of the uterus was excellent.

DELAYED PUERPERAL INFECTION.

Doleris (in *Nouv. Arch. d'Obstet. et Gyn. Nov.*) points to the established fact that the bacilli of infection may be temporarily innocuous until some incident arouses their former virulence. Thus an infection may lie latent for weeks or even months, and then suddenly flares up and produces serious symptoms of puerperal infection. Thus also an infection may occur some time after labor, and still have a puerperal character, owing to the sexual organs possessing a special morbid receptivity from want of involution having occurred. Treatment would be in accord with antiseptic principles.

THE RESULT OF VERSION AFTER SYMPHYSEOTOMY.

Spaeth (in *Monats für Geburt und Gyn Bd. H.5*), reports a case in which he failed to deliver a child with the axis traction forceps after symphyseotomy, and succeeded by version. He finds that 9.5 p.c. of children are lost by version and 21 p.c. with forceps. He disagrees with Schauta that version is likely to cause laceration of the sacro-iliac synchondrosis.

BACTERIAL ORIGIN OF ECLAMPSIA.

Leusden (in *Virchow's Archiv. Bd. CXL III H.1*), after examining the various organs of two cases in which eclampsia occurred, says: "I have found nothing which indicates the infectious (bacterial) origin of puerperal eclampsia. The probability is that a toxic substance circulating in the blood is the cause of the eclamptic attacks. The changes in the kidneys are the principal organic

lesions. The embolism in the lungs of the placental giant cells is only an accidental coincidence. There are no emboli containing liver cells. The minute necrotic changes in the parenchyma of the liver in both cases could not be connected with the cause of eclampsia. The hyaline (fibrous) thrombi of the lung and liver capillaries are the result of secondary uræmic changes, and are independent of the eclampsia.

PATHOLOGY.

IN CHARGE OF

ANDREW MACPHAIL, B.A., M.D., M.R.C.S., Eng., L.R.C.P., Lond.

Professor of Pathology, University of Bishop's College.

PATHOLOGY.

Attention has been called in many quarters to the work in Surgical Pathology and Therapeutics, by John Collins Warren, of Harvard University, the first of its kind published in this country, of the same scope and much resembling in this respect the work of Billroth which bears the same name. It is not the present purpose to refer to its many excellences, either as a text-book or as a summary of the best that is known upon the subject, but rather to deal with one small portion, the section devoted to shock. Yet one must observe its high literary quality, and how singularly free it is from that embellishment of words which is commonly believed to constitute what is called style.

This discussion of shock is the more timely, since not many works on Pathology deal with the subject at all. The term has been used to cover a wide group of cases, including those in which there has been an actual concussion of the body, as in a railway accident, to those in which the affection follows a profound mental impression with attendant symptoms of neurasthenia or of hysteria. Laying such cases aside, the term shock should be applied to those cases in which death ensues upon injuries of parts not essential to life and unattended by hemorrhage, as was pointed out by G. Travers in 1828. It is not a little singular that a condition so grave and so common should have excited so scant attention. Up to the time of Billroth and Neudorfer it passed unnoticed in Germany. The terms "traumatic stupor," "prostration without reaction," "collapse," and "neuro-paralysis" were then introduced, but have now generally given way to the expressive English word.

Dr. Warren admirably discusses the prevalent views as to the production of this condition. They fall into two classes: the one concerns the vascular, the other the nervous system. Fischer takes the ground that the heart is paralyzed as in the case of Goltz's dog, with a loss of tonicity in the abdominal vessels, so that the great mass of the blood stagnates there. This, he thinks, would

explain the anæmia, coldness and loss of sensation. He holds with Goltz that there is a general vaso-motor paralysis. Experiment shows that muscles deprived of their blood are rigid and unable to perform their function, and cerebral anæmia would explain the mental phenomena, the nausea and vomiting. Schneider with Falk and Somenburg adopt the theory of a reflex paralysis on the analogy with the cause of death after burns, and Mansell-Moullin elaborates it into something as follows: Shock is an example of reflex paralysis, probably in the majority of cases generally affecting all the functions of the nervous symptoms and not limited to the heart and blood vessels only.

Gross, Eulenburg and Schede adopt a similar view. Now, Goltz himself refers to this vaso-motor paralysis rather as syncope or fainting, explaining the circulatory symptoms, but not those of sensation and motion. Ligature of the abdominal aorta does not produce the symptoms of shock, nor does the application of an Esmarch bandage cause anæsthesia, and anæmia of the brain is associated with syncope not with shock. Indeed, in animals dying from shock, the abdominal vessels are found empty, and many claim that an animal cannot be bled to death into its own veins. Even division of the splanchnic nerves does not produce the characteristic symptoms of shock. Surgeons have never observed in cases of shock that the vessels of the abdomen were unusually full. Again, many pathologists, amongst them Savory, hold that the heart is powerfully affected through the nervous system, and its action is arrested. Upon these lines Blum explains the functional disturbance of the heart by the action of the pneumo-gastric nerve similar to that caused by experimental irritation. But this theory does not account for the diminished blood pressure, the weakness of muscular action and the affection of sensibility.

Besides, irritation of the pneumo-gastric nerve causes arrest of the heart in diastole, while in death from shock the heart is often found contracted and empty. It is interesting to note that Billroth assigns as the cause a molecular disturbance of certain parts of the brain, and Brown-Sequard attributes it to an irritation of the cervical cord, the medulla and the neighboring central structures.

The leading advocate of the nervous theory of the origin of shock is Grønigen. He holds it is due to a condition of fatigue or exhaustion of the nerve centres induced by over-irritation. In this connection the observations of Hodge are suggestive. After microscopic study of the changes in the nerve cell due to functional activity, he claims that he has found alterations comparable with those seen in the cells of a gland performing its function. They both conclude that there is a profound functional disturbance, which does not gradually disappear after an interval of rest. The view which the author himself takes is that a single, sudden maximum irritation produces a degree of exhaustion in the nerve centres from which there is no recovery. He then at-

tempts to distinguish several varieties of shock: "the torpid form of shock," "prostration with excitement," "delayed shock," "insidious shock," and the "local shock of Pirogoff." He next deals with those injuries, which are peculiarly liable to be followed by this condition, and the operations which have so often proved fatal from this cause.

Again, the influence of shock upon infectious diseases has always excited interest. But it is probable that here one must differentiate between powerful mental impressions and the effect of shock. Galeazzi has obtained valuable experimental evidence, showing that the condition of shock lessens the liability to infective processes. The abdominal cavities of guinea pigs were opened, and by the use of cold sponges to the intestinal coils, a condition of collapse was induced. Inoculations were then performed with the bacilli of anthrax and diphtheria and with the bacterium coli commune. In all cases the reaction was much less than the normal. The same results were observed after poisonous injections of strychnine. From all of which it would appear that the toxins do not readily pass from the blood into the tissues in a condition of shock.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF

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Parachlorphenol in a 10 p. c. glycerine solution sprayed on laryngeal tuberculous ulcers is claimed to cure them, whether superficial or deep, as well as cause absorption of tuberculous infiltration—(*Archives des Sciences Biologiques*.) The drug is said to have an advantage over lactic acid and curetting, in that it may be employed up to the last hours of life in all stages of laryngeal tubercle.

Bar (Nice) relates a case of grave complications following operation for extirpation of adenoid vegetations. The most rigorous aseptic and antiseptic precautions were followed both before and after the operation which caused these results. The author thought the unfortunate case only confirmed anew the theory of Brieger and himself regarding the uselessness of antiseptic washes in these regions.

Beverley Robinson finds that a gouty or lithæmic condition underlies many laryngeal affections, showing the importance of studying the general condition of the patient, a thing which many laryngologists ignore. He attributes many coughs, the origin of

which is obscure, to such causes as an engorged lingual tonsil, a distended lymphoid mass between the epiglottis and base of tongue, or a lingual varix. The correction of these morbid states and a due regard paid to any necessary constitutional indication has been found sufficient to relieve an otherwise stubborn cough.

Anæsthesia by guaiacolated oil in ear, nose and throat diseases is discussed in January number of *Annales de l'Oreille, du Larynx, etc.*, by Laurens, referring first to the excellent results obtained in general minor surgery by the hypodermic injection of this substance. Olive oil, extremely pure, is first treated with chloride of zinc to eliminate resinous or coloring matters, washed afterwards with alcohol, to separate formed fatty acids, and finally maintained at a temperature of 100 °. The resulting product is very pure. Solution of one in twenty was found to give satisfactory anæsthesia, in several cases of paracentesis for acute purulent otitis media, and seven cautery applications to nose of a child 8 years old. This substance is not so readily applicable to the pharynx as cocaine, and has also the objection that it takes longer time than cocaine to produce anæsthetic effect, owing to slower absorption, from 15 to 20 minutes being required, as compared to 8 or 10 for cocaine. It is thought the choice of another vehicle will overcome this slow action. On the other hand, the great safety of this anæsthetic makes its selection preferable to cocaine, cases of poisoning through use of the latter being not infrequently recorded. The author does not pretend that this analgesic will supplant cocaine, but his experience, though limited, has demonstrated its value in throat and nose cases. Apropos of cocaine Dr. de Havilland Hall uses and recommends a solution containing 10 p. c. resorcin and 20 p. c. cocaine. The toxic effect of cocaine is diminished by this combination while its anæsthetic effect is increased. The antiseptic action of resorcin is valuable. He disapproves of spraying nose with cocaine, as nearly all cases of poisoning by this drug have occurred after spraying. The writer's experience confirms this statement. The solution should be applied with cotton wool. One should always keep ammonia (aromat. spts.) and nitrate of amyl on hand, which are the reliable antidotes for cocaine poisoning.

Farlow of Boston records a few cases of polypoid lipoma of larynx and cheek, referring to their uncommonness and to deaths from hæmorrhage and suffocation where they are allowed to attain large size. From the larynx they are best removed with galvano cautery snare, in the mouth, if pedunculated, their removal is simple, but they may grow into the cheek, becoming large, and may be mistaken for tumors of the parotid, which they resemble. The writer's only experience with these growths was one which he removed 6 months ago from the cheek of a lady fifty-five years old.

Journal American Medical Association states, regarding nasal catarrh, that the original condition of the mucous membrane in chronic inflammation cannot be restored by any course of treatment, but that by treatment from time to time the serious difficulties that would result therefrom may be prevented, and the patient made comfortable through life. More they cannot procure by any line of treatment, and they usually will be contented with this statement unless promised a radical and permanent cure. The following conclusions are given : Surgical work must be done in certain cases ; constitutional treatment is necessary in some ; local applications in all ; the remedy should reach all parts affected, and be in itself and the means by which it is applied non-irritating, and that it is useless to prescribe a spray producer for a patient without first teaching him how to use it.

Frendenthal says if we want to cure a post nasal or similar catarrh of the respiratory organs, it is not sufficient to prescribe a gargle or spray, we must treat the whole body, as every cold, every noxiousness of the skin, works back on the mucous membranes. Our general mode of living makes us susceptible to the influence of weather, and therefore we must harden our bodies by daily living and moving a certain time, not too short, in the open air, and this we should be capable of doing with benefit, rain or shine. Weltz has shown that bacteria in the air decrease in winter and rainy weather, and increase towards the warmer season, so rain should not be an obstacle to judicious outing. The barefooted condition of children is advocated while they are in the country in summer as being one means of preventing catarrh in winter. Cold baths and washings are dwelt upon as helpful, with light underclothing in winter, heavy weight being considered objectionable.

THE
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Editorial.

THE DENTAL PROFESSION AND BISHOP'S COLLEGE.

Many of the Medical profession in the Province of Quebec are aware that the University of Bishop's College has for some years been repeatedly approached by a number of Dentists, with a view to establishing a Faculty of Dentistry in connection with its Medical Faculty. In 1893, it decided to do so, and arrangements were made whereby lectures were delivered during the session 1893-94. This action was largely brought about by the Dental Association establishing the Dental College of the Province of Quebec, and its attempts to affiliate that College to McGill and Laval Universities for conferring the degree of D.D.S. Although there was not any question as to the right of Bishop's University to teach Dentistry and confer degrees,—yet, as the law stood, graduates would have to present themselves for examination before the Board of Examiners of the Dental Association before receiving a license. The re-examination of their Medical graduates before the Medical Licensing body of this Province has always been successfully opposed by Bishop's, McGill and Laval, and Bishop's felt that its opposition to a Central Board of Examiners must extend to its Dental as well as to its Medical graduates. With this object in view, it presented to the Quebec Legislature, in December, 1894, a bill, which was absolutely identical with the present Quebec Medical Act, and giving the same rights to McGill, Bishop's and Laval. The title of the Dental degree recognizable was not mentioned—the possession of a Dental degree from one of the

three Universities in this Province was all that was necessary to obtain the benefits of the Act. It secured to graduates the granting of the License without further examination—the Board of Examiners exercising its function through assessors named by it, being present at the examinations. This Bill was very favorably received by the Legislative Assembly, which passed it by a large majority. In the Legislative Council it met with severe defeat, the committee to whom it was referred, reporting against it. In November, 1895, the Bill was again brought forward by being first introduced into the Council. This time Laval gave a certain amount of aid by writing a letter—stating that “it would view with pleasure the passing of a law which would give to Universities the right to confer degrees in Dental Art, upon the same terms and conditions as they are now conferred in Medicine.” McGill held aloof, having in the meantime offered to give a degree to be called G.D.S., and which the Dentists had the good sense to refuse. The Dental College representative opposed the Bill again before the Council, and the Dean and Vice-Dean of Bishop’s, with several dentists, supported it. The fight was very keen, neither side being prepared to give way. The Hon. Dr. Ross, who was chairman of the Council Committee to which the Bill had been referred, took a deep interest in the whole question. He studied it carefully, and then telegraphed to the Dean of Bishop’s, that he thought a compromise, honorable to both, might be arranged. Both sides met at Quebec on December 4th, Bishop’s College being represented by Dr. F. W. Campbell, Dean ; Dr. J. B. McConnell, Vice-Dean ; Dr. Vosburgh, one of the teachers in the Dental Department ; and Mr. J. L. Lavery (of the firm of Casgrain & Lavery), their attorney. The Dental College was represented by its Dean, Dr. W. G. Beers ; and the Dental Association by its President, S. Globensky ; Dr. Lovejoy, its secretary ; and A. Globensky, their attorney. A free discussion took place—the result being that the following compromise Bill was drafted and presented to the special committee to whom the previous Bill had been referred by the Legislative Council. After it had been discussed clause by clause, it received the unanimous endorsement of the Committee.

(COUNCIL BILL C.)

An Act to further amend the law respecting Dentists.

HER MAJESTY, by and with the advice and consent of the Legislature of Quebec, enacts as follows :

1. Paragraph 2 of Article 4055 of the Revised Statutes, as replaced by the Act 55-56 Victoria, chapter 32, section 1, is amended by adding thereto the following words: "but, in addition thereto, each of the universities in the Province of Quebec granting the degree of Doctor of Dental Surgery, and to which the Dental College of the Province of Quebec is affiliated, and also the said Dental College of the Province of Quebec, shall be entitled to appoint a member of the said board, and such member shall also be a member of the Dental Association of the Province of Quebec, and in such case the total number of members of the Board shall be increased by the number of members so appointed."

2. The following article is added after Article 4055*a* of the said Revised Statutes, as enacted by the Act 55-56 Victoria, chapter 32, section 2:

4055*b*. Any person shall, however, without further examination as to his dental knowledge or skill, be entitled to receive from the Dental Association of the Province of Quebec, a license to practise dentistry in this Province, and the title of "Licentiate of Dental Surgery," upon fulfilment of the following requirements:

1. He shall have obtained the degree of Doctor of Dental Surgery from any university to which the Dental College of the Province of Quebec is affiliated; provided that such degree shall have only been given after three years of study of dentistry in any of the said universities, from the date of his having passed the examination required by the Board of Examiners of the Dental Association of the Province of Quebec, of candidates for admission to the study of dentistry, and according to the curriculum of study prescribed by said board of examiners;

2. He shall, at least one month before any of the regular sittings of the said board, referred to in Article 4059, have paid, into the hands of the treasurer of the said Dental Association, the fees required from candidates for admission to the practice of dentistry, and shall have enclosed and delivered to the secretary of the said association the treasurer's receipt for the same, together with evidence satisfactory to the said board of his integrity and good morals;

3. He shall have studied during three years with a licensed dentist of this Province, in accordance with the provisions of paragraphs 2 and 3 of Article 4058.

3. The following Articles are added after Article 4061 of the said Revised Statutes, as enacted by the Act 52 Victoria, chapter 40, section 1:—

"**4061*a*.** The board of examiners of the said Dental Association shall appoint two or more assessors, either outside its own body or from amongst the members of the said dental association, to attend the dental examinations of the universities to which the Dental College of the Province of Quebec is affiliated, mentioned in Article 4055*b*, and to report to the said board of examiners upon

the character of such examination ; but such assessors shall not be chosen from amongst any of the teachers in the said college.

“ If the report should be unfavorable to some of the candidates, the Dental Association may refuse to grant the admission, license and title mentioned in the said article to those candidates whose qualifications have so been deemed insufficient.

“ It shall be the duty of the college to notify the secretary of the Dental Association of the time and place at which their examinations in dentistry shall be held, at least one month previous to such examinations.

“ **4031b.** The Dental College of the Province of Quebec, as established by the Board of Examiners of the Dental Association of the Province of Quebec, is declared to have a legal existence, and the board of examiners aforesaid shall have, in relation to the universities granting the degree of Doctor of Dental Surgery, and to which the Dental College of the Province of Quebec is affiliated, all the rights and privileges mentioned in section 2 of the Act 55-56 Victoria, chapter 32.”

Before the above Bill had time to reach the Council, the Medical Faculty of McGill discovered that their new-born Dental degree of G.D.S. had not been arranged for. In other words—having failed to give Bishop's College assistance when they could have done so, and legitimately secured recognition to their new degree, the affiliation of the Dental College with Bishop's had left them out in the cold. Here was a condition of things the McGill Faculty of Medicine had not counted on. The result was that the Dean, Dr. Craik, and Dr. Ruttan hurried to Quebec, and arrived just in time to prevent its consideration by the Council. They secured the Bill being referred back to the Committee, where they met the representatives of Bishop's and the Dental College. With a resignation which was most commendable, considering what they had already been subjected to, the Committee heard both sides, and again recommended the Bill in the same form as it had previously met with their approval. When, a day later, it came before the Legislative Council, it passed its third reading by a unanimous vote. In the Legislative Assembly, owing to the unavoidable absence of Mr. F. E. Panneton, M.P.P. for Sherbrooke, who last year so successfully carried the original Bill through that house, the compromise Bill of this session was taken charge of by Dr. Cartier, M.P.P. How thoroughly the house recognized that the compromise was a sensible and judicious act, is proved by the fact that, in spite of a renewed attempt made by McGill to get recognition of its proposed G. D. S., the Bill passed its three readings in one day, in every way just as it came from the Council.

A most unusual thing, it was not referred to any Committee. Thus has terminated a struggle of several years' duration between the Dental College and the Faculty of Medicine of Bishop's College. It would be untruthful to say that the fight was not a bitter one. Each side worked earnestly and hard for what it believed was right. Amid all the heat of discussion—and the licence of a Committee room gives ample opportunity for irritating remarks—we are pleased to know that not a word was said on either side which can leave behind an open wound.

After a full consideration of the situation, we are free to confess that it was wise for both sides to cease the struggle, and make amicable terms, honorable alike to both. We believe that Dentistry in Canada is fully equal to that found anywhere, while its practitioners are among our very best citizens. To-day Canada stands in the front rank of countries where a sound medical education can be obtained—and, above all, an honest examination had. The result is seen in the yearly increasing number of students enrolling themselves at our Medical Colleges. Now that united action will result from the affiliation of the Dental College with the University of Bishop's College, we may confidently look forward to a similar condition resulting as regards Dentistry. There is in this Dominion a wide field for the practice of Dentistry, for we believe there are large sections of country where the nearest dentist is fifty and even a hundred miles or more away. The field from which to attract students embraces not only the various Provinces of the Dominion, but all the border States of the American Union, and we fully believe that the near future will see the city of Montreal the centre of Dental education in Canada, as it is to-day of Medicine.

SIR WILLIAM HINGSTON.

The appointment by the Bowell Government of Sir William Hingston to a seat in the Senate has been received, not only by his professional brethren all over the Dominion, but by the general public, with great favor. His ability is by no means confined to his profession—for he has always evinced a warm interest in everything which tends to promote the well-being of the public. In his new position he will bring to the benefit of his country a mind well stored with information, and we are satisfied that his political life will redound as much to his credit as has his pro-

fessional life. This is, we believe, the first time in the history of the Dominion that the Medical Profession of Montreal has been thus honored, but we trust that it will not be the last. The Medical profession of the Canadian metropolis has always stood high. It has always had among its number some who have stood prominently forward in advancing interests which are beneficial to the city and country. They have doubtless had their reward in the consciousness of work well done; but elevation to a sphere where larger opportunities may be seized is a reward which we think might be legitimately looked forward to by them. To the Local Legislature, Montreal has recently sent one of its popular Medical men, by a majority so large as to prove the popularity of the profession. Have we not some who would adorn the Upper Chamber?

THE ELECTRICAL WORLD.

Published by the W. J. Johnston Co., 253 Broadway, New York.

The first issue of this illustrated weekly for 1896 is a huge number, having 136 pages; it is the 27th vol.; has the largest circulation of any electrical journal, and is an able exponent of the progress of every department of electrical science.

CLEVELAND JOURNAL OF MEDICINE,

The official organ of the Cleveland Medical Society, is the title of a new medical journal, edited by Henry S. Upson, M.D., and P. Maxwell Foshay, M.D., with six associate editors. It is the successor of the *Western Reserve Medical Journal*. In the editorial bow there is a reference to the prosperity and growth of Cleveland, in regard to its population, business, shipbuilding and steel manufacturing interests and educational matters, showing that a new era of progress and enterprise has begun in this hitherto somewhat slow city.

This journal will represent the work of the Cleveland Medical Society founded in 1893, and having now a membership of 300, and which claims to be the most progressive medical organization in the United States, having adopted methods and features novel to such organizations, one of which is said to be of signal benefit in arousing an interest in the society, and greatly extending its membership, viz., the bringing of medical teachers and investigators of national renown several times during the year to address its mem-

bers. Progress is noted in regard to new hospitals and additional teaching facilities. A Medical Literary Association was established about a year ago, with now a membership of 108, and a productive endowment of \$6000.00 and over 2,000 volumes. The founding of this journal is another step in the evolution to an advanced position of the medical profession in Cleveland; it is to be entirely independent, and aims at the purest medical journalism. It will publish but few extracts, aiming to contain only original matter. This the first number is an exceedingly creditable one in every respect, the scientific tone of the contents auguring well for its recognition as a high class Medical journal.

PEDIATRICS.

This is the title of a new semi-monthly illustrated journal, devoted to the prevention and study of the diseases of children; owner, Dillon Brown, M.D., New York; and edited by Geo. A. Carpenter, M.D., London. Published by the Van Publishing Co., 1432 Broadway, cor. 40th street, New York, and 85-89 Great Litchfield street West, London.* \$2.00 a year.

The appearance and character of the two first numbers of this special journal give promise of its being classed among those qualified by scientific and practical aims. The editorial staff contains the names of men eminent in this specialty in England, the United States and Germany. There are eleven departments, each in charge of one or two collaborators, who are leaders in the department they represent, and who each contribute original articles, editorials and retrospects. A prominent and valuable feature is the illustrating by photogravures of many of the articles. It will also contain full reports of the meeting of the British Orthopædic Society, the American Pediatric Society, the Pediatric Section of the New York Academy of Medicine, the Ohio State Pediatric Society, the American Orthopædic Association, and all of the English and Continental societies devoted to diseases of children. It is very neatly printed and gotten up generally, the cover being in heavy black combination of oak-tree branches and leaves, and owls, on white, which, although somewhat funereal, is up to date in the cover line.

We wish the new comer every success.

Personal.

Dr. F. Benoit (M.D., Bishop's, 1875) has removed from Mat-tawa to Montreal, where we wish him every success.

Dr. (Miss) Cunin (M.D., Bishop's, 1895) has successfully passed her examination in Edinburgh for the diploma of the Royal College of Physicians, Royal College of Surgeons, Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow. We are informed that Dr. Cunin stood very high on the list of successful candidates.

Dr. Richer (M.D., Bishop's, 1892) has just left Berlin for Paris, where he will pass the next six months, returning then to Canada. Dr. Richer has been two years in Europe, and has been a faithful and diligent worker.

Dr. S. J. McNally (M.D., Bishop's, 1893) is doing well at Campbell's Bay, P.Q. He has visited the Western Hospital and College several times lately.

Dr. O. C. Edwards, of Ottáwa, was in Montreal, and read a most interesting and valuable paper on "Inebriety as a Disease and its Treatment," before the Medico-Chirurgical Society, on the 9th of January last.

Dr. Anthony, of the Montreal General Hospital House Staff, left for Neilhart, Montana, on the 27th of January, having secured the position of Assistant to Dr. Vidal (Bishop's, 1892). In connection with this appointment there is an interesting story. Dr. F. W. Campbell announced that such a position was open for candidates, and two Richmonds entered the field—one contented herself by writing Dr. Vidal—the other, Dr. Anthony, made use of the telegraph, and secured the appointment in less than twenty-four hours.

Dr. Boucher has again returned from his home in Peterboro, to act as a *locum tenens* in the Montreal General Hospital, where he has formerly done excellent work.

Sir William Hingston, M.D., has been called to the Senate by the Howell Government. That Chamber possesses no more courtly gentleman or wise legislator than the recently created knight.

Deputy Surgeon General Neilson, R.C.A., and Deputy Surgeon General F. W. Campbell, R.R.C.I., were in Quebec at the end of January on official duty, and were the guests of the officers of the R.C.A. at the Citadel.

Book Reviews.

The American Year Book of Medicine and Surgery, being a yearly digest of scientific progress and authoritative opinion in all branches of Medicine and Surgery, drawn from journals, monographs and text-books of the leading American and foreign authors and investigators. Corrected and arranged with critical editorial comments by the following eminent American specialists and teachers: General Medicine.—William Pepper, M.D., Philadelphia, Pa.; Alfred Stengel, M.D., Philadelphia, Pa. Surgery.—William W. Keen, M.D., Philadelphia, Pa.; J. Chalmers, Dacosta, M.D., Philadelphia, Pa. Obstetrics.—Barton Cooke Hurst, M.D., Philadelphia, Pa.; W. A. N. Dorland, M.D., Philadelphia, Pa. Gynæcology.—J. M. Baldy, M.D., Philadelphia, Pa.; W. A. N. Dorland, M.D., Philadelphia, Pa. Diseases of Children.—Louis Starr, M.D., Philadelphia, Pa.; Thompson S. Westcott, M.D., Philadelphia, Pa. Nervous and Mental Diseases.—Archibald Church, M.D., Chicago, Ill.; Hugh J. Patrick, M.D., Chicago, Ill. Dermatology.—William A. Hardaway, M.D., St. Louis, Mo.; C. Finley Hersman, M.D., St. Louis, Mo. Orthopædics.—Virgil P. Gibney, M.D., New York City; Homer W. Gibney, M.D., New York City. Ophthalmology.—Howard F. Hansell, M.D., Philadelphia, Pa.; Charles F. Clark, M.D., Columbus, Ohio. Otolaryngology.—Charles H. Burnett, M.D., Philadelphia, Pa. Rhinology and Laryngology.—E. Fletcher Ingals, M.D., Chicago, Ill.; T. Melville Hardie, B.A., M.B., Chicago, Ill. Pathology and Bacteriology.—John Guitéras, M.D., Philadelphia, Pa.; David Riesman, M.D., Philadelphia, Pa. Materia Medica, Experimental Therapeutics and Pharmacology.—Henry A. Griffin, M.D., New York City; Van Horne Norrie, M.D., New York City. Anatomy and Physiology.—C. A. Hamann, M.D., Cleveland, Ohio; G. N. Stewart, M.D., Cleveland, Ohio. Hygiene, Physiology and Chemistry.—Henry Leffmann, M.D., Philadelphia, Pa. The whole under the editorial charge of George M. Gould, M.D., in one Royal 8 vo. volume of about 1000 pages, uniform in size with the American text-book series. Profusely illustrated. Cloth, \$6.50; half morocco, \$7.50. Published by W. B. Saunders, Philadelphia, 925 Walnut street.

We have in the November issue of the RECORD referred to this book, and stated what was to be its character and scope. We can now say that the complete work more than fulfills our expectations. It is got up in the same style and size as the American text-book series of W. B. Saunders'. The collaborators are recognized specialists in the departments of medicine and surgery under their charge, and hence are more competent to give a correct summary of progress without presenting anything which would only epitomize knowledge already in our possession. "Without being too dogmatic, it has been the aim of the departmental editors to pronounce such needed judgment upon new suggestions or upon matters in dispute." The book is profusely illustrated throughout. The journals referred to are noted at the bottom of each page; the articles are quoted from the journals of all countries, and we have here the cream of all the principal papers published during the year, and an epitome of the advancement of

every branch of medical science. The selection of articles and their cutting down has been very creditably done, the reader will find little but what is deeply interesting, and one cannot read a page without adding practical points to his knowledge, and not the least interesting and useful are the frequent comments of the editors. The publishers of this work—which will appear annually—have thus placed within reach of all, at a moderate sum, the means of keeping abreast of the world's medical progress without going beyond its covers, and we trust that the immense labor and expense in illustrating, to which the publishers have gone, will be appreciated by the profession at large by a practical endorsement of this effort in their behalf.

An American Text-Book of Obstetrics for Practitioners and Students. By James C. Cameron, M.D. ; Edward P. Davis, M.D. ; Robert L. Dickinson, M.D. ; Charles Warrington Earle, M.D. ; James H. Etheridge, M.D. ; Henry J. Garriguer, M.D. ; Barton Cooke Hurst, M.D. ; Charles Jewett, M.D. ; Howard A. Kelly, M.D. ; Richard C. Norris, M.D. ; Chauncey D. Raliner, M.D. ; Theophilus Rarvin, M.D. ; George A. Peorsol, M.D. ; Edward Reynolds, M.D. ; Henry Schwartz, M.D. ; Richard C. Norris, M.D., Editor ; Robert L. Dickinson, M.D., Art Editor. With nearly 900 colored and half-tone illustrations. Published by W. B. Saunders, 925 Walnut street, Philadelphia.

This is a massive imperial octavo volume of over one thousand pages, written by the above prominent obstetricians, all of whom are also teachers of this branch of medicine, and are authorities on the subjects they treat of. It is a companion volume to the Text-Books of Medicine, of Diseases of Children, Gynæcology, and of Surgery, recently issued by W. B. Saunders, all of which are monuments of the perfection of American medical literature, and need only to be examined to impart the conviction that they are the most complete works on the subjects they treat of published in any country. Similar volumes are promised in Applied Therapeutics, Physiology and Nursing.

It would be futile to attempt, in the space allotted, to convey an adequate impression of the excellencies of this work. It is most profusely illustrated, having nearly as many cuts as pages, many beautifully colored and full page in size. The illustrations have mostly been specially prepared for the book, most of the borrowed cuts having been re-drawn, and many have been made from photographs from pathological specimens at the Army Medical Museum, Washington, the New York Hospital Cabinet, and from many other sources. One point which is original in the book is that a uniform scale has been adopted for the figures, which are usually one-third or one-sixth life-size, and in sagittal sections the left half is always shown.

The anatomy of the pelvis and female generative organs, and the physiology of the latter, is first considered. These subjects can be studied here, as they could not be in any of the general text-books of anatomy or physiology, owing to the large number of new special cuts introduced for illustration, many in colors and having the names of the parts placed directly on them instead of, as in some of the others, at the bottom of the page and indicated by letters or figures. The plates illustrating the growth of the human embryo in the next section on the physiology of pregnancy are numerous and exceedingly fine, as are also the two full-page colored diagrams of the fetal circulation, and the same after birth.

The articles on the diagnosis of pregnancy and its hygiene and management then follow.

The pathology of pregnancy is considered under eight heads. In the last the disease of the fœtus in utero are very fully considered; the effects of la grippe, cholera, diphtheria, typhoid and malarial fever, erysipelas, etc., upon the course of pregnancy, and the influence on the child in utero, and subsequently of malaria, the eruptive diseases, tuberculosis and syphilis, with the diagnosis and treatment of the latter, are fully considered. Intra-uterine strangulations, amputations, fractures and luxations, congenital tumors, deformities, malformations. Both sides of the question of maternal impression are discussed. The writer of the article has yet no very sound views upon the matter, stating in the same paragraphs that it is usually only a coincidence; and a little further on, "exceptionally very profound emotion can and does, in some unknown manner, influence the growth and development of the fœtus."

Bidder's disease, Schmidt's, and Müller's are then discussed; then the various affections of the skin; and, finally, the causes of the death of the fœtus; some 300 pages are then devoted to labor—its conduct, mechanism, and the various dystocia. A number of fine cuts illustrate the methods in detail of diagnosing the fœtal presentation and positions, pelvimetry, the regulating of the birth of the head, repairing of perinæum, etc.

The various causes of dystocia are abundantly illustrated.

The physiology, diagnosis, management and pathology of the puerperium are then considered, then the physiology and pathology of the newborn infant, and finally some 100 pages are devoted to obstetric surgery. The technique of the various operations is made clear by explicit directions and numerous illustrations, rendering this one of the most useful sections of the book.

This is certainly the finest book on Obstetrics ever published, the great abundance of illustrations and the clear descriptive text will enable any student or practitioner without any great effort to master every detail of this important branch of medicine, and we heartily commend it to every reader interested in obstetrics, and wishing to be fully abreast of our present knowledge upon the subject.

The Climate and Baths of Great Britain, being the report of a Committee of the Royal Medical & Chirurgical Society of London: W. M. Ord, M.D., Chairman; A. E. Garrod, M.D., Hon.-Sec. Vol. I. The Climates of the south of England the chief Medicinal springs of Great Britain. Contributors—Robert Barns, M.D.; J. Mitchell Bruce, M.D.; W. Howship Dickinson, M.D.; William Ewart, M.D.; A. E. Garrod, M.D.; W. Lazarus-Barlow, M.D.; Malcolm Morris, F.R.C.S.E.; W. M. Ord, M.D.; F. Rinrose, M.D.; Frederick Roberts, M.D.; I. Syms Thompson, M.D. Published by MacMillan & Co., London and New York. Agents, The Copp Clark Co., Ltd., Publishers, 9 Front street West, Toronto.

This volume represents the work of the Committee appointed in May 1889, by the Council of the Royal Medical & Chirurgical Society, for the purpose of investigating a question of importance in reference to the Climatology and Balneology of Great Britain and Ireland, in regard to the south of England. The contributors are among the leading physicians of Britain, and suggest at once the character of the reports here presented. The results were obtained by personal observations and circular letters sent to the medical men practising at the various health resorts and bath places. The letters inquired for information in regard to the prevalence of disease among the permanent residents and visitors, a list of the dis

eases on which a report is required is given, the climatological outline required, the general physical characters of the district, geological formation and soil, dryness and humidity, effects of trees, and ocean currents, general description of climate, drainage, water supply, therapeutic effects of the climate.

In regard to baths, information was asked for as to the advantage of the waters on various pathological conditions, how employed, contra-indications, etc. The book is neatly bound and printed, having a map and numerous tables and charts, and outlines what can be done in this line of investigation, and what should be done in all countries, and especially our own, where there is much to be learned and worthy of careful study.

Handbook of the Diagnosis and Treatment of Skin Diseases. By Arthur Van Harlingen, Ph.B. (Yale), M.D., Emeritus, professor of Dermatology in the Philadelphia Polyclinic, Dermatologist to the Howard Hospital. Third edition enlarged and revised, with sixty illustrations, some in colors. Published by P. Blakiston, Son & Co., 1012 Walnut street, Philadelphia.

The book contains nearly 600 pages, and differs from previous editions in having numerous foot-notes and references, descriptions of some of the rarer skin affections, a number of new illustrations, changes in the text called for by recent additions to our knowledge in the department of Bacteriology, the article on tuberculosis entirely rewritten, and a number of new methods of treatment. The book is intended for the wants of the general practitioner, and is full in diagnosis and treatment. Numerous formulæ are given for the different varieties of skin affections, and minute details given for their management. The author does not touch on the pathological anatomy, and little is said in regard to etiology. The diseases are considered alphabetically, the idea of the book being to serve as a ready reference for diagnosis and treatment to the busy practitioner, and as such it can be highly recommended.

Practical Christian Sociology. By Rev. Wilbur F. Crafts, Ph.D. Funk Wagnalls Company. New York.

This is a book of some five hundred pages, written by one of the leading reformers of the United States, author of "The Temperance Century," "Successful Men of To-day, etc.," Editor of *The Christian Statesman*, and founder of the "National Bureau of Reforms at Washington." The book is a classical representation of what is now accepted by modern reformers as the desirable solution of some two hundred social problems in ethics and society, such as: State and national federation of Church for social reform; the family the sociological unit; divorce; hygienic education for girls; woman suffrage; colleges as centre of reform influence; justice in wages, prices and work; relation of low wages to low morals; government ownership of railroads; municipal reform; laws needed to purifying citizenship, to protect the purity of elections, to guard the purity of public office, referendum, etc. One-half the book is of the nature of a text-book, on these two hundred and more subjects, the other half being an appendix in smaller type, and containing reference notes on the lectures; there is a brief outline and chart of universal history. About one hundred pages on the Chronological data of human progress. A proposed method of celebrating the transition from the nineteenth to the twentieth century. Dr. Carroll and Dr. Wright, both on Divorce. Notes on purity. How workingmen live. The form of ballot for a plebiscite on current reforms is given, and the

result of a vote on the 167 reforms by fifty students of Oberlin in 1890. Finally, a list of standard books is given for those wishing to study the subject in detail.

It is a mine of information on all subjects pertaining to social, municipal and political reform, and should be in the possession of all engaged in or interested in the promotion of the moral and physical welfare of humanity.

The Principles and Practice of Medicine. Designed for the use of Practitioners and Students of Medicine. By William Osler, M.D., Fellow of the Royal College of Physicians, London; Prof. in Medicine in the Johns Hopkins University; Physician in chief to the Johns Hopkins Hospital, Baltimore; formerly Prof. of Institutes of Medicine, McGill University, Montreal; and Prof. of Clinical Medicine in the University of Pennsylvania, Philadelphia. Second edition, published by D. Appleton & Co., New York; Canada Agency, Geo. N. Morang, 63 Young street, Toronto.

No medical work of modern times has met with such a general appreciative reception as did the first edition of the above work in 1892, and the encomiums which it deservedly received at the hands of the whole medical press of America, as well as across the Atlantic, may still more appropriately be applied to the improved edition now before us. The characteristic features of the book are the terse and complete manner in which each subject is considered; there is no padding, but we have here in each article a condensed review of all that is known up to date on the subject. Dr. Osler has been an industrious student, and his book represents the results of years of active labor in original research, more especially from the pathological aspect of medicine, and many of the problems of modern medicine have been not inconsiderably removed from the sphere of perplexity, and received confirmation through his investigations. Hence in perusing the articles in this book, in which the pithy aphoristic style obtains, one feels that they are not collaborations, but represent the personal experiences and researches of the author.

In this edition the sections have all been carefully corrected, and many important details added. Many of the articles have been almost entirely rewritten, such as those on typhoid, malarial fever, diphtheria, septicæmia pyæmia and appendicitis, and important additions have been made on the articles on cholera, syphilis, tuberculosis, gout, diabetes, angina pectoris, anæmia, leukæmia, Addison's disease, exophthalmic goitre, myxœdema, etc. Among the new articles are those on Bubonic plague, foot and mouth diseases, infantile scurvy, and the hemorrhagic diseases of the new-born, eczema of the tongue, leucoplakia, a new section on affections of the mesentery, dislocations and deformities of the liver, subphrenic peritonitis, anuria, parasitic infusoria, etc.

A new introductory on diseases of the nervous system is given, with a number of new colored plates, which, if thoroughly mastered, will make the reading and study of the section on diseases of the nervous system more easy of comprehension.

While etiology, morbid anatomy and symptoms in the various articles are full and complete, the portion on treatment, while representing what really can be done, shows that the author does not advocate the drenching of the system with promiscuous combinations of drugs of doubtful utility.

The latter disposition is characteristic of the novice and the

inexperienced, and is usually not found associated with a sound knowledge of physiology and pathology, and in the experience of all progressive physicians lessens as they advance in years.

A full résumé of the antitoxin treatment for diphtheria is given, and while a large number of local remedies are suggested, no mention is made as to the frequency of their application. We regard it as the most essential point in local treatment, that it should be applied in the beginning at least every 30 minutes, or more often, and preferably with an atomizer. In tuberculosis, he has not recognized any remedy as having any specific action, and conservatism and caution are shown in there being no reference to nuclein or the antitoxin of tuberculosis, offered and advocated by some. In the paragraph on creosote, no reference is made to the carbonates of creosote and guaiacol, which can be given in much larger doses, and are so well borne. The section on nervous diseases is exceedingly comprehensive; in the 233 pages devoted to it, one can become thoroughly acquainted with the intricacies of this interesting group of affections. Every physician should possess this book, and especially all Canadian physicians, as the author is a Canadian and one of Canada's most noted medical graduates, and his arduous work while in Montreal appears in frequent references throughout the book. It is undoubtedly the best book in the practice of medicine now available, containing as it does all the genuine modern advancement in this subject up to the date of its issue. The printing and binding are beyond criticism, and reflect credit on the publishers.

Pamphlets Received.

- Climates and Baths of Great Britain.** MacMillan & Co., London and New York; The Copp Clark Co., Ltd., Toronto.
- The Structure of Man.** By Dr. R. Wiedersheim. MacMillan & Co., London and New York; The Copp Clark Co., Ltd., Toronto.
- A Manual of Syphilis.** By J. N. Hyde, A.M., M.D., and F. H. Montgomery, M.D. W. B. Saunders, publisher, Philadelphia.
- Handbook of Skin Diseases.** By Van Harlingen. P. Blakiston, Son & Co. Philadelphia.
- Consumption, its Nature, Cause and Prevention.** By Dr. E. Playter. Published by Wm. Briggs, Toronto.
- Practical Christian Sociology.** By Rev. Wilbur F. Crafts, Ph.D. Published by Funk & Wagnell Co., New York, London and Toronto.
- Practical Examination of Urine.** By Tyson. P. Blackiston, Son & Co., Philadelphia.
- An American Text-Book of Obstetrics.** Publisher, W. B. Saunders, Philadelphia.
- Experimental Cachexia Strumipriva.** By Wesley Mills, M.A., M.D. The Bryant Press, Toronto.
- Cranioectomy, an Improved Technique.** By A. H. Meisenbach, M.D. American Medical Association Press, Chicago.
- Ventrofixation and Alexander's Operation Compared.** A. Laphorn Smith, B.A., M.D., M.R.C.S.E. Wm. Wood & Co., New York.
- Recto-Vaginal Fistulae, and Fistulae about the Anus in Women.** By A. Laphorn Smith, B.A., M.D., M.R.C.S.E. From *Matthew's Medical Quarterly*.

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Original Communications.

RESECTION OF CÆCUM.

By **J. A. SPRINGLE, M.D.**,
Surgeon Western Hospital.

The patient was a young woman of 21 years of age, and gave the following history: She had a grave attack of appendicitis, for which she was removed to the Western Hospital, and operated upon by Dr. Ferrigo on the 27th May, 1892. A large abscess was found, walled in by recent adhesions, and evidences of beginning general peritonitis.

She made fair progress towards a recovery, and went home after a stay of 2 or 3 weeks in hospital. The incision, however, did not permanently close.

On June 24th, the sinus, which had ceased discharging some days previously, again discharged a quantity of pus and faecal material.

This condition of affairs continued, and was aggravated by a continual formation of abscess upon abscess in this region.

She rapidly lost weight, and several times appeared to be in the last straits of septicæmia. After a sojourn in the country in 1893 she appeared to gain slightly for a time.

For three years she was practically bedridden, and a nuisance to herself and those about her.

When seen on the 10th of March, 1895, her condition was pitiable. She weighed barely 100 pounds, very anæmic, and unable to eat or sleep.

Upon examining the abdomen, 7 discharging sinuses were found. Two of these were situated 3 inches behind the upper spinous process of the ilium, and of these one led 10 inches into the pelvis and the other joined the 3 sinuses in the scar left by operation. One sinus was situated below the groin fold, and appar-

ently passed behind the femoral sheath to the outer side and into the abdomen. The seventh opening was situated close to the pubic spine. On palpation it was very evident that a large mass of cicatricial tissue existed in this region. At times, and particularly when gas passed from the small into the large intestine, a jet of fluid fæcal matter would spout three inches high from the three sinuses in the scar. This necessitated a constant change of dressing and washing. An attack of diarrhœa would soak through dressings and into her clothing and bed-linen.

The condition of the heart and lungs being healthy, and no secondary changes being observable in the abdominal viscera, it was decided that an attempt should be made to close the bowel.

On the 16th of March, 1895, after each sinus had been thoroughly injected with a strong solution of methyl blue, so as to distend it as much as possible, an incision was carried down upon directors or probes inserted into each, the sinus in each case being thoroughly exposed to view as far as was possible. The sinus above the iliac crest was found to lead down under the colon or cæcum to the pelvis. Here a cavity was found into which the open hand could be inserted. Its walls were very tough, almost cartilaginous to the touch, and it was apparently situated behind the rectum. The sinus opening at the pubes lay beneath the external oblique muscle, following the route of the round ligament.

The sinus in the groin led up under the femoral sheath to reach its outer side, and connected with one of the sinuses in the scar by passing under the cæcum.

The greater part of the cæcum and lower part of the ascending colon were solidly fixed in cicatricial tissue. On following the course of the scar sinuses, it was found that they led to an opening in the cæcum into which the median finger could be easily introduced.

It was found necessary to remove an elliptical piece, 3 inches long, from the bowel, to close this, four tiers of sutures being used.

After all sinuses had been scraped with a sharp spoon, the cavity was packed, and the skin united with sutures. The operation took nearly 3 hours to complete, and the patient was in a state of collapse for nearly 24 hours afterwards, before rallying.

On the third day a slight leakage of fæcal matter occurred, upon which it was thought advisable to remove 3 or 4 skin sutures opposite the bowel incision and to reinforce this with firm packing.

The wound healed rapidly, and the patient quickly regained strength, returning home six weeks after operation.

It is now nearly a year since this took place, and she has gained nearly 25 pounds in weight, is able to follow her employment without pain or inconvenience ; nor is there any appearance of hernial protrusion.

Remarks.—It is rare, considering the number of operations done for appendicitis, to find such a condition as this following. Probably in this case a further perforation took place at the junction of the appendix with the cæcum, or the ligature came away prematurely.

The injection of some coloring agent in such a case as this renders the extirpation of all sinuses and cavities much easier.

GOLD A SPECIFIC FOR INEBRIETY.

By OLIVER EDWARDS, M.D., Ottawa, Ont.

The specific treatment for inebriety, as administered by me, is as follows :—

1st. *Wyeth's Hypodermic tablets of Chloride of Gold and Sodium*, the $\frac{1}{20}$ th of a grain 3 or 4 times a day for 2 or 3 days. Then drop to the $\frac{1}{40}$ th of a grain (that is, one tablet will do for 2 injections), and continue that 3 times a day for at least 3 and sometimes 4 weeks. Use a syringe with a solid piston as sold by Chapman of Montreal, and use *always* a platinum needle. After a day or two you may have some local hyperæmia—use lanoline or carbolized vaseline, and shower the arm with hot water morning and evening. This does not usually last beyond the second week. I inject between the elbow and shoulder of the left arm.

2nd. *Vegetable bitter tonics.*—Use any you like, but use always non-alcoholic tinctures. I use cinchona co, gentian co, columba and coca, and give these before meals.

3rd. *Induce refreshing sleep.*—If a man is on a spree and nervous, use bromide of sodium and chloral for 1 or 2 nights. If he is not drinking heavy, use no hypnotic. But you will not have used the gold for 3 or 4 days before a decided tendency to sleep will follow, what I call the health-giving sleep of childhood ; this will continue during the treatment and after the treatment is over. Watch for this ; it is one of the most remarkable things in medicine

4th. *Nervine tonic pills*.—The formula I use is as follows:—

R Quinæ Sulph, gr. iss.
 Strychnia nit., gr. $\frac{1}{50}$.
 Ol. Resini Capsici, gr. $\frac{1}{3}$.
 Zinci oxidi, gr. ii.
 Acid Arsenious, gr. $\frac{1}{50}$.
 Ferri Redact, gr. iss.

Sig.—One 3 times a day one hour after meals ; where iron is not judged advisable, I have a pill similar to the above with iron omitted.

The hypodermic tablets (Wyeth's), the non-alcoholic tinctures (Wyeth's), and the nervine pills known as Dr. Edwards Nervine Pill, No. 1 or No. 2, according as you wish to use iron or not, can be ordered from Davis & Lawrence, Montreal.

If for the first few days you wish to use a liquid beef preparation, I advise by preference for a hot beef tea, that made from the Mosquena Beef Jelly ; if you use a cold preparation, use Wyeth's Beef Juice with ice.

Always give a good calomel purge at the outset, and get rid of all poisonous ptomaines that may be in the bowels.

After you have taken your patient through the treatment, instruct him that alcohol in any form of beverage, from cider up, to him is poison and poison only. He can never touch a drop. The odor of alcohol will become so repugnant that he will not be able to endure it without turning sick, yet at any time after one single drink of whiskey will as I say "reverse the current," and the old appetite be quickly aroused. The permanency of the treatment depends on the character of the man.

That inward craving, which formerly dominated his life, and compelled him to drink, his will in the matter having no control, is subdued, and will remain subdued *just as long as he may wish*.

My full paper gives 34 cases treated showing the appetite subdued in every case, and where lapsing took place as it did in a percentage of cases, but where that happened, in every case the man or woman admitted he or she was *entirely* to blame.

Any doctor can administer this treatment, and I hope it will become general, and the reproach will be removed from our profession which now stands when we see Gold Cure Institutes saying by their presence: "We can render medical help where the old profession is absolutely helpless."

Gold is a safe and helpful drug, and you can use it with perfect confidence. I asked Dr. Burgess this question, when I met him in Montreal: "You know the treatment I follow. Is there anything in this treatment that can induce insanity?" His answer was: "Nothing; such an idea is perfectly absurd."

Expect the insatiable appetite for liquor to be subdued always within a week, often inside of 2 or 3 days, and at times inside of one day.

If a man is drinking hard, let him have a limited quantity just as long as he wants it. If he is not drinking, don't give him a drop.

NON-ALCOHOLIC TINCTURES.

Patients who have been treated for alcoholism should never have the ordinary tinctures or fluid extracts prescribed for them in the event of subsequent illness. Alcohol taken in medicine may act as an irritant, arousing a tendency that has effectually been subdued.

A few weeks ago I brought this fact to the attention of Messrs. John Wyeth & Bro., of Philadelphia, and they are manufacturing as full a line as possible of non-alcoholic tinctures. The menstrua used are acetic acid and glycerine. There are some drugs that necessitate alcohol, but the greater part can be prepared in the way indicated.

Thus the objectionable element—alcohol—is removed; furthermore, the cost will be reduced about 50 per cent. It is the columba, gentian and cinchona we wish our patients to get, and not of necessity the alcohol. They are therefore paying for what they do not need.

Whenever a physician prescribes for any patient that he knows has been treated for alcoholism he should always avoid giving alcohol. This may seem on the surface an insignificant matter, but those who have given special attention to this work realize how absolutely necessary it is that these patients shall never have alcohol in any form. It will quickly seek out a part previously weakened and arouse the appetite.

OBSTETRICAL NURSING AND THE IMPORTANCE OF ASEPSIS.

A lecture delivered to the Canadian Nurses Association

By JAMES PERRIGO, M.A., M.D., M.R.C.S., Eng.,

Professor of Gynæcology University of Bishop's College, Surgeon to the Western Hospital.

I understand you have had a lecture on the ideal nurse. I fancy from the faces I see before me, you have profited by that lecture, as I am quite sure there is none but the ideal nurse here.

I am quite within my right if I say that Montreal, for its size, is as well equipped with well-trained nurses as are larger centres. I have been able to observe the work and training of nurses elsewhere, and I am quite sure other medical men will confirm what I say,—we should be satisfied with our training schools here, and the quality of the graduates turned out by them.

Remember, when I say this, I do not say there is not room for improvement, and that you are to rest on your laurels because there is nothing more to learn. This would be a mistake, and absurd. There is always something to learn in any walk of life, and this is doubly true in medical and surgical work. The medical man who thinks he knows all that is necessary to be known, when he graduates, will know a great deal less ten years after his graduation, and become simply a cipher in the professional ranks. This is equally true of your own work, and I am glad to see you are aware of that fact, and are attempting to hold on to what knowledge you already possess, and are wishing to add to it. You are fully in the medical ranks. A medical man can do very little satisfactorily without you. You are a necessity to him in most cases he is called to treat. You are to bear this in mind—in fact, it is upon the careful nursing and ceaseless watchfulness and tact of the nurse that many a difficult case is pulled through. I am speaking now from experience of my own work. I could give you cases of typhoid fever, one particularly, and others in surgical and obstetrical work, where, if it had not been for the devoted care of the nurse, they would have been lost. When I say this you will easily perceive how much we are dependent upon your assistance, and in no class of cases are we more so than in obstetrical work. It is upon your nursing and our attention that a mother is again restored to her position in the family.

In obstetrical nursing you have to remember all you have been taught in asepticism and the objects to be attained by it. It

is here where it is most absolutely necessary. I cannot impress that fact too often upon you. Do not forget it. You will understand you cannot attain in your work ideal asepticism, but you can get as near to it as you possibly can. All the links in your chain of asepticism must be complete. Break one, and there is no asepticism. If you receive instructions to douche a vagina with a sublimate solution, and you use a dirty nozzle of a syringe, your aseptic nursing is a farce and you open the door for trouble. To make you understand this better, I had better give you an illustration from my own work. Not long ago, I had to attend to a confinement, and on entering the house, met the nurse, who told me that everything was all right, and that labor was going on well, that she had made an examination and that she had given a preliminary douche.

I was rather astonished at all this information, took a quick glance at the hands of the nurse, and saw her finger nails were not clean. Asked her if she had boiled the nozzle of the syringe, and she said yes, but the manner in which the answer was given showed me pretty clearly that the truth was concealed. After making my hands and the parts of the patient aseptic, I made an examination, and found what the nurse considered was all right and everything going on well was a breech-presentation, with the membranes already ruptured, and this in a primipara. I felt that everything was not all right and that things were not going well. I need not tell you I had septic trouble in this case, and septic pneumonia; and if it had not been for the good care given by another nurse, I would not have saved my case. You will now understand what I mean by attention to the details of the aseptic methods. This nurse not only did not understand aseptic methods, and the object to be obtained by them, but she had no right to make an examination, or to use a preliminary douche unless requested by the medical attendant. You have to remember the upper portion of the vaginal tube in a woman of ordinary good health is already aseptic, and that examination by a nurse is wholly uncalled for, and is productive of mischief.

A woman immediately after delivery is particularly susceptible to the absorption of micro-organisms. It is on this account medical schools will not allow students who are attending dissecting classes to attend any cases in the Maternity Hospital, and that medical men take the utmost precaution if they have any erysipelas or scarlatina in their practice. Some will not undertake this responsibility. This fact, of being absolutely clean in every detail

of your work, cannot be too forcibly impressed upon you. If it holds good in general surgical work, it is equally so in obstetrics. The statistics of obstetrical work have steadily improved since aseptic methods have been introduced. If you could read the history of this class of work the world over, you would read of many deaths from the so-called puerperal fever how it would break out again and again in some institutions, and how, sometimes, it would follow the practice of some individuals,—indeed, so much, that obstetrical work would have to be relinquished. Asepticism has changed all this, and the Maternity hospitals are the safer places for the poor people to go to, and we do not hear of one man being followed by the nightmare of puerperal septicæmia. The general public are alive to all this, and demand now more careful work from both the physician and the nurse. When a lady calls to engage you for her confinement, it is always better to stipulate that you should be in the house a day or two before the expected event. If the lady has already had children, it may not be so necessary, as she has had previous experience and knows how to prepare, but it is different with a primipara, who is wholly ignorant of what is before her. In such cases, I consider it advisable that the nurse should be in the house a few days before the confinement. The nurse is some comfort to the patient, who perhaps dreads the approaching event, and she can encourage her, and answer all questions, and make the preparations that are requisite in the lying-in room. Not only this, you will see that your patient takes sufficient exercise, and in doing so, she does not go beyond the point of fatigue. You will also see that her bowels are kept regular. You will also be able to note any symptoms that might make it necessary to send for the physician without unnecessarily alarming your patient. You will see that all superfluous furniture is removed from the room. Heavy hanging draperies are not required in a sick room, and at the best are only collectors of dust, and sometimes are dangerous if a gas jet is near them. The bed should be away from the wall, so that you can get easily around on both sides, and discard any feather mattress, which is an abomination. Have all cupboards and closets examined, and see they are clean. It is surprising how this is neglected. It is hardly your province to have the drains examined, but you will, in most cases, be able to tell if there are noxious odors about. It is then your duty to call attention to them, when the master of the house will have the cause remedied. You will be asked a lot of questions by your patient, perhaps one

of them will be whether you prefer the old-fashioned napkin, or pad as it is now used. You must remember, there are lots of people yet who talk of their common sense, usually the mother of your patient ; she may be opposed to what they are pleased to call the new-fangled ideas of the doctor. Such people are dangerous, and here it is your tact will come into service, to minimize any mischief they may do. There is no question of the superiority of the pad of jute, either the carbolized or the sublimated. You will see, therefore, that sufficient jute, either carbolized or sublimated, according to the physician's wishes, is obtained, and also the gauze to enclose each pad. We will suppose now that all your preparations are complete, and the expected event has commenced. You will be able to note this by your patient complaining of perhaps slight pains in the back and over the abdomen. These pains are slight at first, and might be mistaken for flatus, but they come and go, and gradually increase, until there is no doubt left of what is going on, and you send for the accoucheur, and get things, your patient and yourself ready for the confinement. While you are waiting for the physician, you will have your sleeves rolled up above your elbows, and you will scrub your hands and forearms with soap and warm water, and nail brush, and then thoroughly immerse them in a sublimate solution of 1-2000. You can then prepare your pads and cover them with a sterilized towel, so that they may not become contaminated. The physician arrives, and after a few questions, chiefly to know when the pains first began and when the bowels were last moved, he will ask you to prepare the parts of the patient in the same way as you have treated your hands and arms. While you are doing this, he will be making his own hands and arms aseptic. After which an examination is made. You see, there has been no preliminary douche advised. In ordinary private practice it is wholly unnecessary. I admit there is some divergence of opinion upon this point, but the majority would agree, I think, upon its uselessness. It is different, however, in those cases that are sent in labor to a Maternity Hospital, cases that may have been examined, too frequently perhaps, by a careless midwife or an equally careless physician. Again, such hospital cases are only too frequently suffering from specific diseases, when not only a preliminary douche is required but a thorough bath as well. This will also hold good when your patient's confinement is a difficult one, and either manual or instrumental interference is required. Here, the usual surgical aseptic precautions must be

taken. The whole vaginal canal must be disinfected as well as the external parts. This applies to the instruments as well. Leaving aside operative traumatic lesions, the risk to the lying-in woman is septic infection at the hands of her attendants; and when I say this, I do not exclude the physician. You see, therefore, the absolute necessity of paying strict attention to the details of your work. You will also note I have said nothing about the nurse making an examination. This is not required, and not in your province. This is the work of the accoucheur. It is a golden rule in obstetrical work to make as few examinations as possible. It lessens the danger of sepsis. The physician who asks the nurse to make examinations shirks his work and makes her a partner in his responsibilities, whereas he should bear the whole of it, as he is the chief, the one who gives orders, and the one who should see they are carried out. We will suppose, now, your patient has been confined, and that it has been an ordinary case. The condition of the patient will depend upon the previous state of health and temperament, and whether it is a first confinement or not. If she has had children before, the termination of the labor will be that of rest and intense satisfaction. If it is a first case, and in a nervous temperament, there will be some shock to the nervous system, shown by intolerance of light and sound, along with some exhaustion. From these latter cases keep away anxious friends. Allow no one in the room. The physician will most likely place the bandage on himself. Most patients desire it. You will watch how he does it, so as to do it exactly in the same way. It must be sufficiently wide to reach from the trochanters up to the lower ribs. It must be smooth. A wrinkled binder is an annoyance and a source of discomfort to the patient. It must be drawn comfortably tight over the hips, and lessening degrees of tightness as you approach the lower ribs. Some physicians use a compress over the uterus, to retain it in a state of contraction. Some do not, and some will not even use a bandage. I do not agree with them, as I think the bandage is of very great service in giving support. I can recall many a time where patients have expressed their sense of comfort from the bandage immediately after delivery. I look upon it as a necessary part of the treatment, at least for the first five or six days. The compress might in ordinary cases be dispensed with, but even it is required where there has been a post-partum hæmorrhage. Before the physician arranges the bandage, you have to prepare your patient

for it. You will remove all soiled clothing from beneath your patient, and you will wash the parts thoroughly with warm water, and then again with a sublimated solution (say 1-4000), after which dust them with equal parts of iodoform and boracic acid. When this is done, take one of the pads of carbolized or sublimated jute, which you have already prepared, and place it in position. The pads for the first twenty-four hours should be changed every two hours, and after that time at longer intervals. The pads, as they are removed, should at once be sent out of the room, and destroyed. Of course, before the bandage is applied the accoucheur will satisfy himself that the uterus is firmly contracted; if not, he will remain and keep firm control of it, until firm contraction ensues. This is imperative, in so far as his work is concerned. When all this has been done, perfect quiet is required, and the room somewhat darkened to secure sleep. There is nothing so recuperating to your patient as refreshing sleep. The physician before leaving is sure to enjoin this upon you, and to see that the natural functions of the bladder are attended to six or eight hours afterwards. All affectionate friends to be kept away, as information about the patient's condition, the sex of the infant, and who he or she may resemble can be given in the parlor. If they are sensible, they will not ask to see the patient. If you are obliged to use the catheter, use a glass one, and boil it each time. By so doing, puerperal cystitis will be avoided. You should always be provided with them. Do not use a metal catheter. I want to repeat here again, that the asepsis began by you at the time of the confinement must be continued during the whole time you are in attendance upon your patient. If, while changing the pads, you bathe your patient's genitalia and your hands not aseptic, and sterilized towels not used, where is your asepsis? A towel if only slightly soiled must not be used again. No doubt, before leaving, the physician will tell you what to give in the way of diet until his next visit. The old days of starvation during the first few days have gone by. Semi-starvation retards milk secretion, while, on the other hand, you must not take upon yourselves the responsibility of too generous a diet. The doctor will prescribe the diet, as he well knows, or should know, that each case will require its own consideration. When speaking of the catheter, I should have stated that some physicians recommend placing the patient in a semi-recumbent position, as a great many in that position can easily pass water who could not do so lying down.

The old objection to this method was the fear of hæmorrhage, but this fear has, I think, been exaggerated. I would not advise it when the labor has been tedious and exhausting. However, whatever you do in this respect will be governed by the instructions of the attending physician. When the physician makes his first visit, you will have your chart ready, with the temperature, pulse, amount of lochial discharge, whether clots were passed or not, whether urine was passed voluntarily, or the catheter used, and the amount and character of sleep. If the case be a multipara, there will be after-pains, and some women suffer very severely from them, as they disturb sleep and produce exhaustion. In such cases, the physician will leave you an opiate to be given, if required. The after-pains may continue for three or four days, gradually declining as convalescence proceeds. Years ago, it was thought, on the third day a dose of castor oil or some other laxative should be given. I call this dose the military or regulation dose. It is not always necessary, and may in a good many cases be dispensed with, particularly in women who have paid attention to their bowels just before their confinement, or have been under the guidance of their nurse. However, in this, as in all the rest, you will follow your instructions. I am in the habit myself, when it is required, to give a laxative,—castor oil or compound liquorice powder,—just before the lacteal secretion, as I think it prevents too sudden secretion of milk and helps to lessen the distension of the breasts. Milk is secreted about the third day, rarely is it postponed beyond the fourth. With this secretion of milk, there may be some general disturbance, a slight rise of temperature, perhaps slight chilliness, headache, and a pulse somewhat quickened. This does not last long, and will pass away in a day. There may also be some tenderness of the breasts, particularly at their periphery. Excessive distension of the breasts may be prevented or considerably lessened if the child be put to the breasts early,—that is, after the mother is rested by a good sleep, which may be about twelve hours after confinement. This also helps to promote the contractions and involution of the uterus, and assists very much in forming the nipple, particularly if they are flat, or, as is sometimes the case, imbedded in a prominent areola. You can begin with your discipline of the child at once. Do not place it to one breast more than another. Do so alternately, and at the start, every two hours is sufficient during the day; but at night the child should be trained not to nurse more than once, or at the most

twice during the night. A child should sleep from 11 p.m. to 5 a.m. This gives the mother a chance for rest and to regain strength. If you walk up and down the room at night to quiet the infant, you are teaching it a bad habit, and are laying the foundation of a lot of wearisome work for the mother when you leave. You must remember, you will not in every case have a wealthy patient, who can command any amount of attendance, but more frequently patients who, either for want of means, or from love, will attend wholly to their own infants. You will, therefore, understand what I mean by this midnight walking. A great many mothers will give the breast to quiet the child, but this a great mistake. I am not wrong in stating that most infants are over-nursed, with results both harmful to the child and mother. A child is the creature of habit, and if put to the breast at stated intervals from the first, much trouble will be avoided. Babies will cry, but there is a difference in the cry from hunger and that from colicky pains. The cry from hunger is a strong cry, and is a sharp demand for more food ; but it is a continuous peevish cry, accompanied by movements of the legs, when from colicky pains.

A point you must be particularly careful about is the care of the nipples. I would advise you to always wash the nipples with a boracic solution, both before and after nursing. Never allow a drop of milk to remain in the nipple, as fungi will form. In some cases, particularly primipara, the nipples are very tender at the beginning of lactation, and you must remember cracked nipples may cause mammary abscess, so do not hesitate, if you consider the nipples are more tender than they should be, to call the physician's attention to them, and he will give you his instructions. In most cases this will not be necessary, as he will examine them himself at every visit. To go back to the mother.—At the time of her confinement, and when the placenta is being removed, there will be naturally some hæmorrhage, and this may continue to ooze, but the accoucheur will take care this does not become a flooding, by exciting efficient contractions of the uterus. For the twenty-four or thirty-six hours, the discharge will be chiefly of pure blood, perhaps with some clots. This discharge is called the lochia. From the second to the fourth day the color becomes of a pale red, as the sanguineous elements are diminishing. Later on, the flow becomes thin and is of a grayish or greenish color, and about the end of the third week there may be little or none. When

your patient is allowed up about the tenth or eleventh day, there may be a slight increase of the discharge ; but if the discharge should still be of a red color, the getting up should be delayed. The lochia have a peculiar odor, but it should not in a healthy individual be offensive. If you notice anything like this, and there is some time before the physician's next visit, you can, in the meantime, douche the vagina with a warm water injection containing carbolic acid (1-100) or a boracic solution. In doing this you do not forget your aseptic precautions. This is the first item, I have told you, you might do in the absence of the physician. There are other occasions where your services will be of the highest value to your patient. We will suppose your patient has been confined, and the medical attendant has gone, and is perhaps not more than three hours out of the house. He left everything apparently safe, but you notice your patient suddenly becomes pale, restless, says she is smothering, wants some air, and at the same time there has been quite a gush of blood. You find the pad saturated, and perhaps the bedding as well. You will quickly loosen the bandage, or, better, remove it, and grasp the uterus to make it firmly contract again, also pass pieces of ice well up in the vagina, and if you can do so into the uterus, all the better. A piece of ice in the palm of the hand compressing the uterus will assist. If this fails, or if there be no ice at hand, place the bedpan under the patient and use the syringe, and douche vagina and uterus with clean hot water. You will do this slowly and continuously, and allow the water to return as it flows in. These are truly alarming and critical cases, and you must keep your wits alive and do not let your patient see any nervousness. Send at once for the physician, and if he cannot be had, send for the nearest physician, who, when he is told the nature of the case, will come immediately. What I have told you to do, you will do, not without sending for the medical attendant, but while waiting for him to return. It does not matter what your training is, you must not handle such a crisis upon your own responsibility, and then simply give a report of the occurrence next morning ; but your training may save a life while you are waiting for the doctor. These cases of flooding occur sufficiently often for everyone who is in attendance upon a case of midwifery to be always on guard. Prompt attention and quick, skillful work are demanded, and it is in cases like this your training, while waiting for the physician, will be productive of brilliant results. The old-timer would get in a

flurry, would send for the doctor, and then wait for his coming, while the patient would be bleeding to death. Some cases, fortunately rare, nearly always have a flooding, and their confinements are looked forward to by the physician with anxiety. Others again, who may have a fibroma of the uterus, nearly always run this risk, as the tumor interferes with the efficient contraction and retraction of the organ. However, I need not say anything more on this point, as I must not forget I am lecturing to nurses and not medical students.

Septic infection, in spite of all our care and attention to cleanliness, will sometimes ensue. This is an occurrence we all dread. It may show itself about the 3rd up to the 5th day ;—very seldom later. At the end of the week most of the dangers are passed. In some cases it may be earlier, when the patient may have been infected just previous to her confinement. I need not go into all the details of the various methods of infection and the different local lesions accompanying, or I should say resulting from them, as there has been an endless amount of discussion in the profession upon this point ; but I am right in saying the profession the world over are emphatically decided that most of the cases are infected from unclean hands, unclean instruments, soiled linen,—in fact, anything that may be used in the sick room, if not clean, may infect the patient. When infection occurs, there is a period of incubation, and the symptoms will vary and be governed by the character of the local lesion. The patient may be seized with a rigor of greater or less extent, the temperature may go up to 103° or 104° , great heat of skin, a quickened pulse, and she may complain of pain in the pelvic region, which may increase over the whole abdomen. Other cases will only complain of chilliness, with a gradually rising temperature, and no pain. This is only an outline of the beginning of the complication. As a rule, the earlier such symptoms occur after a confinement the more serious will be the case. When these symptoms ensue, do not wait for the physician's visit next day, but communicate with him at once, and in the meantime during the rigor cover the patient with extra blankets, place bottles filled with hot water to her feet and along each side of her, to restore the heat to the surface of the body. Some stimulant with 5 grs. of quinine will also help to lower the temperature. If the lochia be offensive, you can, at the same time, give a vaginal douche of hot water and carbolic acid (1-100) or the boric solution. However, I must tell you in some cases of

puerperal septicæmia there may be no offensive odor to the lochia at all. You are always safe in giving the douche, as, perhaps, the infection may have arisen from wounds of the vagina and cervix. When the physician arrives, he will examine everything in detail to discover the source of the infection, and he may, in all probability, direct you to continue them. Time will not allow me to go further in this lecture, but there is a great deal more to say that could be said profitably. It is not so long ago that any woman thought she could be an obstetrical nurse. If she lost her husband, and had a child or two of her own, that was enough. She became a nurse at once, and if she was passed middle age, she was all the more dangerous, as she would have opinions of her own, which were usually put into practice in the absence of the physician. Fortunately for the community, all this has been changed, as both the profession and the public recognize the important fact that training in obstetrical nursing is just as important as in either medicine or surgery. Up to this point we have not said much about the new arrival, and we do not yet know which parent the infant resembles most, but we will correct that now. When the doctor hands you the infant, you have a blanket ready to roll it up in, as you have to remember it has come from a warm climate. After you have attended to all the details necessary for the mother's comfort and safety, you must then wash and dress it. The child will be covered with a greater or less amount of the vernix caseosa, to remove which you will use vaseline, olive oil, or some unctuous material. This will soften the vernix caseosa, after which complete the cleaning with soap and warm water, and dry thoroughly with soft warm towels. After this is properly done, then attend to the dressing of the stump of the cord. I have discarded the usual way of dressing, and employ now boracic acid or iodoform, in small quantities, and apply a pad of absorbent cotton, or of soft iodoform gauze. All this is held in place by a flannel bandage. The cord undergoes a process of putrefaction, and in the course of 5 or 6 days will separate. There may be, after the separation, a tendency to the formation of umbilical hernia, particularly in those infants that cry a great deal. You will prevent this by continuing your iodoform dressing and the iodoform pad, all kept in place by the flannel bandage. The child should be warmly clothed, and flannel should be the material used. Strict cleanliness is important, and you will show your good nursing by the management of the napkins and the protection of the parts

from the contact of urinary and fæcal discharges. The child must be kept dry as well as clean, or the parts will soon become excoriated. I have already told you when to apply the child to the breast. The first milk is slightly laxative, and assists in the evacuation of the meconium. This will cease in about ten days, when the evacuations become feculent. During the first washing of the child always examine it for any infirmity, caused by want of development, spina bifida, cleft palate, and imperforate anus. Imperforate anus must be attended to at once to save the child's life. With regard to the bathing of the child after the first few days, you had better be governed by the strength and vitality of the child. Delicate infants will not stand two baths in the day. As a general rule one is enough, and 4 to 5 minutes is sufficiently long, during the first few weeks. I have already spoken to you about the regularity of nursing, and the better trained the infant is when you leave, the more your services will be appreciated by the patient.

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

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A RATIONAL TREATMENT FOR PHTHISIS PULMONALIS, TOGETHER WITH SOME NOTES ON A NEW REMEDIAL SOLUTION.

By CYRUS EDSON, M.D.,
NEW YORK.

Dr. Edson has furnished to the world another remedy for tuberculosis, which he puts into the hands of the profession for trial, modestly claiming for it recognition on the basis of its rationality, and the favorable results obtained in a few cases in which it was given a trial. The following is a synopsis of his paper which appears in the *Medical Record*, New York.

Phenol is found in the urine of man, the horse and the cow, and is much increased in diseased conditions, being one of nature's devices to destroy germ infection, and Dr. Edson has labored to find a solution of it that could be used effectively against germ infections which would be tolerated by the system. He concluded that the creosote treatment owed its beneficial effects to the small amount of phenol it contains.

Creosote and phenol given by the mouth produced derangement of the digestive organs, hence the remedy would be better administered hypodermatically, and should be one without irritative or toxic effects. The blood itself is antiseptic, and may not require such percentage of aid to be effective as laboratory experiments had indicated was required outside the body.

The fluid finally selected is a solution of phenol and pilocarpine phenyl-hydroxide, and for convenience is called *Aseptolin*.

Dr. Henry A. Mott, chemist, describes the process of manufacture. Its composition is:

Water (H ₂ O)	97.2411
Phenol (C ₆ H ₇ O)	2.7401
Pilocarpine - phenyl - hydroxide (C ₁₁ H ₁₆ N ₂ O ₂ O H. C H ₅)	0.0188
Total,	100.

The composition of pilocarpine - phenyl - hydroxide is:—

Pilocarpine ($C_{11} H_{16} N_2 O_2$)	53.92 per cent.
Phenol ($C_6 H_7 O$)	46.08 “

“Your experiments have shown that none but the very purest chemicals can be employed. The phenol obtainable in the market, besides containing traces of para-cresol ($C_7 H_7 O H$), contains, as a rule, other impurities which unfit it for the direct preparation of this fluid.

“Starting with phenol distilled directly from its hydrate ($2C_6 H_6 O H_2 O$), which has a much higher melting-point and a much lower boiling-point than the phenol ordinarily obtainable, I find that you subject a solution of such phenol, distilled in water, to an additional distillation, heating the vapor as it passes from the retort to the receiver in an oil-jacketed tube (in which a thermometer can be inserted), and then condensing the same in a double-stoppered receiver, which enables you to reject the first ten per cent. so condensed, utilizing the remainder, with the exception of the last ten per cent., which is likewise rejected.

“In the preparation of pilocarpine-phenyl-hydroxide, it is necessary only to weigh out an equivalent proportion of this purified phenol solution (after determining its strength by chemical analysis), heat the same to about $100^\circ C.$ ($212^\circ F.$), and then gradually add to it an equivalent amount of the pure alkaloid pilocarpine, when, on standing for ten or twelve hours, the uncrystallized pilocarpine-phenyl-hydroxide will separate out. From this salt the fluid may be directly prepared, by following the analysis given above. The usual method, however, adopted in its preparation on an extensive scale is as follows:

“The highly purified phenol is diluted with distilled water until the percentage of phenol is reduced to exactly 2.75 per cent., which can be determined by the phenolometer. This is introduced into glass-stoppered receivers, which have been thoroughly cleansed with boiling water. In the receiver the right proportion of the alkaloid pilocarpine is put, so that, as the phenol distills over and condenses, it immediately combines with the pilocarpine in the production of the fluid. The temperature of the receiver is kept reduced by means of a small stream of water, yet sufficiently high to insure the desired union, but is never allowed to approach a temperature which would permit of the alkaloid suffering any other chemical change.

“Experiment has demonstrated that strict adherence to the above methods is required in order to produce aseptolin of a uniform composition and of an absolutely colorless physical appearance. A cloudy, milky, or slightly tinted preparation should be rejected. The proportions of the constituents do not permit of the presence of even traces of foreign bodies, if reliable results are to be expected.”

Pilocarpine induces leucocytosis, stimulates glandular activity,

and is an expectorant and stimulant of secretion causing increased amount of water also to be poured into the lung cells.

Any competent chemist can prepare the fluid, but great carefulness is required. The solution is colorless, with the odor and taste of phenol. Sharp, burning pain follows the injection with little or no local irritation after, and no visible physiological action is noted with doses even of 250 minims, but phenol is found increased in the urine and in the breath and stomach.

The effect when injected into the system when suffering from active germ infection is to directly inhibit bacterial development, which it does quickly and positively. The treatment has the advantage of not interfering with the functions of the digestive organs. The dose is from 50 to 70 minims daily, increasing 10 minims daily—until 100 or 120 minims are reached, and this dose continued until the patient recovers or some contra-indication occurs. Besides the injection he gives inhalations once or twice daily from a sass spray tube and globe inhaler, using a 10 per cent. solution of iodoform in ether, and given under a pressure of one atmosphere, the patient inhaling and exhaling deeply during the delivery of the spray.

When the inhalation causes too much irritation he uses a few sprays of the following before beginning it :

R Acidi carbolici,	3 parts.
Glycerine,	10 “
Aquæ distl,	87 “

When ether cannot be borne, olive oil may replace it. In atelectasis besides lung gymnastics, compressed air is recommended to assist deep inspirations in expanding the lung.

Dr. Edson finds aseptolin a greater specific in malaria than quinine.

The total number of cases that have been and are being treated with this fluid which have been reported to me to date is 216. Of these, improvement is reported in 212 cases, and no improvement in 4 cases. Of the improved cases, 23 have been discharged cured ; 66 will, in the opinion of the attending physician, be discharged cured ; and in 91 cases, while improvement is noted, no definite prognosis can be made yet. In 32 cases the improvement was only temporary. Of those in which no improvement has been noted, 1 has died.

ARTHRITIS DEFORMANS IN A CHILD SEVEN YEARS OLD.

Henry Koplik, M.D., of New York, describes a case of this kind in the March number of the *Archives of Pediatrics*. This rare affection is to be distinguished from arthritis, affecting many joints following the exanthemata, due to streptococic invasion of bones, the bone symptoms of late hereditary syphilis, tubercular

arthritis and recurring acute articular rheumatism. The author agrees with Charcot in regarding arthritis deformans as of neurotic origin, owing to the symmetry of the affected joints, the atrophy of muscle and skin, absence of any history of syphilis, tuberculosis, cardiac disease or rheumatism. Only some eighteen cases are described. Garrod and Charcot lay stress on the enlargement of the ends of the bones, the effusion in the joints, the deformity in flexed or extended positions of the limbs, the comparatively rapid invasion of many joints (within a few months), and the prolonged chronicity after primary invasion of the joints and the resistances to all treatment.

The author's case is typical, pains and swelling occurring in some joints, and spreading to others, permanent deformity with gradual lessening of power of movement, the failure of all treatment.

THE TREATMENT OF MULTIPLE NEURITIS.

HENRY W. COE, M.D., Portland, Ore., in *Medical Sentinel*, January, 1896, states that although this disease occasionally has a somewhat sudden onset, we need to appreciate that the cure is only possible after a course of treatment continuing through a somewhat extended period.

The local manifestations are often but the most striking evidences of a general state of lowered vitality, and may so clearly indicate to us some special cause in the case, as alcoholism, lead poisoning, or syphilis, that a course of appropriate treatment is easily and rationally indicated.

If a sequela of typhoid fever, rheumatism or diphtheria, our knowledge of these diseases and the care of sequential affections, which are often looked for, will avail us much.

In all these cases there is a general lowered vitality, and there is no place in neurological treatment where iron does better than in such affections. The tr. ferri chlor., as I have said before, seems to me to render the best results of any form of iron, although, no doubt, many other forms do well. Arsenic, beginning with a small dose of Fowler's solution, and pushing it to its physiological effect, and then reducing it to four or five drops for an adult thrice daily, may be used for many months. Another excellent form of arsenic is the bromide of arsenic, which may be pressed to its fullest extent, until puffiness of the lids be noticed, when the dose should be reduced to a limit within which no marked arsenical symptoms shall be manifested. The patient should enjoy both mental and physical rest. This rest, like other agencies in the case, should be used as long a time as possible. Alcohol, an important factor in many of these cases, should be carefully withdrawn. If spirits have been the liquor indulged in, beer should be substituted for a time, and then this entirely withdrawn. The bowels should be kept moderately free, remembering that in many

of these cases constipation is a common symptom. Maltine with cascara is an excellent preparation where constipation exists, the maltine providing not only a nutriment but also an aid to digestion, while the cascara which the preparation contains combats the tendency to constipation, and, in fact, if continued for a time, will largely remove such condition from the bowels. I might say that the bitter tonic in cascara is not removed from this preparation, and it is quite likely that this accounts for the superiority of this preparation over many others.

Warm applications upon the affected nerves at the onset of the disease often afford much relief, and warm baths are of value, but, as pointed out by Sachs, care needs to be exercised where anæsthesia exists, that serious burns and ulcerations do not result.

Anodynes should be used with much caution, for many an habitu  has been created by the use of morphine in this disease. In many cases, however, as a last resort, some remedy to relieve pain must be employed. Atropine and hyoscine, either alone or in combination, should be given a trial before a resort is had to morphia, and these should be employed hypodermatically.

Electricity offers promise of much good, and no doubt the best form for this disease is the current from a voltaic battery. Gowers advises s ances of twenty minutes, the current to be given along the muscles supplied by the affected nerves, and applied through large sponges of such degree of current as shall visibly produce contraction. Massage has its defenders, and may be of some value in the latter stages of the disease. Contractures should be provided against according to approved surgical methods.

THE ABOLITION OF THE GARGLE.

(Medical Press & Circular, No. 2959.)

The length of time which it takes for any scientific fact to receive general recognition is unequalled, possibly even exceeded, by the difficulty experienced in inducing practitioners to discard measures or methods which more recent experience has shown to be inadequate, inefficient, or even injurious. It is to be feared that the time-honored gargle falls into this category; but even its antiquity, coeval though it be with the poultice and the leech, cannot blind us to the fact that it necessarily falls short of the mark when the diseased tissues are on a plane behind the posterior pillars of the fauces. Even a casual study of the conditions which obtain in the act of gargling, as usually understood, will show that the fluid is kept in front of the lowered soft palate, so that it is impossible for any effects to be exercised on tissues posterior to that structure. A gargle, as ordinarily employed, is, therefore, only a mouth wash. Under these circumstances, it is really surprising that it should have been reserved for Mr. Lennox Browne to enter

a protest against the continuance of a practice which is not only useless, but, in presence of actual inflammation, is exceedingly painful, and may be injurious. Mr. Browne describes, however, another method of gargling, using the term gargling in the sense of trickling a fluid through the mouth into the pharynx, which is free from one, at any rate, of the objections already alluded to, viz., the method of Von Troelstch, for which the directions are as follows:—"Take a tablespoonful of the gargle in the mouth, hold it in the back of the throat with the head thrown back, then, closing the nose with the finger and thumb to prevent entrance of air, open the mouth and make the movements of swallowing without letting the liquid go down the throat." By this means the medicated fluid can, it is true, be brought into contact with the pharyngeal tissues, but the process is by no means easy to carry out in an effectual manner, and in the majority of instances it is quite out of the question. Gargles, again, are quite inadmissible in cases entailing the dorsal decubitus, such as diphtheria, in which cardiac failure has to be sedulously guarded against. Another obvious objection to gargles is that they must perforce comprise only the most harmless ingredients, if we are to avoid subjecting the patient to the danger of poisoning in the not improbable event of any portion of the fluid escaping control and finding its way down the œsophagus. Moreover, solutions thus employed must not contain any considerable quantity of an active ingredient, because they will come into contact with vastly more healthy, than diseased, tissue. The moral is that gargles should give place to more scientific and precise methods of applying topical agents to diseased surfaces in the throat, especially in children, in whom gargling of any sort is virtually an impossibility. The future, therefore, is towards irrigations, sprays, lozenges, and, in the case of children, to medicated confections.

TYPHOID FEVER IN YOUNG CHILDREN.

The occurrence of typhoid fever in young children has been a subject of discussion in several pediatric societies during the past two years. The evidence adduced renders it clear that the disease is extremely rare during the first two years of life and uncommon under three years. Several gentlemen who have expressed the belief that it was not uncommon in "children" have evidently not been able to restrict themselves to children under three years. We are not aware that the claim has been made that it is particularly rare above that age. The records of four of the largest children's hospitals of the country disclosed the fact that not a single patient under three years of age had been admitted with typhoid fever for many years. Of these the New York Foundling Hospital furnished the most striking proof. Eleven hundred of the eighteen hundred children continuously

under its care are "boarded out," in the city and surrounding towns, and are returned to the hospital when ill. Not a single case has been seen in this institution for twenty years, the facts being vouched for by Drs. Northrup, O'Dwyer, and J. Lewis Smith, and corroborated by 2000 autopsies of Dr. Northrup.

The reasons thus far given to account for this insusceptibility are unsatisfactory. This is the age at which children are especially susceptible to intestinal diseases. Marked susceptibility to such diseases rapidly diminishes after two and a half years, the age at which typhoid susceptibility begins. If typhoid does not occur in infants because they are fed on sterilized milk and boiled water, why do they die from summer diarrhœa in such appalling numbers? The germs of both diseases enter at the same portal—the digestive tract.

The condition which is most commonly mistaken for typhoid fever is, unquestionably, catarrhal pneumonia, a disease in which the physical signs are often obscure and the rational symptoms indefinite. In young infants it is prone to pursue a prolonged course. Grippe, with slowly developing pneumonia, has also been mistaken for typhoid. The febrile conditions resulting from indigestion or simple gastro-intestinal disease may be the source of a similar error. It is certain also that pleurisy with effusion, and other obscure pulmonary and pleuritic disorders have been overlooked, and the fever accompanying them has been attributed to typhoid. The fact that a continued fever in a child may be due to tuberculosis should never be forgotten.

Typhoid fever is so rare in young children, and is so closely simulated by other febrile conditions, that we are in full accord with Dr. Northrup's desire to encourage a healthy scepticism as to typhoid fever in an infant, in the absence of an epidemic, when the symptoms are not present which would lead to a diagnosis in an adult.—*Archives of Pediatrics, January, 1896.*

THYROID GLAND AND MORBUS BASEDOWI.

Scholz in his experiments with thyroid tabloids in the healthy and morbid state measured the amount of elimination both before and after administration.

Before administration, the elimination was equal to the ingestion. On the use of the tabloids no change in the elimination of nitrogen took place, while in the healthy it was reduced, but did not disturb the balance, as no reduction of weight took place in either case.

The phosphoric acid elimination was tenfold increased in morbus Basedowi, while it was only four times in the healthy. In both cases, during the administration of thyroid, more phosphoric acid was eliminated than taken in. This agrees with Roos' results, and bears out Kocher in his opinion that phosphate of soda is the rational treatment for morbus Basedowi.—*Medical Press & Circular, No. 2964.*

THE BLASTOMYCETES OF SARCOMA.

Roncali, who is acting under Prof. Durante, in Rome, affirms that he has found the same microbe as Sanfelice in sarcoma and adenoid carcinoma of the ovaries. It requires a specific coloring agent, as it resists both acids and alkalis. The parasite is found both within and without the cell. When young, and without covering membrane, the protoplasm is chromatic; as it increases in age the membrane thickens and the color recedes. The "Blastomyces" in the cancerous tumor is still awaiting confirmation, as many efforts by other investigators have failed to obtain this parasite.—*Medical Press & Circular*, No. 2964.

TUBERCULOSIS.

Dr. R. M. Cunningham, in his presidential address at the meeting of the Tri-State Medical Society of Alabama, Georgia and Tennessee, reported in the *Southern Medical Record*, December, 1895, and in *Universal Medical Journal*, on this subject based on observations made in the Alabama penitentiary, stated that of an equal number of white and negro convicts there were seven deaths among the latter to one among the former from tuberculosis. These figures demonstrate the wonderful racial predisposition of the negro race to tuberculosis, compared to the white under precisely the same environment. He expressed the opinion that the negro has acquired since his emancipation a predisposition to tuberculosis which, for the present and succeeding generations, is hereditary. He shows a greater liability to diseases which produce a local predisposition to tuberculosis, notably bronchial and intestinal catarrh and pleurisy. He is physically, mentally, and morally inferior to the white man, and therefore more liable to contract disease, particularly tuberculosis and thoracic diseases. His changed social, religious, political, and industrial relations, involving, as a rule, a change from the segregate to the aggregate—from country to town and from farm to public works—are also important factors, as well as his disregard for all rules of sanitation.

GYNÆCOLOGY.

By A. LAPHORN SMITH, B.A., M.D., M.R.C.S., Eng.

Professor of Clinical Gynæcology in Bishop's College; Gynæcologist to the Montreal Dispensary and Samaritan Hospital; Surgeon Western Hospital.

Chronic Cystitis in Women.—Dr. Carl Engel of Minden, Ohio, has an article on this subject in the *American Journal of Obstetrics*, January, 1896, in which he advocates treatment by dilatation and rest. He describes a case of an emaciated woman with a sallow complexion, having strongly acid urine, who had to get up three or four times every night to pass water. The meatus was raw, and

surrounding parts appeared inflamed. He placed her on 4 grains bicarbonate soda in a tumbler of water three times a day, with hyoscyamus and buchu, with considerable improvement. But it was only after he had dilated the urethra under cocaine, washed out the bladder with boric acid, and left a permanent catheter in to drain the bladder that she could sleep all night without getting up. Once he washed out the bladder with 1-50 solution of nitrate of silver, or 10 grains to the ounce, followed by weak salt solution. The patient was completely cured.

This is a very instructive case, and it may be of interest to draw attention to some of the more striking points, as we are frequently called to attend just such cases. In our experience, about 50 per cent. of the benefit is due to inducing the patient, under one pretext or another, to drink more water. In fact, a great deal of cystitis in women is largely due to the habitually concentrated condition of the urine owing to their rarely if ever taking a drink of water. Not only does the delicate mucous membrane of the bladder resent the presence of even a dram or two of the highly concentrated urine, but the urethra, meatus, and even the surrounding parts of the vulva, become intensely red and swollen and painful from the irritation caused by its passing over them. We have frequently avoided cauterizing the urethra and meatus, and even cured urethral caruncles and eversion of the mucous membrane of the meatus in the following simple manner: first, by securing free evacuations of the bowels; second, by diluting the urine by inducing the patient to drink two quarts of water a day more than she has been doing; this may be taken in the form of flaxseed tea, weak tea, beef tea, thin broth, watery gruel, mineral water, river water, or, best of all, rain water; third, to render the urine alkaline by means of one drachm of bicarbonate of soda, or, preferably, bicarbonate of potash four times a day; this may be given in lemonade, which converts it into effervescing citrate of potash, and a very pleasant beverage. This is also a pretext for giving the patient four tumblers of water out of the eight which are necessary. Fourth, if there is retroversion of the uterus, rectify the displacement by means of packing with boroglyceride tampons, introduced while the patient is in the knee chest position with her corsets off. Retroversion causes irritation of the neck of the bladder, first, by mechanical pressure of the cervix, and second by obstructing the circulation of blood in the vesical veins.

Radical Relief of Uterine Flexions.—Dr. Nourse of Alexandria, Ind. (*American Journal Obstetrics*, January, 1896), calls attention to a new method of curing retroflexion of the uterus by splitting up the cervix and then pushing up the posterior lip, and sewing it in this new position. Although the idea is ingenious, we cannot agree with the author in thinking that anything you can do to the cervix will push up a fundus, which is always retroverted when it is retroflexed. Our experience with Alexander's operation, when there are no adhesions, and with ventrofixation when there are

adhesions, has been so satisfactory, and the operations themselves are so rational, that we should be loth to resort to any other method of curing retro-deformities or displacements.

Necessity of early Operation in Mammary Cancer.—(*American Journal Obstetrics*, January, 1895). Dr. Van Rensselaer of Washington has done good work in calling attention to the great importance of early operations for cancer of the breasts. In spite of all that has been written on the subject, it is still rare for us to see these patients immediately after the tumor has been discovered, which is the only period at which they can be operated with a good prospect of cure. He says: "Every induration in the breast of an elderly woman should be regarded with suspicion. Modern histological researches show that growths in this tissue manifest a marked tendency to change their nature, so that a pure fibroma may become by lapse of time of a malignant character." He continues: "Family physicians are sometimes to a degree reprehensible in that the true state of the case may be lightly treated, with the hope that further manifestations may be lacking. Many patients are timid about submitting to operation at the very time when it offers the best prospects of success, and many lives are sacrificed which might have been saved had the growth been seen in its incipiency." The result is satisfactory in cases in which the gland is extirpated before the lymphatics have become involved. In 22 cases reported by Bull, more than half were still perfectly well three years afterwards. Halsted has recently reported 53 cases with only 3 relapses at the end of three years. It is necessary, however, to perform the operation in a radical manner; we must remove the breast entire with fat, axillary glands, clavicular glands and portions of pectoral muscles all in one piece, so as not to infect the cut edges of adjacent tissues.

Stricture of Urethra in a Woman.—Dr. St. Clair Bowen, of Washington, reported a case of this disease in a woman forty-two years of age, who had three normal labors, last one eleven years ago. Five years ago she began suffering with dysuria, one year later she passed pus with urine, and this continued from time to time during one year. Since two years she has been passing only two ounces of urine, with much difficulty and pain, consuming half an hour in passing that amount. Each time the straining efforts to urinate produce cystitis. She had been under the care of a number of physicians in that city, including the speaker, without deriving much benefit. He asked for suggestions for her relief. He did not state whether the urine was high colored or intensely acid and irritating, but we should think that it was, and would suggest the same treatment as outlined above, *viz.*: to increase the quantity of liquids, principally water, so that the patient may be made to pass forty or fifty ounces of weak, non-irritating urine. Secondly, give her alkalies sufficient to render the urine slightly alkaline. Much of the spasm and straining above referred to are due to irritation of the neck of the bladder, and when this is removed

very few of the symptoms of stricture will be left ; if, however, the stream is small and tortuous, graduated bougies, or Hegar's dilators, may be passed, painlessly almost, after the reflex irritability of the urethra has been allayed by the means indicated alone or with the addition of hyoscyamus or morphine.

Retained Pessary Requiring Cutting Operation for Removal.—

We have often expressed our dissatisfaction with the pessary treatment of displacements, the principal cause of it being that as long as the patient wears it, she is tied to the doctor's office, and can only leave it on parole. If she forgets or neglects to return periodically for examination, she is exposed to dire consequences. Dr. Nash, of Washington, reported such a case, in which the pessary had eaten by ulceration a passage through the vagina, and had to be removed by the aid of the knife. In a similar case which has come under our notice, this ulceration had become malignant, presenting a hopeless condition of cancer. ¹ By ventrofixation, combined with plastic operations on the cervix and perineum, the patient is entirely cured there and then.

Ovarian Tumor.—Dr. Skene Keeth, in the *Lancet* of November, reports a successful removal of an ovarian tumor weighing over one hundred pounds, seventy-five pounds of which were removed by the aspirator the day previous to operation, the remaining twenty-five pounds he removed by abdominal section. We pointed out some years ago the vital importance of following this method when we reported a similar case, also successful, owing to the enormous pressure on the abdominal nerves and veins being removed gradually. As the sudden removal of these large tumors allows a tremendous rush of blood into the abdominal veins, the patient frequently dies of hemorrhage, without one ounce of blood being lost.

Dr. Hundlay, in the *Maryland Medical Journal* of November 30th, calls attention to the *importance of leaving an ample cervical canal and external os* for the purpose of free drainage, as there is always associated more or less endometritis. We think his warning is well timed, as we are every now and then consulted by women who are suffering considerably from the results of cervix operations, either done too much or not done enough. That is to say, in some cases all the cervical mucous membrane is removed, and the uterus is left stenosed with a pin hole os preventing either drainage or menstruation ; on the other hand, many inexperienced operators may remove the mucous membrane, but leave cystic glands and scar tissue in the angles of the tear, with a result that they are closed in under still greater pressure when the lips are sewed together. The reflex symptoms are of course greatly aggravated, and the hundred or so of people who are acquainted with the case become firm opponents not only of Emmet's operation, but of gynæcological operations in general. It would be much better if these cases, especially those in which there is much induration and cicatricial tissue should be sent to the more experienced operator.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, 13th December, 1895.

A. D. BLACKADER, M.D., President, in the Chair.

Dr. R. de L. Harwood, of St. Lambert, was elected an ordinary member.

DISCUSSION ON CANCER.

DR. J. G. ADAMI introduced the general pathology of the subject, speaking chiefly on the habit of growth.

He stated that the point of greatest practical interest was the causation of cancer. In regard to the parasitology, bodies were occasionally found which might be of the nature of sporozoa or endogenous cell degeneration, but were doubtful. If a parasite, it does not spread directly through lymph or blood vessels, but is conveyed through them by tissue cells.

If parasites bear an aetiological relation to cancer, why do they induce certain cells of the body to take on a functionless and heterogenous growth? They may originate aberrant vital processes, but such also occurs where no parasite is suspected, as in certain benign growths, examples of fibromata papillomata exostosis produced by irritation were mentioned.

We must, then, logically admit that functionless and heterotopic cell hyperplasia can be induced without parasitic association; and inasmuch as the benign may pass imperceptibly into malignant growths, and inasmuch as we can, for example, come across lipomata showing transition into sarcomata, or fibromyomata doing exactly the same, as again we can, in thyroid, encounter what are certainly benign growths—adenomata (the so-called foetal adenoma)—possessing all the histological characters of carcinomata, the only conclusion to be reached is that a study of the presumed parasite is calculated to lead us only a very little distance.

We must seek deeper than these supposititious parasites if we wish to discover what lies at the bottom of all malignant tumor growth,—aye, of all functionless cell proliferation.

Now, that I may prepare you for the train of reasoning upon which I am about to embark, and that you may throughout the ensuing argument see whither it is tending, let me here state the conclusion at which I have thus far arrived from a study of neoplasms, and not a little consideration concerning their characters and relationships. Briefly, I cannot but hold that the one fundamental phenomenon underlying the development of cancerous and other neoplasms is the assumption of a habit of growth, a habit of rapid cell division independent of external stimulus on the part of certain cells in one or other region of the body.

Multiplication and regeneration are naturally inherent in cells, and the habit of growth mentioned is an exaggeration of this latent capacity. In lower animals, as the hydra, any portion containing a cell if cut away will reproduce the animal. This power is restricted as we rise in the scale,

until in man only the cells of certain relatively simple tissue possess to any marked degree the power of complete reproduction.

The most prominent characteristic of a nerve or muscle fibre present in the attempt at recovery after injury is the multiplication of the nuclei of each unit, a multiplication often regarded and spoken of as a degeneration, and indeed not unfrequently such multiplication precedes the actual disintegration of the unit. This multiplication, which I have elsewhere spoken of as "reversionary degeneration," is, I hold, an indication of a reversion to a more primitive type of cell, and indeed in the case of muscle Metchnikoff and others have shown that the individual nuclei resulting from this nuclear division may surround themselves with protoplasm and may pass away as simple embryonic cells, so that the whole muscle fibre becomes completely disintegrated. The process here is one of what may be also termed vital disintegration. The same principle that is shown here is to be seen at work in glandular structures. Take, for example, a case of parenchymatous nephritis. If this be acute, the cells of the tubules swell up, show vacuolation and other signs of acute degeneration of the cell substance, with failure of the nuclei to stain properly (or, to put it in other words, diminution of the chromatin of their nuclei), and the cells are cast off. With a lesser degree of inflammation the process is very different; we find here that the cells proliferate, but at the same time these new cells do not show the full adult character, their nuclei, it is true, stain intensely, but their bodies are small and cubical, their characters become more nearly allied to those of the cells in the developing kidney.

In regeneration of the liver and lungs the same tendency to revert to embryonic conditions is seen, so that it is sometimes impossible for the pathologist to distinguish between chronic inflammatory and malignant tissue.

And sometimes this development of embryonal or sub-adult gland tissue passes on imperceptibly into cancer. Many cases of chronic irritation and long-continued inflammation of moderate intensity affecting epithelial and glandular tissues merge into carcinomatous manifestations. The difference between the two is that in chronic inflammation the abnormal growth ceases when the cause of irritation is removed, in cancer the cells have gained the habit of unrestrained growth.

It may be also that the vessels going to the region from long dilatation remain distended or have acquired persistent distension; so that even when the primary irritant is removed the part continues to receive nourishment in excess of physiological needs. This, together with paralyzed nerve control, may well be factors leading to the first mentioned condition; but before all, it seems to me, that there is to be recognized this assumption of the habit of growth, so that once fully started upon the road of proliferation the cells continue to multiply, utterly irrespective of the needs of the organism.

Other instances were mentioned where the cells of the body acquired habits as the tolerance for drugs and immunity from disease. Cancer cells are embryonic in appearance, and, like the latter, possess the power of frequent multiplications, and both have an excessive amount of nuclear chromatin, and like embryonic cells those of cancer have intense vitality. The cambium layer in plants has special activity. The stratum malpighii in the skin is constantly undergoing cell divisions, and can be transplanted and will grow if placed in normal environment; the cancer cells have this power still more marked, and will grow in widely different regions of the host from the primary seat of growth. Parasites may be

one cause of the chronic irritation, but must be found in all to be regarded as the cause.

The theory held that a weakened basement membrane led to the cancer cell growth. That of a seminum started by Virchow and elaborated by Creighton and others, and Cohnheim's theory of embryonal cell vestiges were considered and shown not to explain cancerous growth as well as his theory of the assumption of a habit of tenacious and incontinent growth. He showed that irritation was often the cause of external cancer, but sometimes there was no such history. A dilatation of the blood vessels is usually found, caused mostly by central irritation rather than by increased demand, and leads to over-nutrition, and may not other forms of increased blood supply lead to neoplastic growth?

At the climacteric it was possible, he said, that with the retrogressive changes in some tissues, others may receive a greater amount of nourishment; or from being injured may assume a subadult cell growth, especially as at this period the tissue changes are reversionary in character. The subject of modified nerve control over tissue was referred to as possibly having some connection with excessive cell growth.

To return now to the substance of my opening remarks. If the suggestions (and I hardly like to venture to call them more than suggestions) which I have thrown out have any solid basis, then it would appear probable that the advance in interference with cancer must proceed directly along the lines that it is at present taking in the hands of the surgeons, namely, the duty of the surgeon must be to recognize the existence of new cell growths at the very earliest moment; and more, now that operation is so robbed of its previous terrors, and that parts can be removed with so little disfigurement and so little danger of sequelæ, it becomes the duty of the wise surgeon to remove every neoplasm, benign as well as malignant, at the first opportunity. There is no valid reason for retention, there is the possibility, even if it be but distant, that the benign growth may assume malignant properties. Destruction of the cancerous tissue at the earliest moment, whether by the knife or by the administration of substances which excite a specific action upon the cells,—this alone, I cannot but hold, is what we have to recognize as the procedure at which to aim.

In discussing the parasitic theory of cancer, DR. MARTIN spoke as follows: We cannot repudiate the theory without careful consideration, for among its adherents are two scientists whose names stand foremost in bacteriology and pathology—Metchnikoff, after examining the specimens prepared by English and European investigators, emphatically pronounced in favor of the presence of parasites in cancerous tumors; while Virchow is so strongly imbued with the same idea that he is withholding his final volume on tumors, trusting that the near future may bring increased light on the etiology of malignant growths.

The amœba of dysentery is generally accepted as being the causative factor of the tropical malady, yet the absolute proof is entirely wanting. Few scientists to-day will deny the relation between typhoid fever and Eberth's bacillus, or of the plasmodium malariae to the disease with which it is associated, yet in neither instance are we positively enabled to fulfill the requirements necessary to establish satisfactorily the etiological relationship. As in these diseases, so too in carcinoma, where our knowledge is likewise very limited so far as the true cause is concerned, we are scarcely justified in discarding the theory of a parasitic origin till definite proofs to the contrary are established.

There are few pathologists to-day who ascribe the formation of

malignant tumors to an overgrowth of embryonic cell remains, as suggested by Cohnheim for the origin of benign tumors, and the reason is obvious. When a tissue in its overgrowth ceases to remain local, ceases to retain its simple structure, but tends to be distributed throughout distant portions of the body, there is at once suggested some unusual cause for such an irregular mode of procedure and extension of cells.

The cause can hardly be identical with that for other more benign tumors, else one would surely get at some time or other an extension by metastases of lipomata, fibromata, etc. This, however, never does occur with the same invasive propensities, and there is at no time a paramount tendency to extension even locally. Some would explain this by the greater regenerative and proliferative power of epithelial cells over any other kind of tissue. While, however, such is the case, it is but a poor explanation of the atypical character of the growths in malignant tumors. Rapidity of growth alone can certainly not explain it, for whenever the epithelial growths extend rapidly, it is because they find paths of small resistance, *i.e.*, the looser tissues and the surfaces, forming thus cauliflower excrescences, and so forth. It is rather where their growth is slow that they invade denser tissues and infiltrate. Fibromata and other benign tumors may remain untreated for years and their tendency to invasion of other tissues is never manifest. They remain nearly always localized, encapsulated, and cause injury only by mechanical pressure.

Why then do we get metastases in one and not in the other?

The explanation cannot be offered that the nature of the individual cells of benign growths unfits them for transmission by vessels, for when the varied nature and sizes of cancer and sarcoma cells be considered, it is not to be supposed that cells of other tumors find greater difficulty in passing through the vessels. Again, the mere fact that emboli of fat globules can be distributed over the body after fractures, etc., and be found in the smallest capillaries of the lungs, would show that in one kind of tumor at least there is no mechanical obstruction to the passage of its elements by vessels.

To examine into the nature of malignant neoplasms it is in the first degree necessary that we should see if in other parasitic diseases we have any evidence of new growths—if, in other words, parasites can induce cell proliferations in any way analogous to cancers. Of this I think we have abundant proof, and it will be of interest to institute a few comparisons between cancerous disease and those maladies where multiple new growths occur from the invasion of the parasite. Prof. Coats and others have asserted that an essential difference exists between the lesions found in parasitic diseases and those occurring in cancer, that in the former the results are always irritative, inflammatory and destructive, in the latter purely proliferative.

The bacilli once having found a resting place manifest their presence at once by a new growth of cells, the tubercle, and only subsequently do we get degenerative changes. It is practically the same in many other diseases, such as leprosy, where the earliest evidence of the presence of bacilli in the vessels is manifested not by an inflammation, but by a hyperplasia of the neighboring tissues. As a result of the hyperplasia, true tumors form chiefly in connection with nerve endings, while degenerative processes may be quite absent. But a yet more striking analogy between cancer and infective processes is seen in actinomycosis. It is true that here an irritation is set up by the advent of the fungus, but, on the other hand, so great is the proliferation of cells and bone formation in the jaw, that before its parasitic nature was understood, its

structure was looked on as being that of an osteo-sarcoma. From the primary seat metastases can spread to any part of the body, the first evidence of their presence in the newly-infected region being a multiplication of cells in the vicinity. But whereas it may be argued that in these instances the inflammatory conditions are primary, there are tumors formed by parasites where no sign of irritation exists. Such is the case in typhoid fever. The lymphomata sometimes found on the serous coats of the intestines, in the liver and elsewhere, are essentially neoplasms induced by the action of the typhoid germ.

Non-inflammatory neoplasms likewise occur in Hodgkin's disease ; and in chronic malaria the almost constant result of the parasitic infection is to produce in the spleen an enormous overgrowth in its essential cells and the fibrous stroma surrounding them. It may, then, be asked with reason, if cancer be parasitic why the epithelium cannot equally well be selected as a cellular habitat by parasites just as the blood cells, etc., in other diseases.

Since the researches of Malassez, Delepine and others, it has been recognized that certain parasites (whose form and general character bear a striking resemblance to the supposed organism of cancer) often infest the alimentary tract of rabbits and make their way thence to the liver, where they invade the epithelial cells in the bile ducts. As a direct result, an extensive proliferation of the epithelial cells takes place, and also of the fibrous stroma about them, so much so that a luxuriant overgrowth occurs resembling very much a malignant adenoma of the rectum. (v. fig. F. and Nos. 1 to 7.)

From what has been said, then, it seems clear that, firstly, parasites are quite capable of producing cell proliferation independent of inflammatory conditions, *i.e.*, a proliferation analogous in general features to cancer ; that, secondly, they produce metastases, as does cancer ; that, in the third place, it is not uncommon to find parasites selecting special cell structures for their habitat ; and that, finally, we can find in the lower animals an epithelial overgrowth and the formation of a fibrous stroma, all being induced by the invasion of a parasite.

The parasite is usually spherical or oval, with a more or less rounded nucleus, this latter occupying a relatively small area of the parasites' protoplasm. The cell body is homogeneous or mottled, sometimes radially striated. These striæ were supposed by some to be evidences of reproduction, such as is observed in malarial parasites. A capsule of double contour surrounds the organism, and seems to be intimately associated with the protoplasm of the cancer cell, as though secreted by the latter. Sometimes the organism seems to lie in a kind of cyst or vacuole, in this way resembling the bacilli of leprosy, where the same condition often occurs. The parasite may be single or multiple within the cell, and invades sometimes the nucleus, sometimes the protoplasm.

A few isolated cases have been recorded, where some of the lower animals have successfully been inoculated, and the transmitted portions have given rise to new growths with metastases. This, it may be argued, is a mere grafting from one animal to another ; but inasmuch as the same organisms will be found in the metastases of the inoculated animals, it remains yet to be proven that there is not something else besides the simple transplantation of cells. It is quite as possible that the experimenters, without being aware of it, overcame in some way the obstacles that ordinarily prevent successful inoculations. Within the last few months a melanotic sarcoma was readily transmitted to a rabbit, and in a few weeks had given rise to metastases throughout the body.

At all events we are too little familiar as yet with all the conditions necessary to produce successful inoculations. How many people have already ingested myriads of cholera vibrios by way of experiment, and have subsequently felt no ill effects? Our methods at the present day are in many respects imperfect, and failures do not necessarily render the general underlying principles fallible.

On much that has been written on the contagiousness of cancer and its frequent occurrence in people who live much together, I cannot touch, nor of the plausibility of the so-called "cancer-houses," which are marked as being contaminated. I would merely conclude by suggesting that until some other reasonable explanation is afforded we are not in a position to despise the parasitic theory of cancer formations.

It has been so often urged, and with apparently great emphasis, that in the majority of cancerous growths there is associated some chronic irritation, it may be a slight and persistent one, that I cannot close without referring for one moment to this theory. Whereas it is true that in a great number of cases some irritant is associated with the development of carcinomata, yet in the vast majority of instances the self-same irritant may be at work in just the same mild chronic and intermittent way, and yet never induce a cancer. Of the number of men who use clay pipes there is surely but a small minority in whom cancer develops on the lip, while in the cases of cholelithiasis how rarely do we find cancerous conditions of the gall-bladder? It is true that with almost every case of cancer of that organ gall-stones are associated, but the mere presence of the cancer, implying as it does some destruction of the epithelium, etc., will supply a most ready nucleus around which concretions can form.

It would seem that irritation alone, then, cannot explain the formation of cancerous tumors, that to the mere activity of epithelial cells alone cannot be accredited the formation of cancers, and it would seem that our only resource is to examine for some deeper cause, to search for the original stimulus which brings to the cells the power to proliferate. It has been shown how characteristic are new growths as the result of parasitic invasion, and how scarce are evidences of similar growths in diseases that are proven to be non-parasitic. So that placing together all our facts, we feel that, for the present at least, there still remains a hope that in the near future something more may be discovered to account for the similarity of malignant processes to those in the infective diseases.

DR. SHEPHERD spoke in regard to the clinical character and treatment of cancer of the lip, tongue, throat and œsophagus. He believed all cancers to be local, that by early and wide removal recurrence may be prevented, and should be early. Vulnerability was, he thought, hereditary, and the exciting cause is local irritation, examples of which he mentioned as in smokers and chimney sweepers.

In cancer of lip, epithelioma is the most common variety, chiefly in males about 45, grows slowly and glands in submaxillary regions not early involved.

The disease first appears as a fissure, a warty growth, an excavation or an ulcer, which will not heal. It may first appear as a tubercle covered with a scab, which when picked off soon forms again. In whatever way the growth commences, sooner or later ulceration sets in. This ulceration is deep, with hard edges and a hard infiltrated base, and although not painful, causes discomfort, especially when eating. After a time the glands in the submaxillary region become enlarged and infiltrated, and after the other glands in the neck become involved, and the case becomes

hopeless. Chancre of the lip is the only affection which might be mistaken for epithelioma. In chancre the glands are early involved. As I said before, involvement of the glands in cancer of the lip is a late symptom. Early incision is the only form of treatment which is of any use. Every sore on the lip which is difficult or slow to heal in an individual past middle life should be regarded with suspicion and should be freely removed. Caustics should be avoided. Early removal before the glands become involved will, in most cases, result in a permanent cure. No cleaning out of the submaxillary space will be needed; but if the sore has lasted for any length of time, then even if no distinct enlargement of the glands can be felt through the mouth, the lymphatic tissue in the submaxillary region should be cleaned out, as the axilla is in the cancer of the breast. It is my custom when there is enlargement of the submaxillary glands, first to operate on the lip, and a week or two later in the submaxillary region, waiting till the inflammatory conditions about here subside, and one can tell how much tissue to remove. In most cases it will be found necessary to remove the submaxillary salivary glands, for in them are imbedded lymphatic glands which lie concealed and may contain cancerous elements.

In the jaw, cancer is more unfavorable. It occurs sometimes in the comparatively young. Commences in gums and spreads to jaw. Early removal is the only treatment, but it usually recurs. In the tongue, epithelioma begins as a fissure nodule or ulcer, more common in men, 247 to 46, leucoma, scars, and fissures, predispose. Operation to be successful must be early.

Diagnosis.—(1) Tubercular ulceration; (2) syphilitic disease, primary or tertiary; (3) simple ulcer.

Tubercular.—More at tip; age not diagnostic; lymphatic glands involved in both; history and microscopic examination the only tests of value.

Syphilitic ulcers if primary, glands are early involved, history helps in tertiary syphilis, ulceration is usually preceded by induration. In cancer this follows the ulcer. Ulcers may be multiple in syphilis.

Simple ulcers have rarely much induration. Any ulcer in a man past 40 which does not heal readily must be excised. In a doubtful case excise a portion for microscopical examination. He preferred Whitehead's operation with scissors, to Kocher's, where a preliminary tracheotomy was performed. He ties the arteries as cut. Feeds with a tube the day after. Careful asepsis and attention required.

In operating for cancer of the tongue the following points are important:

1. Remove all the disease. And here I might say that I do not believe in partial extirpation of the tongue, but prefer always to remove the whole tongue.

2. Prevent hæmorrhage.

3. Avoid entrance of blood into the air passages. This may easily be done in Whitehead's operation by never allowing the patient to be too completely narcotized. In these cases I always keep the patient in a semi-recumbent position, and as soon as the tongue is excised allow him to recover and sit up, and the arteries which have been secured by forceps are now tied at one's leisure.

4. The presence of an aseptic condition of mouth should be preserved until healing is complete. This may be accomplished by the use of antiseptic paints and the frequent irrigation with an antiseptic solution.

DR. ARMSTRONG spoke of cancer in the gastro-intestinal tract. Statistics showed that the shortest period of survival after gastrostomy was $3\frac{1}{2}$ weeks, and the longest twelve months. It saves from the agonizing form of death by starvation—the normal termination. The average duration of life after gastro enterostomy for carcinoma of pylorus was $9\frac{1}{2}$ months. After pylorotomy, average duration of life was $16\frac{1}{4}$ months, and is therefore the best procedure. If no tumor can be felt, and cancer suspected, he advised an exploratory incision, as early operation only gives hope of permanent cure.

Resection of stomach he thought had no future.

Carcinoma of rectum runs a chronic course. The mortality from operations is high. The difficulties are access, hæmorrhage and sepsis.

Kraske reached rectum by chiseling away left border of sacrum,— a safe and simple operation.

In 1889, Billroth made a V-shaped incision, one leg of the V crossing the sacrum below the level of the third sacral foramen, and the other passing down along the left border of the sacrum and coccyx. The sacrum was then divided on a level with the third sacral vertebra and the osteo-integumental flap turned to the right. This operation was afterwards claimed by Rehn, of Frankfort, and by Rydygier. This method gives a very ready access, and is not so likely to be followed by prolapse. The right lateral blood supply is not interfered with, and the bone is found to unite well, even in those cases where primary union of the external wound is not obtained. Borelius, of Karlsbroma, modified this method with a view of still further avoiding injury to the nerve supply of the levator ani and sphincter. He made a median incision from the middle of the sacrum down over the coccyx, and then along the border of the right gluteus maximus muscle, and cut through its fibrous insertion. The margins of the wound were then dissected back, and the sacrum chiselled through obliquely from the lower margin of the left to the lower margin of the right sacral foramen, and the lower end of sacrum was then turned down to the left.

Heinecke made a T-shaped incision, the transverse incision corresponding to the level of the third sacral vertebra. The bone incision corresponded to the superficial one, and the two osteo-plastic flaps were turned out, and at the end of the operation replaced and sutured. This is practically the method employed by Gussenbauer, and its results are said to be very satisfactory.

Rehn has approached the rectum in woman by the vagina, making longitudinal median incisions through the raphe of the perineum to the sphincter ani. The rectum is then separated from the posterior vaginal wall and from the sacrum, and brought down, the portion diseased resected, the ends of the gut sutured, and the wound closed.

These latter operations do not divide the tubero-sacral and spinosacral ligaments, and thus weaken the pelvic floor.

To save sphincter, Willems, Rydygier and Witzel proposed to utilize a portion of the gluteus maximus muscle for a sphincter, and brought the upper end of the rectum out between the lower fibres of the muscle.

Gersuny proposed torsion of upper end of gut on its own axis and fixing to skin. The next step in advance was the opening of the peritoneum; several weeks' preparatory treatment is required to cleanse the intestinal tract, and growth is curetted and cauterized. Must avoid injuring the mesenteric vessels so as not to cut off the nutrition of rectum. It has been found difficult to secure union of upper and lower segment

of rectum. Schede has proposed a preliminary colotomy which is closed after union of segments.

Another sequelæ of proctorrhaphy is stricture. Dr. Armstrong suggests extirpating the rectum, completely establishing a permanent artificial anus in groin.

Mikulicz, to lessen shock, gives an intravenous injection of Koch's saline solution before operation. An Australian surgeon, Dr. Maunsell, proposes to invaginate the rectum together with the neoplasm, and then to remove it.

DR. BELL in discussing "Carcinoma" spoke as follows :

There is probably no organ of the body which is subject to cancer in which the disease produces greater distress and suffering, both mental and physical, and ultimately a higher rate of mortality than the female breast. Moreover, it is frequently attacked at a comparatively early age, and valuable lives are lost while yet in their prime. In this connection I wish to point out that although the rudimentary mammary gland of the male is sometimes the seat of cancer, it is nearly always the mammary gland of the female which we are called upon to treat. And in the early stages of cancer of the breast, when it is most important that a diagnosis should be made, and there is still an opportunity to effect a radical cure, it is most difficult to recognize, and, as a matter of fact, is rarely recognized. There are, moreover, benign tumors of the breast, which it is practically impossible to diagnose from carcinomata, except by the microscope. I think the surgeon's rule should be that except in the case of those distinctly innocent growths, which are comparatively common in young women, it is safer to act upon the assumption that they are malignant. I mean that unless he can be practically certain that the growth is a benign one, he should treat it as if he were certain that it was a carcinoma.

The surgical treatment of cancer is based upon a recognition of the following facts, which may be said to be generally accepted by both pathologists and surgeons :

1. That cancer is primarily always, and generally for a considerable period of time, a local disease.
2. That it extends (*a*) by infiltration of adjacent tissues, and (*b*) by being carried along the lymphatic vessels to the nearest group of lymphatic glands.
3. That Metastasis to remote organs occurs only, as a rule, much later.

The obvious inference is that removal should be early, and should include not only the tissues for a considerable distance around and beneath the mass, but also the nearest group of lymphatic glands, and also the tissues intervening between them and the mass. When I speak of removal, I mean by a cutting operation, and I wish here to express my opinion in the most emphatic manner that the use of caustic applications for the cure of cancer is in the highest degree unscientific, and that in most cases it can do nothing but harm. I speak thus plainly, because even in comparatively recent text-books and monographs upon malignant disease, we find the statement that there are cases in which escharotics are curative and are to be recommended. With this teaching I have no sympathy whatever. I admit that as a palliative measure in incurable or inoperable cases the use of caustics or partial operations, such as curetting, etc., may be indicated, but I contend that their ultimate effect is always to stimulate the growth of the original disease. In my opinion,

clinical experience all goes to show that local irritation is a very prominent factor in the production of cancer and in increasing the rapidity of its development when it is already established. Now, with regard to operations for the removal of cancer of the breast, the methods of operating have within the last few years been so greatly extended and modified that they are now quite different from what they were ten or fifteen years ago. We recognize that, quite apart from the necessity or the possibility of closing the wound, the whole breast gland must always be sacrificed, and the tissues for a considerable distance beyond what seems to be the limit of the disease, because there can be no doubt but that infiltration always extends much further than we can recognize it by either the sense of sight or the sense of touch. The tissues should also be removed deeply, down to the wall of the chest in the lower part, and always including the pectoral fascia, and, when necessary, a part or the whole of one or both pectoral muscles, quite apart from the consideration of the subsequent usefulness of the arm. (And it is surprising to observe how little these extensive dissections interfere with the functions of the arm.) In all cases the whole of the axillary lymphatic and areolar tissue must be removed. It must be removed whether we can recognize any glandular infiltration before operating or not. Speaking now, from memory only, I do not think that I have ever removed a carcinomatous breast and dissected the axilla in which I have not found cancerous glands, although it was in many cases impossible to detect them before operation.

With regard to the statistics of the operative treatment of cancer of the breast, I do not think that there are any that can be relied upon, for the reason that it is only within the last few years that anything like radical measures for the removal of all the disease have been adopted, and the statistics of the older methods show uniformly bad results. If I am not mistaken, the statistics available, say ten or fifteen years hence, will show very good results,—at least everything seems to point that way at the present time. I have not attempted to trace the subsequent histories of my own cases for this discussion, and I can only at the moment speak positively of one very satisfactory case in which perfect health has been maintained for any length of time. The case is that of an elderly lady, 65 years of age, operated upon in 1889, now six and a half years ago. The disease was extensive, distinctly involving the glands of the axilla. The operation effected a very wide removal of tissue and a very thorough dissection of the axilla, and, according to my information received quite recently, this patient is still quite well and free from any sign of recurrence.

In cancer of the male genital organs, the same general principles must be applied, and in removal of the penis, whether the disease be extensive or not, and whether the superficial inguinal glands show any sign of infiltration or not, the contents of these spaces should be thoroughly removed by dissection.

In dealing with malignant growths of the testicles, it is practically impossible, except, sometimes, at a very late period, to distinguish between cancer and sarcoma, or those mixed growths which are so commonly found in the testicle. In any case, it is to be borne in mind that the lymphatic extension here is to the retroperitoneal glands, which, of course, are quite inaccessible to operation. It is only in the later stages of cancer of the testicle, when the tunica vaginalis and superficial parts have become involved, that extension to the superficial inguinal glands occurs.

THE
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Editorial.

THE GUARD PIER AT MONTREAL.

We observe, by our exchanges, that this question has been brought up by Sir William Hingston, and has been animadverted upon by him in the Senate—and none too soon. When conservative bodies as the Medico-Chirurgical Society, the Provincial Board of Health, and the City Health Board, are agreed as to the noxious influence of an obstruction to the free flowing of the St. Lawrence to wash away the city's sewage, and the offensive discharges from the vessels which line our harbor, it is time, we think, for our wise Harbor Commissioners to halt for a moment, and to ask themselves: are not the advantages of increased accommodation, and the possible protection from an occasional ice-shove, most dearly purchased by the erection of this standing menace to the health of the citizens of Montreal? Anyone visiting certain parts of the harbor will recollect the offensive smells, the foul odors which they received into their nostrils last summer. That these were as hurtful as they were disagreeable is evidenced by the facts mentioned in the report of the inspector of the Provincial Board of Health—Mr. Beaudry—that many cases of fever were the result. We quote a few lines from that report: "The odors emanating from this basin (the one near the Custom House square is here spoken of) seriously incommode the employees who have to work in the neighborhood; several among them have already been obliged to leave work through sickness, some being now at the hospital, and

others at their home sick with low fever, in all probability caused by sewer gas poisoning." All through the report of the inspector for the Provincial Health Board, there are evidences of alarm at the possible results of cutting off the free circulation of water, and of making our port a back water basin—fetid and noisome from the washing of the city's putridity and rotteness. With a rapidly running river draining half a continent flowing past the City of Montreal, it is difficult to conceive any project to find favor which does not embrace the securing to it the advantages it enjoyed, by nature, of an abundant and constantly changing supply of pure water. We should be glad to see this question seriously considered by the proper authorities where the *sanitary* aspects of the question would be taken fully into account. We do not object to the guard pier, *per se*. What we do object to is that provision was not made for a sufficient supply of water being received from the river above the pier, instead of forcing our harbor and its shipping to trust to the inadequate quantity afforded by the canal—inadequate we do not hesitate to say at all times, and liable to be cut off at anytime.

But as the guard pier is there, and looks, in its huge bulk, as if it were to stay, it becomes the imperative duty of the City Council, in order that the upper harbor may not become a place to be avoided rather than to be selected for the purposes of receiving and discharging freight, to at once devise means for remedying the evil which, if it has not been created by the council, most certainly exists. To us, unlearned we admit in the mysteries of engineering skill, there appear to be several methods, either of which might be followed with advantage, and, if combined, with entire success.

The question of expense should not obtrude itself too much where the sanitary condition of our harbor is concerned, and where the advantages it affords for the purposes of commerce, and for the pleasure of travel, may be made to harmonize, most easily, with the best interests of public health.

GOLD AS A SPECIFIC IN INEBRIETY.

Dr. Oliver C. Edwards of Ottawa read a paper before a large gathering of the Medico-Chirurgical Society of Montreal on 10th January, 1896, "On the Treatment of Inebriety as a Disease." The paper records original investigation, and throws some light upon a subject that hitherto has been one of difficulty to

the medical profession. "The drunkard," he said, "has been in the past the one for whom the profession could do very little. We could send him to one of the homes at Quebec or Guelph, and shut him away from temptation for six months or a year, and give him tonics; but when he was allowed to return to his friends, in the great majority of cases he simply went back to his old habits. The craving was there, and soon asserted itself. If we tried to do anything for him ourselves it resolved itself into some tonic preparation and some good advice, and that was all. We said: 'For God's sake, man, behave yourself,' and the poor man answered: 'I will, doctor, I will behave myself. I'll never touch another drop,' and inside of ten minutes, or as quick as his feet could take him, he was standing at a bar drinking as he had for years." Dr. Edwards endeavours to show that this overmastering appetite can be quickly and effectually subdued by hypodermic injections of chloride of gold and sodium; that gold has a potency simply astonishing in subduing this diseased condition, and that it will remain subdued as long as the drunkard may wish,—that is, if he ever drinks again after taking the treatment, it will not be *in the first place* from any inducement from within but from inducement from without. The paper presents us facts of the deepest interest, and these facts have been carefully tabulated by Dr. Edwards, who has made this subject a matter of almost daily study since 16th November, 1893. He has given in that time over 4000 hypodermic injections of gold, and his experiences and close observation becomes now a matter of deep interest to the profession generally. The paper was read a second time in Ottawa on January 24th. The facts and conclusions and evidence of Dr. Edwards will soon be put to the test, and if his teaching on this subject meets the endorsement of the profession generally, a blessing will have been conferred upon the world, the magnitude of which is not easily estimated. We sincerely hope it may be so, and it will be a source of pleasure and gratification if from the ranks of the Canadian profession a man has been chosen to throw light upon a subject hitherto shrouded in the deepest darkness. But as other methods have given apparently as brilliant results as claimed by Dr. Edwards, we must await the verdict of time and further experience before concluding that inebriety, which is always a manifestation of reduced nervous centres, can be cured by any drug.

VISITING LISTS AS EVIDENCE.

The *Journal of Medicine and Science* states that Judge John Stewart, of the Franklin County (Pennsylvania) Court, recently handed down an opinion of more than usual interest to the members of the medical and legal professions. It seems that a physician of Shippensburg attended his aunt, a lady of Green Village, who was also his stepmother. After her death he presented a claim of nearly \$400 against her estate for medical attendance upon her. Payment was refused upon several points, one of which was that the book presented by the physician as evidence was not a book of original entry. The book was one of the Standard Physician's Visiting Lists, in which the calls are marked down under dates by a stroke, and then extended to the margin. Judge Stewart disallowed the claim, and said that the book was not one of original entries, but merely a book of memoranda. As the great majority of physicians use these lists, the decision is one of great moment to all in the profession who make no other debit charges against their patients.

The New York School of Clinical Medicine has succeeded in introducing a modified form of the European manner of personal instruction, suited to the needs of busy American practitioners, who need brushing up in the specialties, but who can afford only a few weeks' time for the purpose. The method consists essentially in limiting the class to a very few students, and having them act as assistants in attendance upon the vast clinical material at the school's disposal. As soon as qualified, the matriculants examine, treat and operate on patients themselves, the teachers acting as assistants.

The school itself as well as the hospital and dispensaries at which its teaching is done are fitted with everything to meet the requirements of modern science.

Massey's Magazine, published by the Massey Press, Toronto, at one dollar a year, is a new Canadian illustrated monthly periodical; it compares favorably with similar publications from across the border; the printing and illustrations are exceedingly creditable, as is the tastefully gotten up cover. Canadians should see

that this venture is liberally supported, as its continued success is of moment as affording to the world some of the evidence of our capacity for producing high class literature. It will doubtless be popular beyond our borders, as it represents so much of strictly Canadian habits, history, industries, sports, and literary and art productions. The publishers hope to have a circulation within twelve months of fifty thousand; the March number, which is No. 3, was sent to twenty-two thousand subscribers. Our sincere congratulations and wishes for success are extended to this laudable enterprise.

The directors of the Post Graduate & Medical School and Hospital, New York, have named one of their wards in memory of the late Dr. Charles Carroll Lee, who was for many years a Professor in the Institution. They have placed a tablet in the ward, giving the names of those who combined to contribute the ten thousand dollars, which was given for the purpose of the memorial. These names are as follows: Dr. Robert Abbe, Dr. L. Bolton Bangs, Mrs. James Beales, Dr. Stephen S. Burt, Miss Caldwell, Dr. Charles L. Dana, Dr. Bache McE. Emmet, Dr. George H. Fox, "A Friend," Dr. Horace T. Hanks, Mr. and Mrs. Eugene Kelly Mr. and Mrs. Henry J. Lamarche, Dr. Daniel Lewis, Mr. and Mrs. William Lummis, Mr. and Mrs. Frank A. Otis, Dr. Clarence C. Rice, Mr. Eli K. Robinson, Mr. Nelson Robinson, Dr. D. B. St. John Roosa, Mrs. Eliza M. Sloan, Dr. Andrew H. Smith, Mrs. M. E. Sparks, Dr. Reynold W. Wilcox. It will be seen that the Faculty of the Institution participated largely in the memorial gift.

INTERNATIONAL CONGRESS OF DERMATOLOGY.

The Third International Congress of Dermatology will be held in London, August 4th to 8th, 1896.

PROGRAMME.

Tuesday, August 4th.—Preliminary business. 12.00—Presidential address. Dermatology; Syphilis. 3 p.m. Subject:—"Prurigo." 1. Dr. Besnier (Paris). 2. Prof. Kaposi (Vienna). 3. Dr. J. C. White (Boston). 4. Dr. Payne (London).

Wednesday, August 5th.—9.00 a.m.—Clinical Demonstration of Cases. 10.30 a.m. Subject:—"The Etiology and Varieties of Keratosis." 1. Dr. Unna (Hamburg). 2. Dr. H. G. Brooke

(Manchester). 3. Prof. V. Mibelli (Parma). 4. Dr. W. Dubreuilh (Bordeaux). 3 p.m. Papers. 10.30 a.m. Subject:—"Syphilitic Re-Infection." 1. Prof. Fournier (Paris). 2. Prof. Lang (Vienna). 3. Mr. Alfred Cooper (London). 4. Dr. Fitzgibbon (Dublin).

Thursday, August 6th.—9 a.m.—Clinical Demonstration of Cases. 10.30 a.m. Subject:—"The Connection of Tuberculosis with Diseases of the Skin other than Lupus Vulgaris." 1. Dr. J. Nevins Hyde (Chicago). 2. Dr. Hallopeau (Paris). 3. Dr. Radcliffe Crocker (London). 4. Dr. G. Riehl (Vienna). 10.30 a.m. Subject:—"The Duration of the Period of Contagion of Syphilis." 1. Mr. Hutchison (London). 2. Prof. Campana (Rome). 3. Prof. Lassar (Berlin). 4. Dr. Feulard (Paris). 2 p.m.—Subject. "Ringworm and the Tricophytons." 1. Dr. Sabouraud (Paris). 2. Prof. Rosenbach (Göttingen). 3. Mr. Malcolm Morris (London). Many contributions to this Debate promised.

Friday, August 7th.—9 a.m.—Clinical Demonstration of Cases. 10.30 a.m. Subject:—"The Nature and Relations of the Erythema Multiforme Group." 1. Prof. de Amicis (Naples). 2. Dr. T. H. Veiel (Stuttgart). 3. Dr. P. A. Morrow (New York). 4. Dr. Stephen Mackenzie (London). 3 p.m. Papers. 10.30 a.m. Subject:—"Malignant Syphilis." 1. Prof. Handlung (Copenhagen). 2. Prof. Neisser (Breslau). 3. Prof. Tarnovsky (St. Petersburg). 2 p.m. Clinical Demonstration of Cases. 3 p.m. Papers.

Saturday, August 8th.—9 a.m. Clinical Demonstration of Cases, followed by Papers.

NOTE.—The Congress has been fortunate enough to secure for its use the building known as Examination Hall, on the Victoria Embankment. This will afford every facility for all kinds of demonstrations: cases, pictures, museum, etc. Special efforts are being made to have large clinical demonstrations of cases, and all who have been in London know how rich is the material there.

It is of the greatest importance that those intending to join the Congress should notify the Secretary, Dr. J. J. Pringle, 23 Lower Seymour st. W., London, of their intention as soon as possible. The membership fee is \$5.00, which should be sent in the form of a one pound sterling draft on London, or P. O. order to the same amount.

GEO. THOS. JACKSON,

14 East 31st St., New York,

Secretary for the United States.

Book Reviews.

Consumption, its Nature, Causes, and Prevention, with an outline of the principles of treatment for all classes of readers. By Edward Playter, M.D., Toronto. Published by William Briggs, Toronto.

This is a neatly bound book of 350 pages, published for all classes of readers, although sufficiently comprehensive to be of interest and instructive to members of the medical profession. Knowledge of a disease which makes such inroads on humanity, and constitutes such a large proportion of the mortality list, cannot be too widely disseminated among all classes of people, more especially as such knowledge will undoubtedly tend to enlightenment as to methods of prevention, which is at present the chief avenue of hope for lessening its ravages; and a book of this kind which gives a vast amount of information on the subject and matters cognate to it, if widely read, will become a fruitful means of education in regard to methods for the prevention of consumption and of fortifying the system generally, and securing natural physical development, and thus favoring a condition which gives more or less immunity from all diseases.

Dr. Playter opens with some preliminary remarks on nomenclature, prevalence, its communicability, causes and curability. Then a chapter is devoted to the lungs and their functions. The chapter on the causes is very full, the tubercle bacillus being fully discussed. He takes the ground that the most important point in regard to cause is the pretubercular condition, in which the vitality is lowered probably by ptomaines, produced in the body from the decomposition of the retarded debris of imperfect tissue change or wear, and combustion, consequent on imperfect respiration, and which excites the tubercle bacillus into pathogenic action. Many will dissent from this view, preferring to regard the condition as one in which a lowered vitality permits the bacillus to develop or one where a particularly virulent variety of the bacillus becomes implanted.

Heredity as a cause is then considered, phagocytes and blood serum, habits and conditions of life, source and dissemination of bacilli, etc.

Part II, on prevention, contains a great deal of useful information on such subjects as soil, ventilation, sunlight, dietary, bathing, respiratory exercises, food and climate, all tending to teach that by maintaining a high standard of health, and especially of the respiratory functions, is the best means of preventing the bacillus tuberculosis from exercising its destructive inroads. The book is worthy of a wide circulation, containing as it does information up to date, which it is well for the community to possess, as it is only by the general education of the public on the subjects considered so fully and clearly therein, and the practical application of the directions there given, that we can hope to stem the progress and finally stamp out the greatest physical foe of humanity.

A Guide to the Practical Examination of Urine, for the use of physicians and students. By James Tyson, M.D., Professor of Clinical Medicine in the University of Pennsylvania, and physician to the Hospital of the University, physician to the Philadelphia Hospital. Ninth edition, revised and corrected, with a colored plate and wood engravings. Price \$1.25. Published by P. Blakiston, Son & Co., 1012 Walnut street, Philadelphia.

No book is better known than "Practical Examination of Urine," Tyson. The present edition brings the subject quite up to date in regard to methods of qualitative and quantitative analysis and in regard to all the latest instruments used, cuts of which are given, such as Purdy's electric centrifuge, the Daland centrifuge, Squibb's urinometer and jar, the Laurent-Shadow polarizing saccharimeter, Marshall's & Doremus' ureometers, etc. The book contains Vogel's scale of urine tints and 48 woodcuts, and it is needless to say that the subject matter, although terse, is complete, and forms a trustworthy guide in this important department of clinical work. Corrections have been made and recent points of advancement added, while some unimportant paragraphs have been omitted, so that the book is of the same compact size and appearance of former editions.

Practical Urinalysis and Urinary Diagnosis : A manual for the use of physicians, surgeons and students. By Charles W. Purdy, M.D., Queen's University ; Fellow of the Royal College of Physicians & Surgeons, Kings'on ; Professor of Urology and Urinary Diagnosis at the Chicago Post Graduate Medical School. Author of "Bright's Disease and Allied Affections of the Kidneys," also of "Diabetes : Its Causes, Symptoms and Treatment." Second revised edition. With numerous illustrations, including photo-engravings and colored plates. In one crown octavo volume, 360 pages, in extra cloth, \$2.50 net. Philadelphia : The F. A. Davis Co., publishers, 1914 and 1916 Cherry street.

The appearance of this second edition within ten months of the first is ample evidence of the worth of the book, and shows how quickly the members of the profession recognize true merit in medical literature, and promptly appropriate that which enables them to become more proficient in the management of disease. It is imperative now that both physician and surgeon should be thoroughly acquainted with the methods of analyzing and fully examining the secretions of the kidneys, and this is undoubtedly one of the most complete works now published on this important branch for their guidance. In this edition all discovered errors have been corrected, which considerably enhances its value. We were much puzzled by the description on page 9 of the first edition of the application of Vogel's scale of colors, but it is rectified in the present edition, as are a number of other errors which are apt to appear in first editions, especially in a work of this kind, where so much detail in figures, scientific names and descriptive words obtains.

Section 1 is taken up with general considerations, such as changes on standing, color, specific gravity, quantity, etc. Then follows a section on the normal composition of urine, each substance being fully described and its origin explained. Then the various accepted methods for its detection and the determination of its quantity. The same method is applied regarding the abnormal constituents. The author's percentage tubes are a distinct advance for the quick determination, by means of the centrifuge, of the percentage of chemical and anatomical sediments and chemical precipitates. They consist of glass tubes graduated in tenths of a cubic centimetre, the lower portions being drawn out in to a conical form. The author has designed an electric centrifuge which is capable of a maximum speed of over 6000 revolutions per minute, and with large tubes 1500 to 2000. The centrifugal force is 2000 times greater than that of gravity, hence a sediment can be obtained in two minutes with this apparatus, which by

gravity requires 24 hours. The author asserts in regard to the convenience and saving of time of centrifugal methods, that "complete qualitative and quantitative examinations of the urine, including microscopical search, are duly made in his laboratory in twenty minutes.

Section 8 considers fully gravel and calculus. Part II, urinary diagnosis, gives the anatomy of the urinary organs and methods of physical examination. Then the condition of the urine in the various diseases of the kidneys and affections in which changes in the urine occur, giving also the prominent clinical features of each. An appendix on the examination of the urine for life insurance is a valuable guide in this branch of medical work, affording numerous valuable suggestions.

The book altogether cannot be praised too highly, representing as it does in a succinct, clear and readable manner all the essential points and methods now known, culled from the extensive literature of this subject, together with the twenty-five years personal observations and experiments of the author.

General Hygiene of the Skin and Scalp. By Dr. Henri Fournier. Published by the Société d'Éditions Scientifiques, Paris.

This is a small volume of 154 pages, one of thirty manuals on kindred subjects forming the *Petite Encyclopédie Médicale*, and designed for the use of the public as much as medical men. It is written in a clear, plain style, and contains a deal of sound advice both as to what to do and what not to do. It indicates the dangers attending the use of hair dyes and cosmetics, etc., and gives simple, plain rules for the proper care of the skin and hair.

The Up-to-Date Primer: A First Book of Lessons for Little Political Economists. By J. W. Bengough, 12mo, limp cloth, 75 pp. Illustrated, 25 cents. New York, London, and Toronto: Funk & Wagnalls Company.

"Wit can often pierce where graver counsel fails." Assuming the truth of this old saw, we discern a very effective weapon for social reformers in general, and single taxers in particular, in this little book, *The Up-to-Date Primer*. It consists of 70 separate "lessons" in words of one syllable, each illustrated with very cleverly executed cartoons. Each lesson is preceded by nine words, after the fashion of the child's primer, these words combining in themselves caption to the cartoon and introduction to the lesson. The author, J. W. Bengough, former editor of the Canadian comic paper, *Grip*, is well known for his bright, witty caricatures on political and economic subjects.

An American Text-Book of Surgery, for Practitioners and Students. By Charles H. Burnett, M.D., Phineas S. Conner, M.D., Frederic S. Dennis, M.D., William W. Keen, M.D., Charles B. Nancrede, M.D., Roswell Park, M.D., Lewis L. Pilcher, M.D., Nicholas Senn, M.D., Francis J. Shepherd, M.D., Lewis A. Stimson, M.D., William Thompson, M.D., J. Collins Warren, M.D., and J. William White, M.D. Edited by William W. Keen, M.D., LL.D., and J. William White, M.D., Ph.D. Second edition carefully revised. Publisher, W. B. Saunders, 925 Walnut street, Philadelphia.

The science and art of surgery in all its departments has made rapid strides during the past decade, fostered by our increased knowledge in physiology and pathology, and more especially by the immense progress made in bacteriology, which has made clear methods necessary for asepsis

and antiseptis, and thus led to operative measures being applied to almost every organ of the body, and to parts until recently considered inaccessible to the surgeon's knife. Hence the necessity for frequent editions of our surgical text-books, in order that the advances made may be condensed from the general literature of the subject and put into concrete form for the convenience of practitioner and student.

The first edition of the present work appeared in 1892, and met with a phenomenal sale in the United States and Canada, and abroad, and has been adopted by over sixty teaching bodies as a text-book. The book is in one massive volume of some 1250 pages, well printed, strongly and neatly bound, and the ease with which the book remains open at any part overcomes any objections one might have to its size, and this is still further made excusable when the numerous half and full page cuts are examined, many of which are new in this work, and are extremely well executed. The writers are all well known teachers and authorities, and each subject has been submitted to and approved of by each editor, so that it represents in each subject the views of the whole staff, which may be considered to fairly represent American surgery. Many corrections and additions have been made to the text throughout the book. Among the latter are: "The effect of modern small arms in military surgery; a new section on acromegaly; the Hartley Krause method of removing the Gasserian ganglion; the osteo plastic method of resection of the skull, with a number of additions to operations and methods in endocranial and spinal surgery; in the surgery of the chest a description of Schede's operation; in the surgery of the digestive tract, Witzel's methods for gastrotomy; the use of Murphy's button in intestinal anastomosis; the consideration of retro-peritoneal tumors and of castration for enlarged prostate; a chapter on symphysiotomy; Macewen's method of compressing the aorta in amputation at the hip joint. The sections dealing with fractures and dislocations, appendicitis, the radical cure of hernia, amputations of the breast, are enlarged. Displacements of the uterus have been also regrouped, and the chapter largely rewritten.

The contents are considered under the heads of general, special, regional and operative surgery. Among the articles which are well treated and fully illustrated are those on aneurism, surgery of the joints, diseases and injuries of the head, in which is found fully considered the position of the motor areas, and the technique of cerebral operations as worked out by Horsley, Chiene, Keen, and others. Operations on the intestines, intestinal anastomosis, the use of decalcified bone plates, the rings of Abbe, and Murphy's button. Appendicitis is fully considered. medicinal treatment is recommended in the early stage, surgical if it does not rapidly yield, which is the condition in the large majority of cases. We find here an epitome of the work done in this important affection, by Willard Parker, McBurney, Treves, Senn, Kummell and others. A good résumé is given of the surgery of the female generative organs, as well as of the surgery of the eye and ear. The section on the ligation of arteries is fully illustrated by a number of full page colored illustrations. The book ends with a chapter on minor surgery, in which are found twenty-four original cuts illustrating all the varieties of bandaging.

This book is certainly a credit to American surgery, the authors and publishers, and deserves a wide circulation among general practitioners, and is a most suitable college text-book for students, embodying as it does a comprehensive representation of modern surgery, having sufficient detail without being cyclopædic.

The Year Book of Treatment, for 1896. A critical review for practitioners of medicine and surgery. Price \$1.50. Published by Lea Brothers & Co., Philadelphia.

The various departments of medicine, surgery, etc., in this the 12th issue of this valuable book are in charge of the following eminent contributors: Diseases of the Heart and Circulation, Sidney Coupland, M.D., F.R.C.P. Lungs and Organs of Respiration, E. Markham Skerritt, B.A., M.D., F.R.C.P. Lond. The Treatment of Nervous and Mental Diseases, Ernest S. Reynolds, M.D., M.R.C.P. Lond. Diseases of the Stomach, Intestines and Liver, W. Hale White, M.D., M.R.C.P. Lond. Kidneys, Diabetes, etc., Charles Henry Ralfe, M.A., M.D. Cantab, F.R.C.P. Lond. Gout, Rheumatism and Rheumatoid Arthritis, Archibald E. Garrod, M.A., M.D., F.R.C.P. Infectious Fevers, Sydney Phillips, M.D., F.R.C.P. Lond. Medical Diseases of Children, Dawson Williams, M.D., F.R.C.P. Lond. Anæsthetics, Dudley W. Buxton, M.D., B.S., M.R.C.P. General Surgery, William Ross, M.B., B.S., F.R.C.S., and Albert Carlross, M.S. Lond. Orthopædic Surgery, W. J. Walsham, F.R.C.S. Surgical Diseases of Children, Edmund Owen, M.B., F.R.C.S. Genito-urinary system, Reginald Harrison, F.R.C.S. Rectum, Alfred Cooper, F.R.C.S. Venereal, J. Ernest Lane, F.R.C.S. Diseases of Women, G. Ernest Horman, M.B., F.R.C.P. Lond. Midwifery, M. Handfield Jones, M.D. Lond. Skin Diseases, Malcolm Morris, F.R.C.S. Ed. Eye, Henry Power, M.B., F.R.C.S. Ear, George P. Field, M.R.C.S. Throat and Nose, Barclay J. Baron, M.B. Ed. Tropical Diseases, Patrick Manson, M.D. Public Health and Hygiene, B. Arthur Whitelegge, M.D.

A review of this list of names is sufficiently suggestive as to the high character of this resumé of advances made in the treatment of disease during the past year. Every department of medicine and surgery, including all the specialities, is covered in its 275 pages.

In the different departments the diseases are taken up one after another, and all new suggestions for treatment, culled from the writings of the most distinguished authorities in the medical journals of all countries, are given, many practical notes being added by the editors. To particularize is out of the question, as every page contains something of interest to the practitioner in practical therapeutics. As the aim of the physician and surgeon is to relieve suffering and rectify abnormal conditions, and as he is esteemed by his clientèle in proportion as he succeeds in accomplishing this end, the wisdom of being armed with every known method for alleviating human ills is apparent, and we know of no better means to this end than by possessing this annual and assimilating its contents. The book is well printed, neatly bound, and compact in its arrangements, and of such size that it can be slipped into one's pocket and referred to at odd moments. The price is exceedingly reasonable, and every general practitioner who studies it carefully should be able to keep himself so well posted that it will not be necessary for him to so continually be referring his patients to the specialist.

Syphilis in the Middle Ages and in Modern Times. By Dr. F. Buret, Paris, France. Translated from the French, with notes, by A. H. Ohmann-Dumesnil, M.D., Professor of Dermatology and Syphilology in the Marion Sims College of Medicine; Consulting Dermatologist to the St. Louis City Hospital, to the St. Louis Female Hospital; Physician for Cutaneous Diseases to the Alexian

Brothers' Hospital ; Dermatologist to Pius Hospital, to the Rebekah Hospital, to the St. Louis Polyclinic and Emergency Hospital, etc., etc. Being Volumes II and III of "Syphilis To-Day and Among the Ancients," complete in three volumes. 12mo, 300 pages. Extra cloth, \$1.50 net. Philadelphia : The F. A. Davis Co., Publishers, 1914 and 1916 Cherry street.

These two volumes, bound together, complete Dr. Buret's work on syphilis to-day and among the ancients, volume I, syphilis in ancient and prehistoric times, having appeared some time ago, and demonstrated the existence of syphilis, not only in the most ancient historic epochs, but also in prehistoric remains. The second volume gives the history of the disease during the Middle Ages, from the fall of the Roman empire up to the end of the fifteenth century, and in doing so makes an exhaustive examination of the literature of this period. Brief extracts are given from the scientific, historical and literary documents of numerous writers, bearing upon venereal diseases described under a number of different titles. He passes under review the writings of the principal masters who were inspired by the doctrines of Hypocrates and Galen. next the Arabists, the school of Salerno, and various authors of the 14th and 15th centuries. Chapter 3rd treats of the great epidemics of the Middle Ages, the worship of Venus in the monasteries of the tenth century.

Then follows an account of the great epidemic of Naples, in which other contagious diseases than syphilis are included ; the identity of the leprosy of the Middle Ages and syphilis is discussed, followed by chapters on the origin and nomenclature of venereal diseases, and the pretended American origin of syphilis. The latter describes how this legend of the American origin was born. Guaiac was obtained from the new world, and was said to be a specific, and as they held that Providence always places the remedy next the disease, the new world was proclaimed to be the cradle of the pox, and it was concluded that the disease had been brought to Europe by the crews of Christopher Columbus. The author in this work completely dispels this delusion, which has been generally endorsed until recent times in the present century.

The third volume gives an account of syphilis from the 15th century to the present time ; it depicts the vice which reigned in ecclesiastical institutions among popes, cardinals, bishops, clergy and women in convents. The name syphilis had its origin in a poem by Francaster, a physician of Verona, in 1530. The use of mercury in the 15th century was adopted from the empirics. A history of its use is given, and also of guaiac, smilax and sarsaparilla. Chapters 2 and 3 gives venereal pathology as it was understood in the 17th and 18th centuries. In the latter we learn that the speculum was used in the 6th century by Paulus Aegineta, and that one was found in the ruins of Pompeii (destroyed in 79). Hunter's work in 1786 is noted. Chapter 4 describes the work on syphilis during the 19th century. The schools of the identists and unicists are referred to, and the work of Ricord, the most distinguished syphilographer of the century. The concluding chapter reviews the procedures employed in venereal therapeutics from the most remote times to the present day. This classical book makes most interesting and instructive reading, carrying the reader over the history of the world from the most remote times, and showing that this scourge of sexual indulgence has manifested itself in all countries, and from prehistoric times down through the ages.

Pamphlets Received.

- Sanitation in Street Pavement.** By Henry A. Marcy, A.M., M.D., LL.D. American Medical Association Press, Chicago.
- Personal Service as the Especial Exponent of a Great Profession.** By Henry A. Marcy, A.M., M.D., LL.D. Damrell & Upham, publishers, Boston.
- Five Cases of Pyosalpingitis.** By A. Laphorn Smith, B.A., M.D., M.R.C.S.E. Wm. Wood & Co, Philadelphia.
- Treatment of Uterine Retro-displacements by Vagino Fixation.** By Frederick Holme Wiggin, M.D. Reprinted from the *New England Medical Monthly*.
- Traumatic Separation (Compound) of the Lower Epiphysis of the Femur.** By A. H. Meisenbach, M.D. From Directory Printing & Bookbinding Co., New York.
- Removal of Ingrowing Toe-Nail.** By the same author. A simplified operation by means of a new instrument.
- Auscultatory Percussion and Allied Methods of Physical Diagnosis.** By A. L. Benedict, A.M., M.D., Buffalo.
- Report of the Board of Health of the Province of Quebec.**
- What has Sewer Gas got to do with Bad Results in Obstetrics and Gynaecology.** By A. Laphorn Smith, B.A., M.D., M.R.C.S.E., Montreal.
- Clinical Notes on Psoriasis,** with especial reference to its prognosis and treatment. By L. Duncan Buckley, A.M., M.D., New York.
- Urethroscopy in Chronic Urethritis.** By Ferd. C. Valentine, M.D., New York.
- Practical Urethroscopy.** By G. H. R. Wossidlo, M.D., Berlin, Germany.
- The Technics of Maunsell's Method of Intestinal Anastomosis.** By Frederick Holme Wiggin, M.D.
- Supplementary Report on the Success of Electrolysis in the Treatment of Urethral Strictures.** By Robert Newman, M.D., New York.
- Electricity in the Treatment of Exophthalmic Goitre.** By Robert Newman, M.D., New York.
- Burns of the Cornea,** Electric Light, Explosion, causing temporary blindness; traumatic injuries to the eyes. Hypopyon. By L. Webster Fox, M.D., Philadelphia.
- Evacuation of the Eyeball.** By same author.
- Sleep in its Relations to Diseases of the Skin.** By L. Duncan Buckley, A.M., M.D., New York.
- Transactions of the College of Physicians of Philadelphia for 1895.**
- A Consideration of Certain Doubtful Points in the Management of Abortion.** By Chas. P. Noble, M.D., Philadelphia.
- Nephritis of the Newly Born.** By A. Jacobi, M.D., New York.
- Criminal Abortion.** By Mary A. Dixon-Jones, M.D., Brooklyn, N. Y.
- Carcinoma on the floor of the Pelvis.** By same author.
- Sterility in Women,** by same author.
- Colpo-Hysterectomy for Malignant Disease.** By the same author.
- A Case of Dermoid Tumor of both Ovaries,** complicated by a deposit of bone upon each side of the true pelvis, having no connection with the tumors. By Chas. P. Noble, M.D., Philadelphia.
- Movable Kidney.** By Chas. P. Noble, M.D., Philadelphia.
- Technique of Emptying the Uterus in Inevitable Abortion.** By Chas. P. Noble, M.D., Philadelphia.

Some of the Newer Problems in Abdominal and Pelvic Surgery in Women. By Chas. P. Noble, M.D., Philadelphia.

Diagnosis and some of the Clinical Aspects of Gyroma and Endothelioma of the Ovary. By Mary A. Dixon-Jones, Brooklyn, N. Y.

The Sensory Nervous System in Diagnosis. By Chas. P. Hughes, M.D., St. Louis, Mo.

The Necessity of Complete Extirpation of Tumors, and the importance of rapid cicatrization of the wound. By Frederick Holme Wiggan, M.D., New York.

PUBLISHERS DEPARTMENT.

ACCURATE ADMINISTRATION OF LITHIA.

Wm. R. Warner & Co.'s original Lithia Water Tablets (3 and 5 grains) admit of an accurate dosage of Lithia not to be obtained in any natural Lithia Water.

These tablets are securely packed so as to maintain their permanency, in consequence of which, when a Lithia Water Tablet is placed in a glass of water it quickly dissolves, effervescing in so lively a manner as to excite the interest of the patient to such a degree that the unpleasant thought that he is about to take a medicine does not arise. Now that Lithia has become a valuable remedy for Rheumatism, Lithemia, Goutt Gravel, Bright's Disease, etc., these tablets are without doubt the most convenient method to administer it, as enough Lithia Water Tablets may be carried in the pocket to make 2½ gallons Lithia Water of definite strength.

THE DECADENCE OF OPIUM.

Wendell Reber, A.M., M.D., Pottsville, Pa., Oculist and Auist to the Children's Home, under the above caption in the *Buffalo Medical Journal*, writes: "We would not banish opium. Far from it. There are times when it becomes our refuge. But we would restrict it to its proper sphere.

"In the acute stage of most inflammations, and in the closing painful phases of some few chronic disorders, opium in galenic or alkaloidal derivatives is our grandest remedy—our confidential friend. But here, the application should cease; and it is just here that the synthetic products step in to claim their share in the domain of therapy.

"Among the latter, perhaps none has met with so grateful a reception as antikanmia, and justly so; for among all the contributions of pharmaceutic chemistry, none so fully merits our confidence as this one.

"Given a frontal-temporal-vertical or occipital neuralgia growing out of an uncorrected ocular defect, it will almost invariably arrest the head pain, until such time as the ocular trouble can be corrected with glasses. In the terrific fronto-parietal neuralgia of glaucoma, or in rheumatic or post-operative iritis, it is of signal service, contributing much to the comfort of the patient, and, I have sometimes thought, exerting an undeniable influence over the ocular disease. In this last group of cases I have seen the most benign effects follow the hourly administration of ten grs. of antikanmia until the pain is relieved. It will seldom be necessary to exceed sixty grains of the drug.

"Its range of application is wide. It is of positive value in certain forms of dysmenorrhœa; it has served me well in the pleuritic pains of advancing pneumonia, and in the arthralgias of acute rheumatism; on several occasions, I have been able to allay with it the lightning, lancinating pains of locomotor ataxia; but nowhere do I employ it with such confidence as in the neuralgias, limited to the area of distribution of the fifth nerve." Here its action is almost specific, surpassing even the effect of aconite over this nerve.

"PLEASURES OF OUT-DOOR LIFE."

Live while you live. Get all the legitimate pleasure you can. This is a beautiful world. Don't miss a large part of its pleasure by going through life blindfolded, as many people do. The outdoor world is poetic, pleasing, instructive. There's a wealth of pleasure in roaming over the hills, across the fields or through the woods. All nature is harmony of music to the attentive ear. Birds, plants, flowers, ferns, mosses, insects, the beauty of minerals, yes even stars above are strains in this harmony. Get in closer touch. Take *The Observer*, Portland, Conn. Sample 10 cents. One year \$1.

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Original Communications.

**VALEDICTORY ADDRESS TO THE GRADUATES IN
MEDICINE,**

Delivered at the Annual Medical Convocation of the University of Bishop's College, 8th April,
1896, by A. ARTHMAN BRUCER, M.D. EDIN., Professor of Physiology and Histology.

LADY AND GENTLEMEN,

I have been chosen by my colleagues to address a few parting words of advice and of encouragement to you who are about to assume the duties and responsibilities of the practice of medicine. I deem it a privilege to address you on their behalf.

You have joined the company of the brave and unselfish men and women, who freely risk all that is dearest, even life itself, in the performance of their daily work; and it is to me a pleasing duty to welcome you into the ranks of practitioners of the healing art. For four years, your teachers have done their utmost to assist you in mastering the several branches of medical science. Knowing how rough and rugged is the path of medical education, they have endeavored to guide your footsteps and help you to meet with a cheerful spirit the difficulties of the way. To-day they feel proud to bear testimony to your mental worth. They rejoice to be able to say that you have employed your time, and availed yourselves of your opportunities, to the best advantage, and that you are deserving of the degrees conferred upon you.

The title of Doctor in Medicine not only expresses the possession by the physician of certain items of professional knowledge, but it also implies the possession of a well-trained mind, furnished with every intellectual means to get the most out of professional life. A doctor is expected to be endowed with intellectual powers of no mean order. He or she must be an educated person in order to rise above mediocrity in the medical profession. The value to the physician of a liberal education

is now considered so essential, that many universities do not confer a medical degree unless the candidate has previously graduated in Arts. Permit me to urge upon you the necessity of improving your general education, if your early training has been defective; for among the educated public, a physician who is learned and cultured has a better chance of achieving professional success than one who is illiterate, and who, by his ignorance of subjects not strictly pertaining to medicine, exposes himself to ridicule. In alluding to a sound general education as an element of success in the medical profession, I have no intention to disparage your literary and scientific attainments. I have taken the liberty to address you on the subject, because I would have you speak a word of counsel to intending medical students, should you have the opportunity to do so. Plead for the cultivation on their part of scientific habits of thought, and advise them to undergo a thorough training in Arts prior to matriculation in a school of medicine. A large percentage of medical students are, in consequence of their imperfect education, unfit to cope with the exigencies of medical training; and the difficulty they experience in grasping the significance of scientific truths, and in clearly expressing their thoughts, is the secret of their repeated failures to pass professional examinations.

The medical man should aim at being scientific in his methods of practice and in his habits of thought. He should be able to follow, be it in a humble way, the leaders of medical science in their application of scientific methods to the service of suffering humanity. He should be in a position to appreciate their labors if not actually ambitious to emulate them. He should be capable of making his diagnosis with judgment, basing his ultimate conclusions on well established symptoms of disease. The degree that you possess is a guarantee that you have the qualifications for which I plead; and I am confident that you are qualified by your training to undertake your life's work, and to acquit yourselves therein with distinction. Your teachers will nevertheless expect you to continue the work of medical education begun at Bishop's College. We would have you study the pages of the best medical and surgical works. We would have you read the best medical journals, in order that you may keep abreast of the progress of medical science. But beware of making mere book-worms of yourselves. The physician's duty is to improve his art. He may attain his object by making exact clinical observations, by

gathering facts related to disease and carefully comparing and correlating them, and having ascertained the correctness of his conclusions by well conducted experiments, publishing his results for the advancement of his profession. And let me say here that the clinical ward, and the out-patient room, are as much places for scientific study as is the laboratory of the physiologist or of the pathologist. All unusual phenomena you may chance to observe at the bedside should be made the subject of scientific inquiry, and the theories suggested by your observations confirmed or disproved by experiments. Let us, however, warn you against publishing results of investigations that are incomplete, merely for the sake of contributing an article or a paper to a medical journal. To the investigator the old maxim "hasten slowly" should be a golden rule; and his researches should be conducted without hurry and with the greatest care. In the interest of the progress of medical science, the physician should publish no theories, arising from his clinical observations, as facts; he should make known to the medical world no results of the accuracy of which he is himself doubtful. Although we would advise you to publish the results of honest work, we cannot too strongly deprecate the unfortunate tendency on the part of many medical men to write papers when they have nothing in particular to communicate—papers which, for lack of original ideas, and the clumsy arrangement of borrowed thoughts, may fairly be considered as samples of literary patchwork.

Now that you have obtained your degrees in medicine, the very serious question arises of what you are to do with your laboriously acquired knowledge. Advice on this head will depend on your circumstances, pecuniary and otherwise. If you possess some means, and can afford to wait a year or two before settling down, we should recommend you to spend a year at least in some resident appointment in an hospital; or if you have already enjoyed the clinical opportunities of an hospital appointment, to spend a year or more in the medical schools of Europe. When you come to settle down, you will have the alternative of beginning practice in a city or town, or in the country. General practice, either in town or country, must be the work of the majority of medical men and women, and no branch of medical work is more honorable or affords better opportunities for the exercise of the highest qualities of heart and mind.

Nowadays, the tendency on the part of some young graduates

in medicine is to devote their energies and time to the mastering of special branches of medicine and surgery, thereby qualifying themselves to practise as consultants or specialists. While one cannot but admit that concentration of thought and work on any branch of medicine or surgery conduces to greater efficiency in that branch, we would advise recent graduates to rather aim at acquiring a sound knowledge of all the branches of medical science in the first years of practice. By so doing they will discover their aptitude for a special branch of medical science, and should they eventually decide on adopting a specialty, they will have acquired that general experience of diseases which will materially influence the quality of their special work.

Your selection of a suitable field for practice must be made with the greatest care. You will be guided in your ultimate choice of a suitable location by personal considerations of health, character, professional ability and pecuniary resources, by the professional competition likely to be encountered, by the prosperity of the community, and by the probability of a constant increase in the population of the town or rural district. Yet, after you have settled down in what seems to be a suitable location, chosen with the due exercise of caution and forethought, circumstances may arise which will unfavorably influence your chances of professional success. The growth of practice may in consequence be slow, and your work ill-remunerated. The young physician, thus circumstanced, must not allow the slow growth of medical reputation and practice to discourage him. Should he be fortunate in possessing an independent income, sufficient for his needs, he will act wisely if he persists in giving the location of his choice a fair trial, with the determination of commanding success by the faithful and thorough performance of his work. Let him have recourse to every legitimate means of making known his professional worth, and if he be truly competent, his neighbors will after a time recognize his merit. In endeavoring to secure professional success, you should be constantly on the watch for opportunities, and be prepared to avail yourselves of them when they arise, for in this often lies the secret of success.

“ There is a tide in the affairs of men,
Which, taken at the flood, leads on to fortune ;
Omitted, all the voyage of their life
Is bound in shallows and in miseries.”

It is in the judgment and ability shown in taking the tide

when at the flood, that the successful man mainly differs from the unsuccessful.

Figure, address, polish, management are elements of success in the medical profession. The public, unable to fathom the depth of a physician's special knowledge, are often influenced in selecting him for the treatment of disease by mere appearances. There is truth in the adage "nothing succeeds like success," and, I may add, success in medical practice. Although you may be disinclined to credit the statement, the public are often guided in the choice of a physician by considerations of dress. They prefer to employ a well dressed practitioner to one who is slovenly attired, although the latter may be the more skillful of the two. You will therefore have to humor the public in the matter of dress, if you wish to become popular.

Let us suppose that by your honest endeavor to succeed, by the conscientious performance of your work, by your sympathy with the sick public, by your courage in battling with disease, you have succeeded in building up a good and reliable practice, and in gaining the esteem of the public. The maintenance of yourselves in public favor will in a measure depend on your relations with your professional brethren, and on the manner in which you dispose of the trust reposed in you by the public.

In your intercourse with your professional brethren every acknowledged rule of etiquette should be strictly observed. Some unprincipled practitioners, in their anxiety to make business, have recourse to doubtful expedients in order to supersede fellow-physicians in the treatment of patients under their care. Never by any means act unfairly towards a professional brother or sister, and by your indiscrete words and actions take a mean advantage of him or her.

When called in consultation, carefully refrain from disparaging the methods of treatment of the regular medical attendant, but rather defend his management of the case if you can honestly do so. The habit of some consultants, of conversing with members of the family about particulars of a case to which they have been called, and in the absence of the family physician, is to be strongly deprecated.

In your dealings with the deserving poor, let no consideration of ill-paid fees deter you from placing the benefit of your experience and skill at their service. Never refuse, except for valid reasons, to visit the lonely abode of poverty and "learnt he luxury of doing

good." If you live by the public you must also live for the public. It is incumbent on every practitioner of medicine to educate the people to pay due regard to the claims of hygiene. Here you have an opportunity to aspire to a reputation of disinterestedness. And although the due observance by the public of the laws of health must greatly conduce to the lessening of disease, and the consequent reduction of your income, you should bear in mind that you owe the public certain duties which, in proportion to the trust reposed in you, are not measurable by fee or reward.

If you be successful in establishing yourselves in fair practice, you might be tempted to work without relaxation from year to year. lest in your absence you should lose some of your best paying patients. The physician should, in justice to himself, take at least a month's holidays every year; for broken rest, tasteless meals, anxieties shorten life, and if the daily routine and drudgery of practice be uninterrupted, he must sooner or later suffer from impaired health, which will shorten the period of his usefulness.

You are leaving the University at a time when its Medical Faculty is about to enter on a new era in its history. It cannot be that you are wholly ignorant of the extent to which its educational work has been hampered, not only by lack of endowment, but also by the relentless opposition to its advancement evinced by many in this community. It is now more than likely that the recent affiliation of the Dental College of the Province of Quebec with the University of Bishop's College will, by securing the good will of the leading members of the Dental Profession in this city of Montreal, and by increasing the number of students attending special departments of our medical school, materially assist in promoting the prosperity of the Medical Faculty of the University.

It is our earnest hope that in your future career you will be true to yourselves and faithful to the interests of the medical profession. Your devotion to duty should be ideal. It is not always easy to rise to the highest level of professional duty, but it is desirable that young graduates should entertain an ideal of duty and endeavor to attain it.

In your dealings with members of the medical profession, put aside all petty jealousies and personal rivalries, but be friendly with and just to all co-workers in the field of medicine, irrespective of their nationality and of their university training; for medical science is of no special university, language or nationality. We would have you do your utmost to ennoble your profession, and,

by your noble and unselfish deeds, by your single devotion to your ideal of duty, by your honest endeavor to enlarge the boundaries of medical science, do honor to yourselves and to your Alma Mater.

On this memorable day on which you enter upon the campaign against vice, ignorance and disease, let it be your firm resolve not to make your noble office subservient to any ignoble end ; but let each of you say as did Hippocrates of old, " With purity and with holiness I will pass my life and practise my art."

THE CAUSES OF FAILURE TO OBTAIN GOOD RESULTS FROM OPERATIONS ON THE CERVIX UTERI.

By A. LAPHORN SMITH, B.A., M.D., M.R.C.S., Eng.

Fellow of the American Gynæcological Society, Gynæcologist to the Montreal Dispensary and to the Samaritan Hospital ; Surgeon to the Western Hospital, Professor of Clinical Gynæcology in Bishop's University.

Having had an experience of over three hundred cases of operations on the cervix uteri and having been present at or taken part in a hundred more which were performed by other operators, it is impossible for me to shut my eyes to the fact that success does not follow it immediately in all cases, and in some cases not at all. I must even go further and admit what some of the opponents of the operation claim, that a few of the patients are made decidedly worse by it. But there are reasons for this as for everything else, and I shall now endeavor to point out the causes for these failures. I shall do so the more freely and frankly because some of the failures I have met with occurred among my own patients who were operated on during my earlier and less experienced years. The operation for repair of a lacerated cervix seems at first sight a simple and easy one, but I have come to the conclusion that to do a bad case properly is one of the most difficult of minor gynæcological operations. I have seen the great Emmett, the inventor of it, spend the best part of an hour with the best of assistance in performing it on what an inexperienced operator would have called an easy case, hardly bad enough to operate on at all ; it was one of those cases of deep bilateral laceration which had healed by granulation, the angle between the everted lips having been filled in with cicatricial tissue, while the red ciliated epithelium of the mucous membrane of the cervical canal had been destroyed by applications of nitrate

of silver until it had been entirely replaced by pavement epithelium and scar tissue. An inexperienced operator would have said in this case that there was no laceration at all, or at the most he would have denuded the mucous membrane on each lip and stitched it neatly over the immense wedges of cicatricial tissue. Emmet on the contrary worked away with tenaculum and scissors for more than half an hour, digging out piece after piece of scar tissue hard and white and fibrous, being guided by his sense of touch, until when he was ready to sew it up, the original tear had been reproduced right up to the internal os, and the long soft lips were brought together to unite by primary union. The nerve filaments of the great sympathetic which had been irritated for many years were placed at rest at last.

When properly performed on women whose generative organs are otherwise free from disease, the repair of the lacerated cervix is one of the most wonderful and most satisfactory in its results. I confess that at one time I myself thought that its value was over-estimated, and that a moderate laceration had better be left alone. But as one after the other of the women on whom I had operated appeared before me from three to twelve months after the cervix had been repaired, so improved in health that they could hardly be recognized as the same women, I became more and more enthusiastic over its merits. Some of these women had been under medical treatment for years for dyspepsia, headaches, constipation, palpitation of the heart, menorrhagia, miscarriages, leucorrhœa, dyspareunia and painful locomotion; some of them were emaciated and were thought to be in consumption, and yet, without any other treatment but the repair of the cervix, their health was completely restored. As I am writing this a great many of these cases are passing through my mind, and it would be interesting to give a detailed account of a few of the worst of them; but this paper is dealing with causes of failure after cervix operations and I must keep to my subject.

The first cause of failure, as I have mentioned, is lack of thoroughness in removing cicatricial tissue. No matter how deeply this may go it must all be got out. Nothing but soft tissues must be covered up. If any hard scar tissue or distended cysts are allowed to remain, the result will be disastrous to the woman's health, the operator's reputation, and even to some extent to the reputation of all gynæcologists in general. One patient who was under my care at the Western Hospital with very severe reflex

symptoms had been operated on in an American city several years before. When her list of symptoms was read before my class it was at once suggested by one of the students that they pointed to the existence of a lacerated cervix, but she stated that this had been repaired, and on examination there indeed was a beautiful cone-shaped cervix to be seen with a small os. But on examining with the finger a hard mass the size of a bean could be felt on one side beneath the surface, like a foreign body beneath the skin. Her operation was done over again, when large masses of scar tissue were removed from the angles. During the process a cyst the size of a bean was opened and thick jelly-like material exuded. The cyst wall was carefully dissected out and the lips brought together, with the result that the reflex symptoms disappeared some months later.

Another patient under my care at the Samaritan Hospital, who was sent there by Dr. MacNamara, had been attended by several physicians for convulsions. Dr. MacNamara recognized the hysterical or uterine element in them and examined her, when he discovered a badly lacerated cervix which had been repaired a year ago without the cicatricial tissue having been removed. During the week that she was awaiting her turn at the Samaritan for operation she had three or four hystero-epileptical convulsions a day. In this case a Schroeder's operation was performed and at least an inch and a half of dense cervix full of cicatricial tissue was removed, including all the part which had been sewed up before with the result that she has only had two convulsions in the four weeks which have elapsed since her operation. Her doctor tells me that she hardly ever went a day without having at least one, previous to the operation.

For these cases an Emmet operation is impossible, for the simple reason that the cervical mucous membrane itself is hopelessly diseased and indurated. The Schroeder operation of course has the objection that it is exceedingly difficult for a beginner or for one, who has not had considerable experience in plastic work, for it requires great speed on account of the brisk hemorrhage which is going on all the time. But it is a very pretty operation, leaving nothing but soft tissue in the cervix. It has one paramount advantage and that is that it not only offers no barrier to an easy subsequent confinement, but on the contrary ensures that the next delivery will be a very easy one. In fact there is hardly any first stage; the circular fibres surrounding the outlet to the womb having

been removed, there is practically no period of dilatation, which is often the most painful part of the labor.

Another cause of failure is lack of proper preparation of the patient for operation. When there is much eversion and cystic disease of the lips the patient should be kept in bed for a week or two with three douches a day of two gallons of hot water at 116° Fahrenheit. At the same time that excellent little instrument known as Butter's scarificator should be used freely all over the cervix, so as to empty all the cysts and engorged bloodvessels. It is astonishing to see how much can be done by these means in reducing an enormously swollen cervix. If these precautions are not taken and the swollen lips are brought together, the tension is so great that the stitches give way and union fails to take place.

Another rather common cause of failure is the removal of too much of the cervical mucous membrane. The operator has intended to leave plenty of the latter intact, but during the excitement of the operation he infringes a little first on one side and then on the other until when he comes to sew the opposite lips together he has only $\frac{1}{8}$ of an inch on each lip. Now two $\frac{1}{8}$ will make a canal only a quarter of an inch in circumference, or $\frac{1}{3}$ of $\frac{1}{4}$ or 1-12 of an inch in diameter. A good many of these cases suffer subsequently from dysmenorrhœa and require treatment by dilatation. But the greatest cause of failure to cure the patient is the negligence or inability of the operator to recognize retroversion with fixation and serious disease of the ovaries and tubes coexisting with or antedating the injury to the cervix. Sometimes this is not our fault, for after explaining to the patient that she requires two operations, one of them not at all dangerous and the other rather serious, she will request us to do the lesser operation first in the hope that she will be so much relieved by it that she may be able to dispense with the graver one. But after having fallen into this unfortunate error once or twice I have come to the conclusion that we should never perform a cervix operation upon a woman with diseased tubes and ovaries unless at the same sitting we go on and remove the ovaries by laparotomy. If we can only do one operation at a time we should I think remove the pus tubes first. I am so much in dread of these failures to cure, for I know how much injury it does to the profession and how much it disappoints the patient to find that she has been rendered worse rather than better by the operation on the cervix, that I now make it my invariable

rule to do all the operations at one sitting, such as dilatation, cur-
retting, amputation of cervix, repair of perineum, repair of cys-
tocele, removal of pus tubes and ventrofixation all at one sitting.
No one, therefore, should undertake the repair of a lacerated cervix,
unless he is competent to diagnose retroversion and diseases of the
tubes and ovaries, the necessary knowledge for which can only be
obtained by frequent examinations of women in health as well as
of those in every stage of pelvic disease.

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

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LUMBAR PUNCTURE OF THE SUBARACHNOID SPACE.

This subject has attracted considerable attention during the last few months. The articles by Dr. George W. Jacoby, in the *New York Medical Journal*, December 8th, 1895, and January 4th, 1896, being the most comp'ete. Quincke, in a communication entitled *Hydrocephalus*, read in 1861 at the Tenth Congress of Internal Medicine, spoke of a method he had adopted to relieve the cerebral pressure by tapping the subarachnoid space in the lumbar region, he had made 22 punctures in 10 patients. Von Zeimssen, two years later, at the 12th Congress, spoke favorably of it for reducing brain pressure, 60 to 90 c.c. being sometimes removed. Lichtheim, about this time, recognized its chief value, namely, as a diagnostic proceeding. In 1895 Fürbringer reported 86 cases with 100 punctures, and his results were so striking that the matter at once received prompt notice. Browning in 1895 wrote on the subject, and Caillé in 1895. Dr. Jacoby read his paper before the New York Neurological Society, November 5th, 1895, giving his experience during six months, with 17 cases tubercular meningitis, purulent meningitis 1; meningitis with abscess, 1; tumor, 6; hydrocephalus, 4; ventricular hæmorrhage, 1; spinal hæmorrhage, 2; acute mania, 3; the procedure is based on the fact that the subarachnoid spaces of the brain and spinal cord communicate with each other and with the ventricles of the brain, the spinal cord reaches in the adult to the second, and in children a year old to the third, lumbar vertebra, and a puncture in the third or fourth interspace passes in among the nerve roots of the cauda. An ordinary aspirating syringe, with a long hollow needle, is used 8 c.m. in length, 1 to 1½ m.m. in diameter. Count vertebra from below upward, and control by counting from above downward. Dr. Jacoby states that a line drawn across and joining the highest point of both cristaë ilii will pass through the centre of the fourth lumbar; puncture between the third and fourth or the fourth and fifth, about 5 m.m. laterad from the median line. In most cases an anæsthetic

is required, the patient curves the body forward in order to obtain the greatest posterior convexity of the spinal column possible; in the case of a child, it is held across an attendant's knee. The needle may have to pass in from 2 to 8 c.m. to reach the fluid. The manometer shows that the normal pressure in an adult is 150 m.m.; Quincke found it sometimes to have reached 680 m.m. The fluid should be allowed to flow slowly, aspiration causes headache, Fürbringer has removed as much as 110 c.c. at a time; strict antisepsis must be observed, and when the needle is removed cover with iodoform collodion.

Its use has been followed in most of the instances by only temporary amelioration of the symptoms. Continuous drainage to remove toxines and micro-organisms, as well as relieve pressure, has been employed by Sahti and Wynter. Dr. Jacoby suggests puncturing the lateral ventricle, and placing a drainage tube and flushing out the entire cavity from the lumbar puncture with a boric acid solution. The employment of this method as a therapeutic means has been very disappointing in its results, but as a diagnostic measure it is of great utility. The fluid normally is quite transparent, colorless, alkaline, no histological elements, sp. gr. 1.010, albumen traces or none, and a substance like dextrose. The points to be observed in an examination are: 1. The pressure under which this fluid stands. 2. The presence and amount of albumin and sugar. 3. The presence of foreign substances in the fluid: (*a*) blood; (*b*) pus; (*c*) micro-organisms of various nature, particularly tubercle bacilli.

The degree of pressure is roughly estimated by the rapidity of the flow. The amount of albumin is important; it is increased in meningitis 1.6 per cent., in brain tumors only 0.4 to 0.8 per cent., so that over 1 per cent. of albumin favors a diagnosis of meningitis. The proportion of albumin increases after repeated punctures. Sugar is found regularly in tumors, and exceptionally in tubercular meningitis. Coagulation occurs more readily in meningitis than in the fluid, in brain tumor, purulent cerebro-spinal meningitis is readily diagnosed by finding the streptococcus pus in the spinal fluid. Lichtheim found tubercle bacilli in 4 out of 6 cases of tubercular meningitis, and what might not be expected, the experience of Jacoby, Lichtheim and Fürbringer shows that the tubercle bacillus is found in the great majority of cases of tubercular meningitis; some care is required to find them, sometimes requiring repeated examinations. Dr. Jacoby states that the tubercle bacillus may be found in the cerebro-spinal fluid before grave cerebral symptoms appear. This method is a positive guide as to whether a case is one of tubercular meningitis when we find the bacillus; purulent meningitis when the fluid will be turbid, containing staphylococci, streptococci, or pneumococci; brain abscess when a clear fluid is found without micro-organisms of any kind. In cases of ventricular hæmorrhage blood has been found in the spinal sac. Care must be taken not to mistake local hæmorrhage at the

site of puncture for hæmorrhage into the ventricles or spinal canal ; in the latter condition removal of the blood may contribute to recovery. Dr. Jacoby concluded his able paper with the following summary :

Therapeutically, it is only of direct value as a palliative through the reduction of increased pressure ; it may, perhaps, prove of more service indirectly as the first step to local treatment of the cord and brain.

Diagnostically, it possesses great clinical advantages in the diagnosis of the various inflammatory affections of the cerebral membranes and in the recognition of intraventricular hæmorrhage as well as of hæmorrhage within the spinal canal.

From the facility with which this little operation can be carried out, it should not be long before lumbar puncture will form part of the routine work of every practising physician.

GONORRHŒA AND AFFECTIONS OF THE INTERNAL ORGANS.

In the *Medical Chronicle* for February, Dr. R. T. Williamson gives a résumé of diseases of the internal organs, in which gonorrhœa seems to have been the exciting cause. They may result from the action of the gonococcus, from that of some toxine, or to a secondary infection through the micro-organisms connected with suppuration as the result of a mixed infection. Cases of simple and ulcerative endocarditis are reported where there were no rheumatic symptoms present. In a case reported by His, septic thrombi had formed in the veins of the prostate and in the pubic plexus leading to general infection and ulcerated endometritis.

Leyden reports a somewhat similar case ; in both cases gonococci were found in the vegetations. Leyden states that in many of the cases reported they run a chronic course, and terminate in recovery. Others present the characters of malignant endocarditis, and terminate fatally. The aortic valves are affected more frequently than the mitral ; in most cases the endocarditis was preceded by gonorrhœal rheumatism of the joints, and all occurred in male patients.

Danher and Borst have reported a case of malignant endocarditis following gonorrhœa ; Councilman one of myocarditis and pericarditis ; and Winterberg one of endocarditis and pericarditis.

Bordoni-Uffreduzzi reports a case of bilateral pleurisy and multiple arthritis following gonorrhœa, the gonococci being found in the effusion ; he also found this organism in the fluid taken from the joints in multiple arthritis following gonorrhœa. Leyden reports a case of dorsal myelitis with meningitis ; Gowers, one of myelitis ; Burns, a case of hemiplegia with aphasia ; Engel Reimers, one of multiple neuritis, all due to gonorrhœa ; and Fournier states that it is sometimes the cause of sciatica.

DR. WOODBRIDGE'S TREATMENT OF TYPHOID FEVER.

Dr. George Duffield, Professor of Medicine in the Detroit Medical College, gives his experience with this method, in the April number of *Medicine*. He first outlines the pathological conditions found in this disease; he regards Eberth's bacillus as the cause of typhoid fever. Uffelmann's investigations as to the resistance of the bacillus to drying and transmission through air are mentioned; they showed that it resists drying and retains its power of development in earth 21 days, in white sand 82 days, in house and street sweepings 30 days, and on linen from 60 to 72 days, the duration being longer in a moist atmosphere. The changes in the intestine, mesentery and spleen are due to the action of the bacillus on their lymphatic glands, causing infiltration, necrosis, ulceration and cicatrization. Directly the poison begins to act on the intestinal walls, the colon bacteria become pathogenic, and increase enormously, and constitute the first cause of secondary infections.

The blood is vitiated, the white blood-corpucle is destroyed, and the whole body suffers from constitutional infection due to the long-continued fever, absorption of toxins, and destruction of blood-corpuscles.

In the Woodbridge treatment we have a well devised attempt to employ antiseptic methods which have yielded such brilliant results in surgery. We no longer hear of "laudable pus," but, on the contrary, it is now regarded as an avoidable evil. Intestinal antiseptis is the corner-stone of this treatment, and under Dr. Woodbridge's method it is pushed to an extreme limit. According to the Doctor, three formulas are employed. The first consists of:

No. 1.

Podophyllum resin.....	1-960 grain.
Mercurous chloride, mild.....	1-16 grain.
Guaiaicol carbonate.....	1-16 grain.
Menthol.....	1-16 grain.
Eucalyptol.....	q. s.

and should be given every fifteen minutes during the first twenty-four hours, and oftener if necessary during the second twenty-four, until not less than five or six free evacuations of the bowels are secured during each of two consecutive days.

On the third or fourth day of treatment the following tablet is to be given at intervals of one and two hours:

No. 2.

Podophyllum resin.....	1-960 grain.
Mercurous chloride, mild.....	1-16 grain.
Guaiaicol carbonate.....	1-4 grain.
Menthol.....	1-16 grain.
Thymol.....	1-16 grain.
Eucalyptol.....	q. s.

This formula, and also formula No. 1, should be given as freely as possible at first, then gradually reducing the size and frequency of the doses, the object being to so regulate them as to allow the movements of the bowels to become less and less frequent until the temperature has dropped to normal, when the movements will have been reduced to one or two each day. Should symptoms of ptyalism (a wholly unnecessary complication) supervene, the tablets should be promptly discontinued for a day or two, and, if necessary, sodium or potassium chlorate given, returning as soon as possible to formulas Nos. 1 and 2. About the fourth or fifth day of treatment the soft elastic capsules should be commenced :

No. 3.

Guaiacol carbonate.....	3 grains.
Thymol.....	1 grain.
Menthol.....	½ grain.
Eucalyptol.....	5 minims.

one capsule to be given every three or four hours, alternating with the tablets.

During all the course of treatment the patient must wash down each dose of medicine with large draughts of distilled or sterilized water, or, if indicated, some good laxative or diuretic mineral water.

Dr. Duffield then briefly runs over the physiological action of the remedies employed by Dr. Woodbridge, podophyllum acting as a cathartic, calomel stimulating the excretions in the lower part of the small intestines and the upper part of the colon and the liver, and increasing the excretion of the kidneys, and also acts as an antiseptic in the intestines.

Guaiacol carbonate is an antiseptic, having a special sedative action on the nerves of the stomach, and is an active antipyretic mixed with equal parts of glycerine and pure olive oil, and spread over an area of 20 square inches and covered with oil silk. Menthol is antiseptic; eucalyptol is antiseptic and carminative, it increases the flow of saliva and augments that of urea, and is a cardiac stimulant. Thymol is an antiseptic, lessens reflex action, lowers arterial tension and reduces the temperature.

The first action of these remedies is to increase the flow of bile, which stimulates the musculature of the intestines and prevents putrefaction. His previous results with acetanilid, phenacetin, salol, and the cold bath treatment were an average duration of 61 days, as against 13 7-13 days with the Woodbridge treatment.

He then draws attention to a series of thirteen cases which were under his care from October 1 to December 31, 1895, in which the Woodbridge method was used exclusively. In all cases it proved satisfactory, shortening the disease and lowering temperature. In all cases when the temperature reached 103° a sponge bath was ordered, as it gave relief and quieted restless patients. These were rarely required after the fourth or fifth day, because of the rapid reduction of the fever.

Case No.	Continuance of Fever.	Case No.	Continuance of Fever.	Case No.	Continuance of Fever
1	17 days	6	12 days	11	16 days
2	5 days	7	14 days	12	18 days
3	23 days	8	15 days	13	12 days
4	7 days	9	15 days		
5	13 days	10	8 days		
					176 days

It will thus be seen that the average duration of treatment was $13\frac{7}{13}$ days.

In conclusion he states: I wish to say that in my hands this treatment has worked most satisfactorily, shortening, aborting and greatly modifying the severe cases of typhoid fever. There is no tendency to relapse, no unfavorable complications arise, and the bad effect of prolonged stimulation is done away with. I found the plan a most successful one, and heartily commend it to my fellow-practitioners.

He used in the cases above reported the formulas as prepared by Parke, Davis & Co., in harmony with Dr. Woodbridge's instructions. Prescriptions Nos. 1 and 2 are tablets, and No. 3 is issued as a soft elastic capsule. They also have formulas for children under ten. These are easy to administer, accurate, and reliable."

OXYGEN IN THE TREATMENT OF PNEUMONIA.

In an editorial in the *Philadelphia Polyclinic* (April), the subject is commented on as follows:

We have in a previous article alluded to the insidious and extremely dangerous form of pneumonia which accompanies the present epidemic of influenza in Philadelphia, and probably elsewhere. These cases apparently begin mildly. It is only toward the close that alarming symptoms develop, and only by the utmost watchfulness that their true nature can be early recognized and the fatal issue be averted. At first we resorted to the use of oxygen at the time when symptoms of distress in respiration began to be manifested; but in the cases more recently treated we have used oxygen from the beginning, with the result in cases, apparently similar in all respects to the cases earlier seen, of apparently averting the oncoming of danger. This has more than ever convinced us that the time to use oxygen in acute lobar pneumonia is like the time to use the Brand bath in typhoid fever, as early as the patient is seen; and that the way to avoid failure in the selection of cases is to make no selection.

In other words, while a large number of cases of pneumonia, varying from 75 per cent. to 90 cent. in different epidemics, will recover, with any treatment, without treatment, even in spite of treatment, it is impossible to say beforehand in the individual case that it is one of those to be included in the happy category; and as treatment does make considerable difference in the remain-

ing cases, all statistics to the contrary notwithstanding, it is important that the treatment found most serviceable in the worse cases should be applied early in all cases to prevent them from becoming instances of the worst. As soon, therefore, as the diagnosis of acute lobar pneumonia or of influenza pneumonia is made, inhalation of oxygen for ten minutes every hour, or fifteen minutes every two hours, should be instituted, and continued so long as the patient remains comfortable. If, notwithstanding this treatment, omitted only during the night when the patient is resting quietly, respiratory or circulatory embarrassment increases to a point exciting apprehension of a fatal issue or even of a dangerous course not necessarily fatal, the period during which oxygen is administered should be increased to one-half hour in every hour, or the inhalation even be continued without intermission for hours.

While under this routine much oxygen will be wasted, and many patients will recover with the aid of oxygen that would also have recovered without it, we have no doubt that the number of severe cases will be lessened, and the mortality very greatly diminished. We do not mean to imply by this either that the early administration of oxygen will prevent death in every case, or that this should be the only therapeutic expedient made use of in the treatment of lobar pneumonia. On the contrary, we believe that the administration of strychnin at first in small doses, afterwards in larger doses, the continuous application of heat to the chest, and the administration, according to the symptoms of the individual case, of ammonium chlorid or ammonium carbonate will always be indicated; and that in cases running a severe course, notwithstanding the early use of oxygen, there will be a certain period in the case in which the use of amyl nitrite or nitroglycerin will be demanded. Free action of the bowels, of the skin and of the kidneys should be kept up, and for the latter purpose it may be necessary to employ the solution of ammonium acetate as the vehicle in which the stimulating expectorant is administered. Counter-irritation early in the case, dry cupping or wet cupping in some cases, venesection in others, may be called for; but whatever other measures are employed or omitted, our experience in the present epidemic of insidious, dangerous pneumonia in connection with influenza leads us to insist upon oxygen early and regularly as a necessity.

TRANSFUSION OF BLOOD IN SEVERE CHRONIC ANÆMIA.

Ewald (*Berliner klin Wochenschrift*, 1895, No. 45, in *American Journal of the Medical Sciences*) was called to see a man, aged thirty-two years, apparently in collapse. The history obtained then, and examinations made afterward, showed the case to be one of idiopathic anæmia, having many of the characteristics of the

so-called pernicious form. The patient could not swallow, injections of camphor had no effect on him, and as a last resort, apparently a hopeless one, transfusion was practised. The blood was taken from the patient's wife, defibrinated, and injected into the median vein to the amount of about 85 c.cm. Anæsthesia was not necessary. The patient's pulse and breathing improved slightly after the transfusion, but injections of ether and camphor were necessary throughout the following night. On the second day after that, strength gradually returned and the patient became convalescent. On the third day the blood showed 1,250,000 red corpuscles and 29 per cent. of hæmoglobin. There were few polynuclear leucocytes, no nucleated red corpuscles, very few eosinophile-cells. There were hemorrhages in the retina. The blood after two weeks showed 2,300,000 red corpuscles and 33 per cent. of hæmoglobin. Five months later the hæmoglobin was the same, the red blood-corpuscles 3,500,000 to the c.cm.

After discussing the clinical and pathological features of the case—which he does at some length—Ewald inclines to the opinion of Hunter, that pernicious anæmias are due to auto-intoxication caused by changes in the gastro-intestinal tract. In view of our present knowledge of auto-intoxication and antitoxins, Ewald raises the question whether, in such cases as the one just cited, the injected blood has not some antitoxic action, so that a poison circulating in the body becomes neutralized or destroyed by it, and so gives the body time to gain new strength.

In addition to the transfusion and after it, the patient was treated by arsenic in various forms, quinine, iron, hydrochloric acid, and a combination of resorcin, bismuth-salicylate, and benzo-naphthol. Meat was but sparingly used in the diet.

THE HYPODERMIC USE OF GUAIACOL IN ACUTE PULMONARY TUBERCULOSIS.

COGHILL (*British Medical Journal*, March 7, 1896, *Medicine*) has obtained encouraging results in acute pulmonary tuberculosis by the subcutaneous administration of guaiacol. In many of the cases in which the treatment was carried out, the injections were persevered in for some time before any impression was produced on the temperature. The fall of temperature was always comparatively gradual. The subsidence of the fever was invariably marked by increased appetite and weight, and diminished cough and expectoration. A moderate warm perspiration following the injection, a variable interval takes the place of the regular hectic night-sweats. In beginning the treatment, the minimum dose is given before the diurnal rise of temperature has passed above normal, and if the temperature is not reduced in a few days the dose is increased drop by drop to five or even seven minims, which rarely required to be exceeded. When the reactive sweating is excessive, two small injections are given daily. The buttock is the most favorable

region for the injection, which should be made deep and at a right angle to the surface. In every case, sooner or later, the guaiacol is tasted by the patient a few minutes after the injection. The author has also employed the carbonate of guaiacol, benzoyl guaiacol, and iodoform dissolved in guaiacol in the same manner, but concludes that these compounds have no special claims to therapeutic preference.

SURGERY.

IN CHARGE OF

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A LECTURE ON THE LINES OF ADVANCE IN ABDOMINAL SURGERY.

By J. KNOWSLEY THORNTON, M.B., C.M.,

British Medical Journal, Feb., 1896.

After some introductory remarks, Mr. Thornton said: "The one dread enemy of progress in surgery is conquered, thanks to Lister's indomitable perseverance and courage, and to the faithful disciples of many lands who have striven to follow his teaching. To-day we can, in the great majority of cases which require our aid by the use of antiseptics, keep asepsis.

Cases septic before they seek our help we can do much to purify. He expresses the belief that the time will surely come when we will possess some more potent and less irritating germicide than carbolic acid or corrosive sublimate. He ventures further to hope that pre-existent sepsis will some day be defeated from within instead of by the cruder and more painful method of external application. We must look for remedies which will so strengthen the vitality and resisting powers of the tissues, that micro-organisms shall be unable to spread from their local habitation into surrounding fluids and solid tissues. While waiting on the scientific physician, the bacteriologist and chemist, there is much which the surgeon unaided can do. The lecture is a consideration of the "what there is to do and the way to do it."

The Liver and Gall Bladder.—Under this head he considers: 1, operations on liver itself; 2, gall bladder and its ducts.

The liver is said to bear well the knife, the trocar, and the suture, and bleeding from its wounded surface is readily stopped by slight soft pressure, or bringing its injured surfaces gently together, or into contact with some other surface by fine sutures.

Hepatotomy is advocated for the treatment of hydatids, simple cysts and suppuration. Neoplasms of the liver are almost always malignant, so they do not afford scope for surgery.

Lindemann in 1871 is credited with first performing hepato-tomy for hydatids. Tait followed his lead in 1873, and in a succession of cases established the operation.

The old unsurgical practice by puncture, by aspiration, by cauter, by incision, and *à deux temps* is denounced, the mortality by the old methods was very great, and now by abdominal section and immediate opening of the abscess is very small.

To diagnose an abscess in the liver is not always easy, but perhaps Roentgen's marvellous discovery will come to the aid of the surgeon. Mr. Thornton says: I firmly believe that with an improved early diagnosis and prompt operation, no case of abscess of the liver need in the future be fatal or seriously damage the health of the patient, the key of the whole position as to advance in abdominal surgery has been reached when an allusion is made to improved diagnosis, so I would say to those intending to work out improvements in abdominal surgery "Diagnose, Diagnose, Diagnose." Passing from the liver to gall bladder and its ducts, one finds again that the diagnosis is often at fault, and an exploratory abdominal incision does not always help us, for the matting and disorder of the parts may be so great that it is impossible to make out what is the matter, even after opening abdomen, and we close it, no wiser than before.

Splenectomy is unfavorably considered, the chances of immediate success are small, and the future health of the patient is likely to be seriously impaired.

This surgeon, when treating of the alimentary canal, expresses the opinion that there is not much room for new departures, and advocates perfecting diagnosis and the details of all that we now attempt. With regard to wounds or perforation of the intestinal canal, do not wait for symptoms, when you can make a reasonably sure diagnosis, but get to work, and repair the injury, get parts surgically clean, work methodically and as quickly as is consistent with thoroughness.

A decided and recent advance in intestinal surgery has been made by fortifying the patient's vitality by warmth and stimulating hypodermics.

Pylorotomy is undoubtedly a remarkable achievement, and shows what the human frame can endure and recover from.

Gastro-enterostomy.—He says there is a more useful future for gastro-enterostomy than pylorotomy; and if the former operation were performed earlier, it is thought it would be more successful and give much relief to suffering. Brilliant operations are not needed, but careful observation of signs and symptoms, which can tell us when to operate and when to hold our hands. Again, in all varieties of intestinal obstruction howsoever caused, an early and correct diagnosis can only lead to future advance in the treatment of this grave condition. In acute obstruction of the bowels a purgative should never be given, but an exploratory incision should be the rule, which, carefully performed, can do no harm,

while it gives at once a certain diagnosis and permits of any necessary further treatment.

In the case of acute obstruction, it is advised to clear stomach by emetic or by stomach tube; an enema should be given to empty bowel to clear away retained matters below point of obstruction, and thus relieve the tension and stop formation of gas due to intestinal decomposition; he believes there is at present too great an inclination for operative treatment in cases of appendicitis.

Whether an extensive resection of the bowel for a malignant neoplasm will do more for the relief of suffering and the prolongation of useful life than was formerly obtained by the formation of an artificial anus, time alone will tell.

Little sympathy is expressed with the most recent development of uterine surgery. To fix the uterus or broad ligaments to the anterior parietal peritoneum is a proceeding against nature. Alexander's operation was a scientific conception, but the objections to it and its frequent ultimate failure outweigh its possible benefits. The cases are very rare in which such a proceeding is necessary, nearly all cases being curable by careful attention to the general health of the patient and medicinal remedies to restore tone to the uterus and broad ligaments, aided, it may be, for a time by a simple vaginal support.

American surgeons are credited with having done more than either English or continental surgeons in making out improved methods for the removal of uterine tumors. The method of Baer is singled out as being the most surgical. It does not seem that there is a great future for the surgical treatment of malignant disease of the uterus, and he ventures to hope that the ovaries and tubes will not be removed as frequently in the future as they have been in the past.

Nephrorraphy is highly praised, and to-day a large number of people are relieved from suffering, and many returned from invalidism to useful and comfortable life.

A NEW AND ORIGINAL METHOD FOR OBTAINING MATERIAL FOR SKIN-GRAFTING.

Dr. Zera J. Lusk, of Warsaw, N.Y. (*Medical Record*, December 7, 1895), described a case in which he produced a blister, and used the epithelium as a grafting material. The patient was a woman, aged 52 years, who had a large varicose ulcer two and one-half inches in diameter, three inches above the ankle on the outer surface of the left leg. She had worn elastic hose and tried all kinds of ointments for eight years. The granulations were unhealthy and bathed with a four-smelling discharge. The treatment consisted first in thorough curettement, followed by stimulating applications, so that in ten days the granulations appeared healthy. A surface on the left thigh near the anterior superior spinous process was made aseptic, and on it was applied a piece of

emplastrum cantharides two inches long by one inch wide (first moistened with carbolized oil). Vesication was produced in six hours, when the plaster was carefully removed. The epithelium was detached at the edges of the blister, washed in boric-acid solution, after which all moisture was absorbed with sterilized cotton, and it was suspended in a four-ounce salt mouth-bottle (aseptic cotton being used for a stopper), and kept at a temperature between 55° and 70° F. (12.8° and 21.1° C.). It was thoroughly dry in three days, when a piece one inch square was divided, making twelve grafts, which were applied in the usual way. The results were extremely gratifying. Nine of the twelve grafts took nicely and grew rapidly, so that in one month this ulcerated surface was healed, having a substantial epithelial covering.

OBSTETRICS.

IN CHARGE OF

H. L. REDDY, M.D., L. R. C. P. London

Professor of Obstetrics, University of Bishop's College; Physician Accoucheur Women's Hospital; Physician to the Western Hospital.

THE EFFECTS OF LACTATION ON MENSTRUATION AND IMPREGNATION.

1. Of suckling women, 57 p.c. only have absolute amenorrhœa.
2. Forty-three per cent. menstruate more or less, but twenty have absolute regularity.
3. Impregnation does not take place so readily during lactation as at other times, but this is not true to such an extent as has been imagined.
4. If absolute amenorrhœa is present during lactation, the chances of impregnation occurring are only six out of one hundred.
5. If menstruation occurs during lactation, the chances are sixty in one hundred.
6. The more regular a woman is during lactation the more likely is she to become pregnant.
7. During a menstruating lactation the changes in the uterus are presumably similar to those connected with the ordinary monthly periods, and the mucous membrane forms a nidus for the ovum.
8. In the woman who does not suckle at all, the menses appear as a rule some time in the first six weeks after delivery.—Abstract of a paper by Dr. L. Remfrey before the Obstetrical Society, London.

VOMITING OF PREGNANCY.

A writer in the *Lancet* says: "I have not failed once for many years, by a single vesication over the fourth and fifth dorsal

vertebræ, to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache and pruritus pudendi of the puerperal condition yielded as readily, and to one application."

CERTAIN MICRO-ORGANISMS OF OBSTETRICAL AND GYNÆCOLOGICAL INTEREST.

In a paper read by Dr. G. D. Robinson before Obstetrical Society, London, he pointed out the fact, that in fatal cases of puerperal sepsis, the streptococcus pyogenes is constantly found in the blood and tissues. Normally after labor the uterine cavity was known to contain no microbe, but many are found in cases of sepsis. Of all those found, the streptococcus pyog. appeared alone to be able to pass through the uterine wall along the veins and lymphatics, and so to cause general infection. This microbe might cause death without producing any obvious lesion, or it may set up suppuration in various tissues. It may produce false membranes on the peritoneum or genital tract with or without suppuration. The writer next pointed out the supposed connection of the bacillus coli communis with various inflammations (usually suppurative) of the human body. He quotes a case in which a woman four months pregnant had intestinal obstruction from retroversion of the gravid uterus. Abortion occurred four days after reposition of the uterus, followed in a few hours by fever, then diarrhœa which continued for five days until the patient died. During life pure cultures of the bacillus coli communis were obtained from the uterine discharges, and after death from the uterus, peritoneum, and blood in the heart.

DYSTOCIA FROM VENTROFIXATION.

Milander (in *Zeit. f. geb und gyn*, 1895, Band 33 H 3) has collected seventy-four cases of ventrofixation which subsequently became pregnant. Of these, one woman died before labor commenced. Ten were still pregnant. In six cases abortion occurred, three were prematurely delivered and fifty-four went on to full term. Of these cases three were transverse presentations and two other abnormal presentations, leaving only 49 normal presentations. Some of these had pain at the site of fixation; there was feeble labor in two, and eleven cases needed aid consisting of two Cæsarian sections, three cases of version, and four times the forceps. The author points out the large proportion of abnormal positions and seriousness of the operations required.

Edebohls (in *Med. News*) holds the same views, and says: "The indications for ventral fixation of the uterus should be limited to the utmost degree in woman liable to future pregnancy."

COLD BATHING DURING MENSTRUATION.

Cold bathing during menstruation is a beneficial measure, provided women accustom themselves to the treatment by bathing every day for at least eight days before the arrival of the period, when they can continue during the menstrual flow without any danger. In the case of a very anæmic girl, in whom this treatment was instituted, it gave most satisfactory results. Houzel, before the recent Boulogne Congress, held that cold salt-water baths facilitate the menstrual flow, increase the duration of genital life, and likewise increase fecundity in a remarkable manner.—Dr. Depasse, in *Gazette de Gynécologie*.

THE VAGINA AND PUERPURAL INFECTION.

Romme (*Archives de Gynéc. et de Tocologie*, February, 1896) agrees with the newest German school in deprecating routine injections and frequent exploration in normal labors. The results of simplicity have been very encouraging. Walthard had demonstrated, he says, the truth about the vagina and sepsis. The virulence of the vaginal streptococcus in a healthy pregnant subject not officiously treated by the obstetrician and midwife is equal to that of the streptococcus of other mucous membranes, such as the alimentary canal, which lives on normal secretions. In other words, it is not virulent at all, and acts as a saprophyte on healthy tissues. But when the resistance of the tissues is diminished in the vagina, as in the intestine, the streptococcus can act as a parasite, and be as virulent as the special germ, of the same genus, which causes puerperal fever. Hence routine injections are deleterious in normal labor where delivery has not involved true traumatism of the tissues. Digital exploration is to be avoided, as the vaginal streptococcus might be introduced into the previously aseptic but naturally lacerated tissues of the uterus. On the contrary, rigorous disinfection of the vagina is indicated whenever exploration or operative intervention has to be carried above the level of the os externum, and in all abnormal labors. It is also needed when the patient has an affection which diminishes the resistance of the tissues, such as nephritis, cardiac disease without compensatory hypertrophy, syphilis, diabetes, intercurrent infectious maladies, and anæmia.—*Brit. Med. Journal*.

PHARMACOLOGY AND THERAPEUTICS.

IN CHARGE OF

ROBERT WILSON, M.D.,

Lecturer on Materia Medica and Therapeutics University of Bishop's College.

APLEA FOR THE BETTER STUDY OF DRUGS.

Strike one bad case, and the chances are you will have several to keep it company, and it is only when confronted with an emergency demanding the nicest judgment in the selection of the remedy to be employed, a judgment that has to come to a conclusion quickly, with no time for reference to books, and then the general practitioner finds one of three things: (1) either that he has not devoted the time and attention he should have to his armamentarium medicorum, and cannot convince himself that he is using his remedy from any conviction based on a knowledge of its exact physiological properties; (2) that he has so far dropped from the van that he finds he can get along fairly well on a few well known drugs and a twenty-year old reputation; or (3) (*rara-avis!*) he selects his drug from a conviction based on his knowledge acquired either from his own experience or that of others.

In no class of drugs, perhaps, as in those exerting an especial influence on the heart and the circulation is the conviction borne in on one that the man of medicines does not attach the same importance and study to his tools (the drugs) as the man of surgery does to his (the instruments). Your surgeon, who aspires to any recognition in the field of operative surgery, will tell you the name, originator, modifier, and introducer of any instrument in the whole range of special and general operations; while the average man of medicine can with difficulty describe even the plant from which the drug he uses is obtained, much less describe how it is prepared, or give correctly off-hand its more prominent physiological actions. While this may seem a sweeping assertion to make, it is one nevertheless which is susceptible of easy proof—there is not a new graduate, flushed with his new honors and impressed with the importance of his mission in the world of sick and suffering, but collapses, and gets a pretty fair opinion of his own insignificance when he tries to write his maiden prescription. Symptoms, physical diagnosis, clinical examinations and treatment have been fairly well drummed into him, and at an examination he will tell you glibly enough what drugs to use, and how, and when, to use them; but don't ask him to write a prescription containing them, or question him too closely on their physiological action; the former will result in either a stereotyped formula, hoary with age, and committed to memory, or an uncouth mixture, obnoxious alike to palate and eye; the latter will show how much may be forgotten in a short twelve-month, and

let me say right here, that the blame does not lie where at first sight it would seem most likely, *i.e.*, at the door of the teacher responsible for his subject, *but* to an indefinable feeling that the subject is in the curriculum and therefore *has* to be taken, but—well—that it is a knowledge that somehow can be picked up afterwards; that in some unaccountable manner the new medico will instinctively get into a proper style of prescribing the right drugs for the right diseases, and trust to luck, stray items in a medical journal, or, still worse, to that most effectual destroyer of individuality of thought, a book of formulæ, for a combination that will be effectual, palatable, and scientifically correct. That this feeling does exist is undeniable; *why* it should, is just as inexplicable. Of all classes of men, students, and especially medical students, are most susceptible to outside influences; they form a most delicate barometer, sensitive to the slightest impression conveyed, perhaps unintentionally, by those who for four years associate with them and endeavor to guide their studies. And herein perhaps is to be found a reason for the often-times lamentable ignorance displayed by a graduate who will be called on, it may be on the first day of his graduation, to handle two-edged tools. It is not so long since that I heard an old practitioner say: "Materia Medica—oh, that don't count, that's a primary subject." That is where he made a mistake; *it does count*. A man may not be called on very often to amputate at the shoulder, or diagnose between a commencing transverse myelitis and an extensive arthritis deformans, but he *is* called on every day of his life, and many times in that day, to write prescriptions, and rarely any two for just the same conditions. If Physiology and Pathology are the left hand, then Materia Medica and Therapeutics is surely the strong right hand of the Theory and Practice of Medicine. Under existing conditions it has of necessity to be gotten off the students' hands before the final year, but don't throw it aside with "Oh—that's a primary subject." It is primary and final both, linked on the one side with Botany and Chemistry, on the other with Medicine and Practice. Nor would I be understood as making my remarks applicable to the new graduate only: I have a copy of a prescription signed by a well known practitioner in the capital of our Dominion, containing eighteen ingredients for a cough mixture, and it is barely two weeks ago that my attention was drawn to a prescription from a graduate of many years standing, containing the iodide of potassium and liquor strychninæ,—rather a dangerous incompatible, the patient standing a good chance of getting the whole of the iodide of strychnine at the last dose; but these are glaring cases. Can we any of us say that we know our drugs as we ought? We have gone far afield these days, in the pursuit of new remedies, and in our fever for the search after the new, have been tempted to overlook the old. Do we all, for instance, appreciate the action of quinine on the system, apart from its anti-periodic power? Do we remember as much as we ought to, about opium and its principal alkaloid, or

do we simply remember it as a pain-reliever and nothing more? When sparteine is mentioned, how many think of the kidneys and how few of the heart? To how many is atropine a drug which will dilate the pupil, stimulate the respiration, and nothing more? Let me enter a plea, then, for a closer study of the means we, as physicians, use in treatment; let us know our tools better, let us feel, when we use a drug, that we know approximately all about it, not only what it ought to do, but what it can do, and what it *might* do. Let us remember that the first lesson an apprentice learns is to handle his tools efficiently, and if this be a *sine quâ non* in one who builds and repairs inanimate machinery—how much more necessary in one who has the repairing and up building of the animate and precious human machinery! A thorough training in drugs and their uses is the best possible preliminary to the physician. One of the finest teachers of clinical medicine in the world is in Charing Cross Hospital, London, one who devoted half a lifetime to the study of drugs, and whose little volume is a marvel of compactness and accuracy of physiological action—J. Mitchell Bruce. Nor have we to go so far afield for examples of those who, having achieved the highest positions in their profession, are past masters in the science and art of *Materia Medica* and Therapeutics. So much for the practitioner, and I hope my remarks may be food for thought; but what about the student? Just so long as the subject is treated with indifference, just so long will we be behind-hand in remedying the evil. We have pathological laboratories, physiological laboratories, chemical laboratories, histological laboratories, why not a pharmacological laboratory? Every college aiming to give her students the latest advances in medical science ought to be in a position to show them the things about the drugs they hear and read about; physiological actions ought to be demonstrated, the future medical man ought to see made, handle, and help make, many of the preparations he will prescribe; original researches and experiments ought to be encouraged, to yield wider experience and increased knowledge of our drugs; and in this way, the foundation may be laid for an appreciation of a subject which, under existing conditions, in too many cases, the newly-made medico will need most and know least about.

SPARTEINE IN DISEASES OF THE HEART.

“A good thing cannot be repeated too often; in order to utilize a useful thought or idea, it must be constantly brought to mind;—especially is this true when one seeks to supplant an old and fixed idea by a new one; to replace a routine practice by a new method. According to the old saw, ‘you have to drive out an old nail, by using a new one,’ and one has just these difficulties to surmount when one tries to supplant the old method of giving the preparations of the crude drug, with their faults of variability, by the more scientific method of giving the alkaloids in exact doses.” In

this wise argue those who advocate the use of the alkaloids of drugs in preference to the preparations of the crude drug. That their contention is true in many respects, cannot be denied ; that we should go so far as to say that nothing but the alkaloids should be used, would be folly. For example, the happiest results often follow the exhibition of the freshly prepared infusion of digitalis in suitable and often almost hopeless cases ; disappointment has perhaps more often followed the use of its so-called alkaloid, digitalin, varying as it does in the hands of different makers. Neither, in many drugs, can we point to one alkaloid as possessing all the properties to which the plant owes its efficacy in therapeutics—as, for example, opium ; but while this is true, there are many alkaloids which may be obtained in sufficient purity, and which possess properties, not perhaps characteristic of the whole plant, but meeting certain well-defined indications in therapy, which render their use of the greatest importance. Taking cardiac lesions, whether functional, or, more especially, where organic, whether due to disturbances in any part of the nervous mechanism of the heart, or due to actual lesions of the valves and subsequent changes in the heart muscle, or due primarily to some fault in the muscle wall itself, not only is an absolutely correct diagnosis of the actual conditions present of the highest importance, but the prompt exhibition of the remedy whose physiological action will meet the exigences of the case, the first and greatest consideration. In this connection, it may not be out of place to note the diagnostic sign first reported by M. Huchard, as associated with myocarditis, to which he has given the name “Brady-diastole,” and indicative, not only of weakness of the heart, but of commencing dilatation. It differs from that noted by others, where there is enfeeblement of the *first sound*, observed in the myocardia and commencing dilatation of typhoid fever (Picot), of fibrous and fatty degeneration (Stokes), and of smallpox (Huchard and Desnos). The sign is an alteration in the *rhythm*, yet differing from the fœtal heart-beat (which is characterized by an equality of force and duration of the two pauses) in that, instead of an equal pause, the diastole is distinctly lengthened. Take any heart where there is a degeneration of the muscle wall, with or without an associated change in the arterial walls, and not only is there less muscular structure than normal, to contract, but the remaining fibres are weakened and undermined by the condition prevailing ; such a heart fills with blood, an effort is made to empty itself, and the very fact that it is an effort, and not the normal contraction, necessitates a longer pause or diastole for the muscle to recover itself ; during this longer pause, the heart is over-filled, and a greater effort than before is necessary ; now, in a normal muscle wall the result would be hypertrophy, in a degenerated muscle wall the result is dilatation. If, with evidence of enfeebled circulation, one gets a weakened first sound, and the distance between the second and first sounds out of proportion to the distance between the first and second sounds, compared with the normal, then one may

be tolerably safe in diagnosing a degeneration with commencing dilatation. It is clear, then, that if the above explanation, as advanced by M. Huchard, be a correct one, then the sign noted by him is of the greatest value as indicative of *commencing* dilatation,—just the time when drugs, if they are to do any good, are urgently needed. To what drug shall we turn? Digitalis is certainly contra-indicated, not only for its prolonging the diastole in a condition where the heart muscle is not in the best possible condition to stand it, or to respond to stimulation, but also on account of its action on the vessel walls, contracting them and increasing the embarrassment; strophanthus has almost the same objections. Strychnine, while also stimulating the heart, raises blood pressure too, until large doses are given. In sparteine, however, we have a drug which meets all the indications, and is *par excellence* the remedy which will yield the most satisfactory results in the condition named.

Sparteine, used in the form of its sulphate, the most stable and generally employed of its salts, and given in suitable doses (1-6 to $\frac{1}{2}$ gr.), exerts (*a*) a specific dynamic action on the heart, either through the nerves, of which, though, in fairly large doses it generally lowers the reflex excitability, in moderate (1-6 to $\frac{1}{2}$ gr.) doses, stimulates the vagus and centres in medulla; (*b*) through the cardiac ganglia, or (*c*) through a direct action in the contractility of the fibres of the heart muscle itself, to both the latter of which it is a powerful stimulant. Given in the doses indicated, sparteine is without effect either on the spinal nervous system, or vaso-motor system, confining itself absolutely to the heart, acting on it as noted above either directly on the cardiac ganglia and muscle, or through the nerve centres. Under its influence, the weak and rapidly beating heart takes on a force and rhythm quite remarkable, at the same time lowering its frequency and regaining its normal regularity, an action not secondary to any influence on the circulatory system, but due primarily to its power on the heart mechanism itself. Given hypodermically, its effects may be noticed in from 5 to 30 minutes, while its effects are equally good, but correspondingly longer in manifestation, when given by the mouth. The facts which stand out prominently, when we review its physiological action on the circulatory system are: 1st, its stimulant, regularizing action on the heart and heart rhythm; 2nd, the complete absence of any effect on the blood pressure (true, after its exhibition the blood pressure rises, but this rise is not due to any action in the vasomotors, but is the result of an increased heart force); 3rd, its rapidity of action and non-cumulative effects. These three factors alone point to sparteine as being of all remedies the one indicated in a myocarditis with dilatation, either threatened or actually present.

It is not, however, in myocarditis alone that sparteine is useful, but in any lesion of the heart, where its peculiar powers find a suitable field, where the indications are to relieve an over-burdened and over-rapid heart. In lesions of the valves, more perhaps in the advanced mitral cases; in functional disorders, such as one sees as

the result of bodily or mental labor, the abuse of tobacco, or the rapid heart associated with exophthalmic goitre; in angina pectoris, or in true neuralgia of the heart; and in the rapid heart associated with tuberculosis, especially in the young (Maurange). Referring to its use as a cardiac tonic and stimulant, Dr. Casenave de la Roche (1894), in reviewing the numerous new remedies whose powers on the heart and circulation had been vaunted in the Medical press, says:—"Whether they have carried out the brilliant promises of their introducers, I may be permitted to doubt; but..... I will "make, however, an exception in favor of sulphate of sparteine, "..... a drug which certainly regulates the action of the heart, "without affecting the arterial tension." The Academician Laborde in comparing the actions of strophanthin and digitalin with that of sparteine, says: "..... In sparteine, however, we have produced, in a "large measure, the fundamental effects of increased force and amplitude of the cardiac contractions, without any appreciable action "on the intra-vascular pressure." Germain Sée says of it, that "of all the cardiac stimulants, sparteine is the one which acts most "promptly and surely on the elasticity of the heart," and claiming for it that it is the one drug which most completely and most promptly reduces the size of a dilated heart, acts best on the cardiac muscle, and increases best its tonicity.

With reference to its administration, cases which call for a drug such as sparteine, necessarily require that its effects should be obtained as quickly as possible. The sulphate is readily soluble in water, and a solution in distilled water containing 1 gr. to the dram is useful, hypodermic tablets containing 1-4 gr. each afford a ready means of preparing the solution. For internal administrations, a syrup containing 1 grain to the tablespoonful is handy, while Germain Sée recommends the following:—

Sulphate of Sparteine, 1 grm. (15½ grs.).

Distilled water, 100 grm. (3½ oz.).

Giving 1 to 3 teaspoonfuls in the 24 hour—(equal to about 3½ gr. in 24 hours).

As to the dose, in cardiac cases, perhaps the best results will be obtained by giving small doses frequently, say from 1-6 to 1-4 grain every three hours—equal to about 1½ to 2 gr. for the 24 hours. Owing to its prompt action, and almost equally rapid elimination and non-cumulative effects, it is better given in small doses frequently than in massive doses at longer intervals.

Revue Thérapeutique des Alcaloides No. 44.

Formulaire des Alcaloides—H. BOCQUILLON-LIMOUSIN.

COLLAPSE AFTER TRIONAL INGESTION.

Dr. J. W. Irwin calls attention to the (to him) unusual sequelæ of collapse, cyanosis, irregular and intermittent action of heart action, followed by aphasia and loss of memory in a patient suffering from insomnia, for whom he had prescribed 45 grains

Trional in 3 divided doses during the night. Having occasion to use a hypnotic on the same patient 4 months subsequently, he combined the 15 grs. of Trional with 1 gr. Caffeine, with the most gratifying results. During the eight months following, during which he continued the use of the two drugs, the patient gave no signs of embarrassed circulation until sudden collapse occurred at his place of business, from which he rallied slowly under stimulating treatment, and the abandonment of the Trional.—*Am. Therapist*, Vol. iv., No. 4, 1895.

Trional, on account of its hypnotic properties, makes a most efficient addition to Phenacetine and hot stimulants in the treatment of the insomnia of influenza. It is worth recalling the close relationship which exists between Trional (Di-ethylsulphon-*methyl-ethyl*-methane), sulphonal (Di-ethylsulphon-*di-methyl*-methane), and Tetronal (di-ethylsulphon-*di-ethyl*-methane), and that the symptoms described by Dr. Irwin are very similar to those produced by an over-dose of sulphonal. In the administration of these three allied hypnotics, it is important to watch the urine, a peculiar red color indicating the presence of hæmatoporphyrin, as first noted by Ernst Schultze of Bonn. This is a symptom of grave importance, calling for the immediate withdrawal of the drug.

ALLYL SULPHIDE IN TUBERCULOSIS.

Séjournet (*Sem. Méd.* XV. 95) claims to have achieved remarkable results in pulmonary phthisis by the hypodermic injection of a 5 per cent. solution of allyl sulphide in sterile olive oil; the injections are made every day or two into the supraspinous fossa of the side or sides affected. Asepsis precludes abscesses. He commences with 16 minim injections, gradually increasing to 32 m.; the first few injections are painful, later they are painless. After a few injections, the sweat and even the breath give the odor of the drug. After a few days treatment, the pulse and temperature become normal. Hæmoptysis ceases, dyspnoea, cough and expectoration diminish, general health improves, and stethoscopic signs change for the better. After a three weeks treatment, and where there were no cavities, the author claims results equivalent to a cure; where cavities existed, they were more or less benefited. Séjournet reports two cases of lupus cured by injections of allyl sulphide into the parts affected, and in conclusion claims that these injections exert a favorable influence over the dyspnoea of asthmatic patients.

IODIDES AS TÆNICIDES.

J. H. Newington (*Med. Weekly*, XV. 1895).

Newington reports one of his patients as passing a large tape-worm after having taken the following mixture:—

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, 27th December, 1895.

A. D. BLACKADER, M.D., President, in the Chair.

Dr. E. N. Chevalier, of St. Johns, P.Q., and Dr. F. X. de Martigny were elected ordinary members.

Cases.—Dr. G. E. Armstrong exhibited a woman from whom he had removed the whole left upper extremity for sarcoma, a year previously, by Paul Berger's method (1887), and read history of case and operation.

Dr. S. H. Matthewson, per Dr. Buller, shewed;—

1. A preparation shewing complete bony cup in the fundus around the optic nerve in a case of phthisis bulbi.
2. Melanotic sarcoma of eye (microscopic specimens).
3. Eye, with fragment of iron in vitreous.

DISCUSSION ON CANCER (*Continued*).

DR. BULLER, speaking on cancer of the eye and parts about it, stated that his experience of cancerous diseases was necessarily limited to those which occurred in the eye and about it. With regard to the eyelids he stated that cancerous growths here were not at all infrequent, and were usually of the epithelial type. Early diagnosis was usually easy, and a radical cure effected by operation when the growth had not reached the periosteum and bone; where, however, this occurred, cases were apt to go from bad to worse, and terminate fatally. Dr. Buller stated that the wider his experience became the more firmly he was convinced that cancer was primarily a local condition, and that metastases were as apt to occur from soft cancerous growths as from the harder varieties. On the hypothesis that the cancer began necessarily as a single aberrant cellular element, it was easy to understand that with a growing tissue, some of these elements may enter the circulation, and be carried in their germinating state into some other part of the body and there form new "foci"; that growths occurring within the eyeball itself, and not invading surrounding tissues, were not apt to recur elsewhere after extirpation, if this be done at a very early period. Where, however, sarcoma growing within the eyeball has come to occupy a considerable portion of this space, removal of the eye is nevertheless almost certainly followed by the occurrence of metastases in other organs within a few months.

Speaking of the definition of what constituted a cancerous growth, whether it be of carcinomatous or sarcomatous type, there were, he said, as far as he was aware, only two factors or phenomena, belonging to, characteristic of, and never absent from, any malignant growth of the cancerous group:

- I. An incontinent and inordinate development of primitive cellular elements.

II. An irrepressible tendency to invasion of adjacent normal tissues, the second characteristic, however, being a corollary of the first. Following the process backward, in any given case, a period must necessarily be arrived at when the original growth consisted of a few, and, finally, of two unphysiological elements; that any pathologist could ever hope to recognize these cells, and recognize them as the beginning of a cancerous growth, even if placed in the usual field of his best microscope, was impossible, went without saying, yet from this point of view, it was not difficult to understand the one principle or law determining the nature and beginning of every cancer. There must have been a time when a single cellular element seceded from its environment and began to develop a tissue on its own account; the moment this cell produced another one like itself, the cancer had a *de facto* existence as a separate autonomy. Those two cells, and all the others which sprang from them, had ceased to perform any physiological function, and were parasitic to the rest of the animal economy. He was of the opinion that the explanation of a cancerous growth was to be sought for in physiology rather than in pathology, as a modification of the vital process or life. As far as he was aware, all the morbid growths for which a known cause, in the form of a specific micro organism, existed possessed certain characteristics which absolutely separated them from cancerous growths, *i. e.*, the tendency to inflammation, degeneration, and disintegration; the opposite was true of cancerous growths, except under special conditions. The speaker instanced a single trachoma nodule of the conjunctiva as being as much a new growth as the largest osteo-sarcoma; the life history of the one was dependent on the presence, or active agency, of certain micro-organisms, the other was the life history of the whole individual with which it was associated. It seemed to him that the new growths so far recognized as being due to micro-organisms, or dependent on them for development, differed so obviously from cancerous growths, that the difference in itself became a strong evidence against the micro-organic theory of cancer development. On the other hand, the differences which existed between the cancerous growths themselves undoubtedly depended on the vital properties in other tissues, from which the growth originated, though he thought they were all undoubtedly subject to the one fundamental law for their origin and subsequent growth.

DR. RODDICK agreed with the other surgeons that cancer was at first a local disease, and could be cured by sufficiently early removal. Local irritation and chronic irritation he considered the two great exciting causes, and any condition which tended to lower the vitality of the tissues, age, and heredity, as strong predisposing causes. He felt that if pathologists could shew that cancer *was* a parasitic disease, it would facilitate the treatment and methods pursued by the surgeons. His own belief inclined towards the parasitic theory, which was borne out by many clinical facts. Speaking of the infectiousness of cancer, he quoted Mr. D'Arcy Power's three or four cases of cancer occurring often in the same house, and one case of his own, where an epithelioma of the hand had been followed by the same form of growth in the face of the nurse in charge. The failure in the inoculation experiments he thought probably due to a faulty method, and instanced Plummer's success in inoculating animals by placing portions of cancerous growths in the vagina. With reference to treatment, he condemned the use of caustics, but considered escharotics as sometimes useful, to complete the cure after operation, the mere application to the surface was very irritating. Dr. Roddick preferred Whitehead's operation for excision of the tongue, but could not agree with Dr.

Shepherd, that in certain cases, removal of the lateral half of the tongue was entirely satisfactory. Nunnely's operation, consisting of introducing the *écraseur* through an incision in the middle line of the neck into the floor of the mouth, and passing the chain over the tongue, he recommended when the growth was in the anterior part of the tongue, and good assistance was not available, and felt that septic pneumonia was not so frequent after the *écraseur* as after the knife, the crushing effectually closing the lymphatics and blood-vessels, and lessening the possibility of absorption. Where the knife and scissors were used, he invariably fed his patients per rectum until granulations had formed, and protected the parts. Removal of all doubtful tumors of the breast he considered imperative, and as the recurrence was usually in the scar and not the muscles, he rarely removed the latter. The removal of the whole upper extremity he considered as not practicable, and advised cases requiring such an operation to be left alone. Immediate removal in cases of local recurrence was strongly recommended, and he cited two cases of four or five consecutive operations for local recurrence, where general infection had not taken place.

SIR WILLIAM HINGSTON thought the ground had been pretty well covered by the previous speakers. Speaking of the nature of cancer, he felt disposed to agree with Dr. Adami, as clinical experience had led him to regard it as commonly the result of inflammatory action. He quoted Jonathan Hutchison as being of the same opinion, and cited several cases to bear out his statement, one especially, where, after twenty years, a sinus at the back of the knee had developed malignant action. While not feeling qualified to speak on the parasitic theory, on general principles he thought it likely parasites would shew themselves here, as elsewhere, in the course of disease. Predisposition, Sir William said, he did not understand, and in this disease he did not know what heredity meant. If a patient inherited the tendency from his father, he must in turn have inherited it from someone else, and so on through the generations. If heredity was admitted too fully, it would paralyze all effort. With reference to operations, while admitting that there were cases where less extensive operations might be advocated, he thought partial removal wrong in principle. Cancer of the breast, he operated on early, on the principle that even benign growths take on malignant action in time. He deprecated, however, a hurried resort to the knife in all cases, citing cases where he had declined to operate twenty or thirty years ago, and where the tumor was still harmless. The disease recurred, in his opinion, generally in the cicatrix and skin, less frequently in the muscles, and rarely in the glands of the axilla; it was not, therefore, his practice to remove the glands of the axilla in the first instance unless they were diseased, urging against it that it increased very largely the pain and suffering of the patient and the mortality, while not infrequently œdema of the arm followed, neither did he feel warranted in removing the pectoral muscles unless diseased. Removal of the upper extremity he did not consider it necessary to speak against, as the patient herself would certainly object.

In conclusion, Sir William Hingston referred to the various operations for removal of cancer of the rectum, and claimed for colotomy that it gave as much comfort in the end to the patient as any attempt at removal, as, unhappily, cases were rarely seen while disease was confined to the bowel.

DR. A. LAPHORN SMITH was firmly convinced that cancer was a contagious disease, and had seen at least three cases of cancer occurring in people not related in any way to other cases of cancer, but who had at-

tended cancer cases as nurse or friend. None of the speakers, Dr. Smith said, had laid sufficient stress upon the importance of thoroughly disinfecting the field of operation after removal of diseased tissue. He referred also to the method of Dr. Byrne of New York, for removal of cancer of the uterus, by cutting out small pieces with the galvano-cautery until merely a shell was left, and attributed his success in prolonging the period of recurrence to the destruction of the bacilli in the tissues beyond, by the heat employed. The fact of cancer usually, if not always, commencing in scar tissue he thought shewed that the bacillus of cancer, like that of tubercle, would not attack healthy people or tissues.

DR. A. PROUDFOOT advocated the use of caustics in the early stage of epithelioma of the lip, and cited cases to shew its efficacy.

DR. SHEPHERD, in replying, said he preferred removal of the whole tongue, unless the disease was well forward. Referring to feeding, he said he had abandoned rectal alimentation, and fed by mouth with a tube and funnel, allowing patient to go about the second day. In reply to Sir W. Hingston, he said he did not believe in the heredity of cancer, but on inherited vulnerability, which increased with age. Of the removal of the upper extremity for cancer involving the axilla, he thought that where the case had progressed so far, operation was useless. Besides, no account had been taken of involvement of the mediastinal glands in these extensive cases, he having under his care three patients suffering from recurrence or continuance of the disease in the retro-sternal glands, all other parts being free, in some cases apparently for 4 years. Locality, he thought, had nothing to do with recurrence, and believed its greater frequency in poor localities was due to delay in resorting to the primary operation, neither did he place much credence in recurrence being due to implantation of cancer cells, as in all modern operations the knife went so wide of the disease that cancer cells were not disturbed. The speaker thought too many benign cases were reported as malignant, hence the success of caustics in the hands of quacks, and would not admit of the diagnosis of malignancy apart from a careful microscopic examination, caustics only postponed the knife until it was too late, and he only used them in cancer of the cheek and nose, where thorough scraping and the actual canterly proved beneficial.

DR. BELL, in replying to Sir William Hingston, said if we assumed that cancer was primarily a local disease, spreading by infiltration of surrounding tissues, by the lymphatics, and only later by metastasis, the line of treatment was clearly indicated; with metastatic growths in other parts of the body, operation for cure was obviously futile. These statements accepted as facts, the logical inference was early, wide, and complete removal, regardless of deformity, or inability to close the wound. Recurrence in the scar shewed insufficient removal at first. As far as his experience went, he was surprised at Sir William Hingston's statement about recurrence being rarely in the axilla and most frequently in the scar, his experience being that it was generally in the tissues of the axilla. It being utterly impossible to determine before operation that the axillary glands were not involved, the rule that the axillary glands, especially the lymphatic tissues, should be removed, was a good one. The speaker thought recurrence in the scar was explained by the fact, that in advanced disease, infiltration took place down to the bony chest wall, and that it might be impossible to remove tissues deeply enough to remove the whole disease, hence his reason for removing all the tissues down to the chest wall, below the border of the pectoralis magor, and the fascia covering the muscle. The pectoral muscles he did not recommend to be removed unless infil-

trated, or for more thorough removal of diseased lymphatic tissues. When advanced cases presented for operation, there was no choice, the operation, if undertaken, was for removal of *all* the disease, not part, and to do this, it might be necessary to remove portions, if not all, of one or both muscles, and going still further, in dissecting out the axilla, often of infiltrated glands, from the very walls of vein and artery, no surgeon could feel that he had removed all the disease, and it was just in these cases that he advocated removal of the upper extremity, certain, at least, of removing all diseased tissues as far as the first rib. The œdema and swelling mentioned by Sir W. Hingston was not, in his opinion, due to the dissection of the axilla, but, coming on as it did later on, was due to new cancerous masses forming in the axilla about the vessels and pressing on the axillary vein. He believed cases of extension to the mediastinal glands were rare in patients presenting themselves for primary operation, and of course could not be cured by any operation. Escharotics, he thought, had no place in the treatment of cancer except in the cases mentioned by Drs. Roddick and Shepherd.

DR. ARMSTRONG thought that the methods of operation had been pretty well worked out, and understood for some time this information could be found in any standard text-book or journal. His idea, however, had been to establish the fact that cancer was a local disease, and he therefore sought to bring out evidence, or new symptoms, which would enable cancer to be recognized at an earlier stage than had been the custom in the past, to secure earlier operation and consequent permanent cure. The discussion had gone a little outside the ground he intended, but the fact had been established that cancer was primarily a local disease; the early symptoms could doubtlessly be gradually wiped out. The time had gone by for successful results in a case presenting for operation for a cancer of the breast conforming to the description of the text-books. The speaker thought Sir William Hingston took a serious responsibility in advising the leaving alone of tumors of the breast in women approaching the climacteric; they were easily enucleated, and, if left alone, might receive an injury, change their characters and become malignant.

Stated Meeting, January 7th, 1896.

A. D. BLACKADER, M.D., President, in the chair.

CASES:—REMOVAL OF CYST FROM BRAIN FOR RELIEF OF JACKSONIAN EPILEPSY.

Patient shewn by Dr. Armstrong; report will be published later. Dr. Finley gave the clinical history, the boy having been in his ward for some time. Briefly, the boy was admitted suffering from epileptic seizures, of which he had several the first few days after admission; they then intermitted for a month. In the attack witnessed by Dr. Finley, the head and eyes alone were affected: there was no loss of consciousness. Lateral deviation of head and eyes to opposite side, rapid motions of eyelids, more marked in right side. In attacks witnessed by Dr. Byers, the movements spread to right arm and the leg. There was no question of localization, as depression marked the point for trephining. With reference to localization of area, Dr. Finley found that the depression corresponded to the supra-marginal convolutions and angular gyrus. During the

operation, electric stimulation of the cortex was negative, so was unable to obtain confirmatory evidence of localization. The speaker cited a similar case reported by Ross, of Manchester, Eng., with depression in same locality, where symptoms were similar and operation successful. Replying to Dr. T. Wesley Mills, Dr. Finley said the electrodes were about one-eighth of an inch apart, and the current too strong to be borne on the lips.

PRIMARY CANCER OF THE LIVER.

Clinical notes by Dr. W. F. Hamilton ; pathological report by Dr. C. F. Martin. (will be published next month.)

PAPER ON THE TREATMENT OF INEBRIETY AS A DISEASE.

Dr. Oliver C. Edwards, Ottawa, read the paper, an abstract of which was published last month (p. 257 CANADA MEDICAL RECORD, Vol. XXIV, No. 6, March, 1896) when

Dr. Burgess said he agreed with Dr. Edwards that inebriety was a disease, but went further, and considered it a disease long before the stage at which Dr. Edwards set it down as such. Its most prominent symptom was lack of will power, and its victims usually the inheritors of unstable nervous organizations. As regarded the gold treatment, the same results could be obtained by cutting off the liquor supply and building up the system generally. Occasionally, the effect was permanent, but usually only temporary.

Dr. James Stewart said he had no faith in this treatment more than any other. A certain percentage of cures were effected by making a powerful impression on the nerve centres. Hypnotism had been equally as good,—the disease was due to paralyzed control.

Dr. J. B. McConnell agreed with Dr. Burgess in looking on the inebriate as a neurotic. He himself, in a paper read before the Society a couple of years previously, had reported identical results from the use of strychnine.

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Editorial.

MEDICAL FACULTY UNIVERSITY OF BISHOP'S COLLEGE.

The Winter Session of the above Faculty of Medicine closed on the 14th of March. The week commencing 16th and terminating on the 21st was allowed the students for review. The examinations began on the 30th and closed on the 4th of April. Upon the whole, the Session may be looked upon as the most successful in its history—which is satisfactory—as it terminated the first quarter of a century of its existence. The number of First Year students who enregistered their names exceeds that of any previous year—and the total number enregistered was one hundred and one, an increase of forty per cent. over the previous year. The most interesting event of the Session was the affiliation of the Dental College of the Province of Quebec with the University, as the students of this College will take their medical lectures at Bishop's. There will, in the coming years, be a notable increase in attendance upon the lectures on the Primary branches. It will also tend to make known the special advantages of this Faculty of Medicine.

The Annual Medical Convocation of the University took place in the Synod Hall, Montreal, on the 8th of April, and was very largely attended. On the platform were Chancellor Heneker, Principal Adams, Acting Chief Justice Tait, and J. H. R. Molson, Vice-Chancellor of McGill University, and others. Special interest attached to this Convocation, as it was the first one at which the

degree of D.D.S. (Doctor of Dental Surgery) was conferred. Those who received this degree (in course) were the lecturers in the Dental College. Dr. F. W. Campbell, Dean of the Medical Faculty, presented W. Geo. Beers, Dean of the Dental College, for the degree, which, having been conferred, Dr. Beers presented the following gentlemen, who likewise received the degree (in course) of D.D.S., viz. : Charles Brewster, J. A. Bazin, S. J. Andres, S. Globensky, G. W. Lovejoy, L. J. B. Leblanc, J. G. Gardener, J. H. Bourdon, J. H. Springle (*ad eundem*), W. J. Giles (*ad eundem*); C. Coleman (*ad eundem*), F. A. Stevenson (*ad eundem*), A. Globensky, L. Franchere, E. Dubois.

The following members of the Medical Faculty received the degree of C.M., M.D., *ad eundem* : H. L. Reddy, G. T. Ross, and W. Grant Stewart.

The Dean, Dr. F. W. Campbell, read the following announcement as the result of the Session's work :—

There are one hundred and one enregistered students on the roll this year, which is an increase of forty over last year's attendance.

Of these students, which comprise both medical and dental, eighty-six came from the Province of Quebec, seven came from Jamaica, W.I., three came from the United States, one came from Hayti, W.I., one came from New Brunswick, one came from Scotland, one came from Ireland.

The following are the results of the examinations which were held during the week beginning 23rd March last, the names being arranged alphabetically :—

Passed in *Botany*.

A. N. Gould, J. A. Hamilton, H. Lightstone, J. A. L. Harris, T. H. Jackson, C. A. McDougall, John McIntyre, J. A. Paddyfoot, R. M. Stimpson, E. L. Sutherland.

Passed in *Physiology*, Second Year.

D. J. Berwick, Joseph Barsalou, McD. Ford, Miss Minnie Gomery, John McIntyre, W. S. McLaren, J. A. Munro, R. M. Sullivan.

Passed in *Chemistry*, Second Year.

D. J. Berwick, J. S. Browne, Joseph Barsalou, H. C. Dumont, John Francis, A. N. Gould, Miss M. Gomery, Miss Hansford, J. A. Munroe, J. K. Macdonald, John McIntyre, R. M. Sullivan.

Passed in *Practical Chemistry*.

H. C. Dumont, John Francis, A. N. Gould, C. E. Goltman; Miss M. Gomery, T. H. Jackson, C. Lemieux, John McIntyre, A. H. Newman, R. M. Stimpson.

Passed in *Materia Medica*, Third Year.

J. S. Browne, W. M. Cass, McD. Ford, John Francis, Miss M. Gomery, Miss Hansford, C. A. McDougall, John McIntyre.

Passed in *Anatomy*, Second Year.

D. J. Berwick, W. M. Cass, C. A. Fortin, Miss M. Gomery, R. H. Meikle, John McIntyre.

FINAL SUBJECTS.

Passed in *Medical Jurisprudence*.

Wm. Cass, C. A. Fortin, Miss Lorigan, Miss Macdonald, R. H. Meikle, W. Opzoomer, W. J. Webb.

Passed in *Diseases of Children*, Third Year.

W. M. Cass, C. A. Fortin, Miss Lorigan, Miss Macdonald, W. Opzoomer, W. Rea.

Passed in *Gynaecology*, Third Year.

C. A. Fortin, Miss Macdonald, Miss Lorigan.

Passed in *Pathology*.

W. M. Cass, C. A. Fortin, Miss Lorigan, Miss Macdonald, Wm. Opzoomer.

The following passed all the primary and final subjects entitling them to the degree of C.M., M.D., of this University:—

George Hall, Montreal; Ernest J. Addison, Latrobe, Tasmania; Miss Mary Fyfe, Boston, Mass.; James J. Benny, Daillebout, Que. (All first-class honors).

PRIZE WINNERS.

Wood Gold Medal—George Hall.

Chancellor's Prize—Ernest J. Addison.

David Silver Medal (this is awarded to two students owing to the introduction of sessional examinations)—C. A. Fortin and Miss M. Gomery.

Senior Dissector's Prize—Miss M. Gomery.

Junior Dissector's Prize—E. L. Sutherland.

Addresses were delivered, at the close, by Principal Adams Judge Tait, and Vice-Chancellor Molson, of McGill University.

REPORT OF THE COMMITTEE ON INTER-PROVINCIAL REGISTRATION.

The following report has been received by us from Dr. F. N. G. Starr, of 421 College street, Toronto, General Secretary of the Canadian Medical Association :—

“The Committee appointed at the last meeting to look into the question of inter-provincial registration would beg to express their regret that, by the system which at present obtains, a graduate in medicine, entitled to practise in one Province, is not free to exercise his functions in all the Provinces of this large but sparsely settled Dominion ;

“That this condition of things prevents the names of medical practitioners in this Dominion being placed on the British register, becoming thereby British practitioners, which the Council of Medical Education of Great Britain has more than once signified its willingness to grant ;

“That with this end in view it is therefore most desirable that there should be a uniform standard of matriculation, a uniform standard of medical education, and a uniform method of examination for the whole Dominion.

“That to effect this purpose, the Secretary be instructed to communicate with the various Provincial Councils, before their next meeting, asking that each Council discuss the question, and, if possible, appoint one or more delegates to a Dominion Committee for the purpose of adjusting a suitable curriculum and carrying out the suggestions herein contained, and that such Committee be requested to forward their finding to each of the Provincial Councils and to the Secretary of this Association before the next annual meeting.”

“ THE HAPPY MEDIUM.”

We are in receipt of a handsome illustrated brochure, issued by the *Medical Fortnightly*, of St. Louis, which reflects great credit on that enterprising journal. The book contains thirty-two pages, incased in a unique embossed cover, and twenty-five half-tone portraits of its staff, including Dr. Frank Parsons Norbury, Managing Editor ; Drs. Hubert Work and T. A. Hopkins, Associates ; Charles Wood Fassett, Secretary, and twenty-one department editors. The dedication of the work conveys its purpose ; it says : “To those friends, patrons and subscribers, who are interested in the *personnel* of the *Fortnightly* staff, this little book is respectfully dedicated.”

In consequence of the death of the editor of the *Annals of Ophthalmology and Otology*, the conduct of that quarterly periodical has passed into the hands of Dr. Casey Wood, who will have special charge of the ophthalmological department, and Dr. T. Melville Hardie, who will act as editor of the department of Otology and Laryngology.

Dr. Wood's many friends in Montreal will heartily congratulate him on this elevation to the editorial chair, and we can foresee a renewed era of success for this journal, in consequence of its being placed in charge of one possessing the well-known literary ability and energy of our much esteemed friend.

Personals.

Dr. R. C. Blackmer (Bishop's College, 1884), Professor of Legal Medicine in the Barney Medical College, editor of *The General Practitioner*, has been appointed State medical examiner for the Royal Arcanum in Missouri.

Drs. Wm. Gardner and F. J. Shepherd have left for a holiday in Europe and Africa ; besides visiting Cairo, Alexandria, and ascending the Nile they are to be present at the revival of the ancient Olympian Contests at Athens.

A. J. Richer, C.M., M.D. Bishop's 1892, has been appointed lecturer on Physiology in the Faculty of Medicine, University of Bishop's College.

Dr. Drummond, of our editorial staff, has gone for a trip to Jamaica, intending to be absent some three or four weeks.

At the January examinations in Edinburgh, for the diploma of L.R.C.P.E., L.R.C.S.E., and L.F.P. and S., Glasgow, 137 candidates presented themselves ; of these, 65 were successful. Among them we find the name of Dr. Thomas Bannerman (M.D. Bishop's, 1895).

Dr. Wolfred Nelson, F.R.G.S. (M.D. Bishop's, 1872), at present living in New York, has just received the decoration of the cross of a Commander-in-Ordinary of the Royal Order of Isabella the Catholic. Dr. Nelson was informed of the honor by the Spanish Minister at Washington. Dr. Nelson lived and travelled in his professional capacity for eight years in Spanish America, Mexico, Guatemala, Nicaragua, Costa Rico, Columbia and Venezuela, and nearly all the West India Islands. He has written much on all these countries from a socialistic and climatological standpoint. We congratulate the Doctor on this recognition of his labors.

Dr. McPhail, Professor of Pathology in Bishop's College, has gone to Jamaica with Mr. G. B. Burland, who we regret to learn is far from well.

Dr. Saunders of Bedford, Que., was in Montreal the first week in March.

Book Reviews.

A Treatise on the Medical and Surgical Diseases of Infancy and Childhood. By J. Lewis Smith, M.D., Clinical Professor of Diseases of Children, Bellevue Hospital Medical College, Physician to Charity Hospital, etc., etc. Eighth edition: thoroughly revised and greatly enlarged; with two hundred and seventy-three illustrations and four plates. Lea Bros. & Co., 708 Sansom street, Philadelphia; 111 Fifth avenue, New York.

The fact that this important work has reached an eighth edition attests to its great popularity as a standard text-book and work of reference in this large department of medical work. The book has been thoroughly revised, and all recent advances in etiology, pathology and therapeutics have been incorporated in the various chapters, thus necessitating the re-writing of many of the chapters and the addition of new ones. It also contains five times as many engravings as its predecessor, besides several full page plates. There are nearly a thousand pages, printed with somewhat smaller type than in the ordinary text-book, which has permitted a thorough detailed treatment of the various subjects. Part I. contains much that is interesting and of special importance to be versed in by those engaged in pediatric practice, such as the anatomy and physiology of infancy and childhood, care of the mother in pregnancy, wet-nursing, modification of milk in consequence of diet, age, mental impressions, menstruation, pregnancy, medicines, and other causes, and rules in regard to lactation, artificial feeding, bathing, clothing, sleep, exercise, etc.

A number of valuable tables are given, showing the analysis of human and cow's milk, and of a number of artificial foods, which have been in general use, and pointing out the fact that they all differ widely from human milk, except those consisting largely or wholly of cow's milk, and this, practically, is what has to be selected as being the most available nourishment and the nearest approach to and substitute for human milk, all points in regard to its source, quality, amount, freedom from micro-organisms, Pasteurization, predigestion, combining it with dextrinized barley-gruel, etc., are fully considered. The chapter on the diagnosis of infantile diseases is very complete and instructive. The various diseases are grouped and considered under the headings: diseases of the newly born; constitutional diseases; diathetic eruptive fevers, and other general diseases; malformation and deformities; diseases of the blood; local diseases; diseases of the cerebro-spinal system, digestive apparatus, respiratory and circulatory systems, genito-urinary organs and diseases of the skin. The scope and comprehensiveness and, withal, condensation which characterizes this authoritative work, may be seen in the article on scorbutus, a subject on which there has been much discussion and light thrown by the investigations of Barlow and others. Yet we can get the cream of all the writings on the subject in the page and a half devoted to it here.

In this edition the subject of surgical diseases of children has been added, the articles coming from the pen of Dr. Stephen Smith, author of Smith's Operative Surgery.

We can cordially recommend this standard work to our readers as a reliable, practical guide, representing fully all the recent advances in peditary.

A Manual of Medical Jurisprudence and Toxicology. By Henry C. Chapman, M.D., Professor of Institution of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia, etc., etc. Second edition, revised : with fifty-five illustrations and three plates in colors. Published by W. B. Saunders, 925 Walnut street, Philadelphia.

The first edition of this work was published in 1892, and, with the exception of several new figures and tables and brief references to the author's personal experience as coroner's physician to the city of Philadelphia, the book is unchanged. It is published as one of Saunder's new aid series of manuals, of which seven are now ready, and a number of others are in preparation for early publication. In this volume, as in the others, the object is to produce a treatise which will represent the essentials of the subject under treatment in a condensed form for practitioners and students, so that he can, with a minimum of time and reading, acquire, or replenish his memory with the more important details of the subject on which information is sought.

Medical Jurisprudence is considered in fourteen chapters, and Toxicology in two. There is a complete index, which enables one to find what he wants readily. All the subjects usually included in a work of this kind are dealt with in a masterly manner, and, in regard to such topics as the signs of death, the munner of making a post mortem examination in medico-legal cases, conduct of medical witnesses in court, medico-legal definition of wounds, foeticide and infanticide, legitimacy, evidence of poisoning and the detection of poisons. All that is ordinarily required of the general practitioner can be learned from the clear and concise descriptions and directions in this practical volume.

In regard to methods of resuscitation in drowning, chloroform, poisoning, etc., we find no mention of Laborde's method of rhythmical traction of the tongue which has received authoritative endorsement as a valuable aid in restoring the respiratory functions.

We can recommend this work to our readers as a safe guide in this special department of medicines in which the general practitioner is but seldom called upon to act, and therefore requires such concrete articles for ready posting.

Diagnosis and Treatment of Diseases of the Rectum, Anus, and Contiguous Textures. Designed for Practitioners and Students. By S. G. Grant, M.D., Professor of Diseases of the Rectum and Anus, University and Woman's Medical Colleges ; Lecturer on Intestinal Diseases in the Scarritt Training-School for Nurses ; Rectal and Anal Surgeon to All-Saints, German, Scarritt's Hospital for Women, and Kansas City, Fort Scott, and Memphis Railroad Hospitals, to East-Side Free Dispensary, and to Children's and Orphans' Home, Kansas City, Mo. ; Member of the American Medical Association, National Association of Railway-Surgeons, the Mississippi Valley Medical, the Missouri Valley Medical, and the Missouri and Kansas State Medical Associations, etc., etc. With two chapters on "Cancer" and "Colotomy" by Herbert William Allingham, F.R.C.S.Eng., Surgeon to the Great Northern Hospital ; Assistant Surgeon to St. Mark's Hospital for Diseases of the Rectum ; Surgical Tutor to St. George's Hospital, etc., etc., London. One

volume, royal octavo, 400 pages. Illustrated with 16 full-page chromo-lithographic plates and 115 wood-engravings in text. Extra cloth, \$3.50 net; half-Russia, gilt top, \$4.50 net. The F. A. Davis Co., publishers, 1914 and 1916 Cherry street, Philadelphia; 117 W. Forty-second street, New York; 9 Lakeside Building, Chicago.

Dr. Grant has, in this volume, given us a work which is timely and welcome, as in it we find a source of accurate information on a subject that deserves to be removed from the realms of charlatanism, and placed on a scientific basis, as the diseases of these parts are among the most annoying, and hitherto have too frequently been referred for relief to the advertising quack and peripatetic charlatan. In this book the medical and surgical affections are fully considered, and so classified that information on any point can be got without any arduous searching. The book is very fully illustrated with woodcuts and colored photogravures, the latter mostly full page and exceptionally fine, the coloring conforming to the normal appearance of the conditions depicted in the living subject. They, moreover, are all original, most of them from photographs of cases of the author and Dr. Allingham, of St. Mark's Hospital, London, who has written some of the chapters.

The opening chapter gives the anatomy and physiology of the rectum and anus. Chapter III. is devoted to symptomatology, and IV. to methods of examination. The chapters are not lengthy, but are full in information, especially in regard to diagnosis; and treatment at the end of many, illustrative cases are described. Among some we found exceedingly interesting are: the relation of pulmonary tuberculosis to fistula, in which guidance is given in regard to what cases should be operated on; stricture of the rectum, which produces so much disturbance in the circulatory and nervous systems, and causes such a long train of misleading symptoms. The chapter on hæmorrhoids is full; he states that there is no disease within the whole range of medical literature which has a more ancient history and claims a hoarier antiquity. Among the applications we do not see cocaine mentioned, which is of undoubted value as an addition to unguents used in painful external hæmorrhoids. The injection method of treatment, which was for a long time employed by quacks, and with much success, is discussed, and the limited sphere of its advisable application pointed out and minute directions given.

The chapters on pruritis, diarrhœa and constipation are instructive. In the latter affections, his non-medical methods, consisting of twelve items, has given him admirable results—it consists of divulsion, massage, electricity, and certain rules for diet, bathing, exercise, etc.

Chapter XXV., auto-infections from the intestinal canal, is one of the most interesting in the book—the bacillus coli communis looms up here as a "king of disturbers", and its influence is discussed fully in the text and in letters received by the author from Drs. Roswell Park, and Dr. Welch, of Baltimore. Neuralgia of the rectum may be readily recognized after reading the article thereon.

An important chapter is that on Colotomy, by Dr. Herbert Wm. Allingham, F.R.C.S. Eng.

The book is well printed on good paper and neatly bound, and will be an acquisition to the physician's library that will enable him to solve many every-day problems which will repay him manifold for the small outlay required for its possession.

A Text-Book Upon the Pathogenic Bacteria for Students of Medicine and Physicians. By Joseph McFarland, M.D., Demonstrator of Pathological Histology and Lecturer on Bacteriology in the Medical Department of Pennsylvania, etc. Philadelphia: W. B. Saunders.

There is growing up in the United States a class of workers, chiefly younger men, who are silently winning for that country a proper place in the scientific world,—men content to set down what they have seen, and leave to their elders the lucrative and useless task of collaborating upon “systems.”

Dr. McFarland apparently belongs to this class, for the book reveals that the author speaks of things of which he has knowledge. It is not so very long since it was found possible to include the whole duty of the bacteriologist within the compass of a very moderate-sized volume. The growth and movement of the subject soon made this attempt impossible. Then, in the evolution of books, writers addressed at the same time students of varying degrees of ignorance and teachers of different grades in experience and knowledge; as a result, students were led to believe that they could conduct this form of research, as Michael Foster said of physiological experiments, “with a stick and a piece of string,” while teachers found only futility and barrenness. Now nearly everyone is agreed that you can neither learn nor teach bacteriology out of a book, yet, in so far as this can be done, the present work serves admirably.

The author has chosen wisely to restrict his writing to so much as could fairly be covered in a work of reasonable compass. The subject has grown too large to be dealt with as a whole. He deals with the pathogenic bacteria alone, and, after taking thought, decided to omit all whose deleterious action is questionable. Yet he admits forms allied with the spirilla of cholera, for example, though they have no special significance. This of course does not fall within the rigid lines of any classification, but no one cares for “system” any more if only a book is useful. It may as well be said at once that the book is very useful to students of medicine and to the practitioner who aims to learn and profit by what bacteriology has accomplished.

The whole subject is so new and fascinating, no writer can refrain from commencing at the beginning of things, just like the president of an annual meeting, who either repeats the whole story of medical progress or the advance that has been made within the year. The present writer surely goes to bottom when he takes the Hebrew legend of the origin of things as his starting point. But the story is always interesting, and is again clearly told to any who can break through the first sentence, “The unrecognized inception of this department of science had its latent germs in the thought of antiquity.”

The classification and biology of bacteria is adequately set down and the problems of immunity and susceptibility are discussed with real ability. Then follows a full account of the devices and processes incident to the business of bacteriology. The body of the book is given over to a description of the various organisms which produce pathologic conditions, but to deal with it in detail would be to write the book again.

The book is not highly decorative; yet the illustrations are useful, and errors of type are of no importance in text-books which, in a very few years, must pass into new editions or altogether disappear.

Annual of the Universal Medical Sciences. Edited by Chas. E. Sajous, M.D., and seventy associate editors, assisted by over two hundred corresponding editors, collaborators and correspondents. Illustrated with chromo-lithographs, engravings and maps.

The issue of 1895, in five convenient volumes, is a splendid production, and exceeds in excellence and completeness any previous edition of this great and invaluable work. The progress of the general sanitary sciences throughout the world is briefly, but clearly, reported, with references to the best literature on the subjects treated. All branches of medicine and surgery are considered, briefly or at length as, their importance warrants or demands.

The latest facts and theories regarding obscure diseases are stated or logically discussed. The editor, for example, when dealing with tumors, gives the names of the advocates and opponents of the parasitic or infectious nature of malignant neoplasms, and reference is made to any literature of importance bearing on the subject of etiology. Continuing with malignant neoplasms, the latest treatment is given, and statistics gathered from the most reliable sources, to show the results obtained by the various methods of treatment. The reference index this year is, we think, perfection, for it is simple, convenient and complete, a great improvement on the index of the older editions. If one will take the trouble to examine into the character and scope of the Annual, he is sure to appreciate it. The men who are in charge of the various sections are specially well fitted for the work allotted to them. They are men of skill and wide experience, and are recognized authorities on the particular branch of medicine or surgery on which they write.

Much credit is also due to the publishers (F. A. Davis & Co., Philadelphia), for to publish every year such an extensive work must indeed be a great undertaking. The Annual has come to be a standard reference book, and is most valuable as a means of looking up any subject preliminary to writing upon it. In its present form, to bring the different departments within the space allotted to them, great condensation is often necessary, but simply as a reference book no medical library is complete without it.

Transactions of the College of Physicians of Philadelphia. Third Series, Vol. XVII.

This is a volume of 171 pages, representing all the papers read before the College from January, 1895, to the end of the year, many of which are of exceeding interest. A list of the officers and past presidents is given, and a complete list of the Fellows and Associate Fellows, corresponding members and necrological list. The William Jenks' prize essay of the College of Physicians of Philadelphia, consisting of 179 pages, is bound with the Transactions. The prize was awarded to A. Brothers, B.S., M.D., of New York city, who writes on *Infantile Mortality during Childbirth, and its Prevention*. This is the second time this prize of five hundred dollars has been awarded. There were six competitors. The essay is an exhaustive one, and besides giving a careful birds'-eye view of the entire subject, points out all the advances made in recent years in the interest of the unborn child, previous to labor, during the critical hours of active labor and in the earliest period of life succeeding labor. It is a valuable contribution, worthy of being "read and studied" by all who undertake the responsibilities of accoucheurs.

The Transactions are edited by Gwelym G. Davis, Philadelphia, and the prize essay by P. Blakiston, Son & Co., 1012 Walnut street, Philadelphia.

Transactions of the American Pediatric Society, seventh session, held at Virginia Hot Springs, May 27, 28 and 29, 1895. Edited by Floyd M. Crandall, M.D., New York. Vol. VII, reprinted from the Archives of Pediatrics.

This book is neatly bound in cloth, and contains a list of the past presidents, the officers for 1895-96, the council and membership, the minutes, president's address, and the papers read at this meeting, and the discussions. Forwarded by the secretary, Dr. Samuel S. Adams, Washington, D.C.

Electricity in Electro-Therapeutics. By Edwin Houston, Ph.D., and A. E. Kennedy, Sc.D. Publishers, The W. J. Johnston Company, 253 Broadway, New York.

This volume is one of the elementary electro-technical series, ten in number, written by the same authors, and sold at one dollar a volume, and is intended to meet the growing demand of the general public as well as the medical practitioners, for "reliable information respecting such matters in the physics of electricity applied to electro-therapeutics as can be readily understood by those not specially trained in electro-technics." The fundamental principles of electricity and magnetism as employed in electro-therapeutics are made clear, and stated in language devoid of much technical nomenclature. It is profusely illustrated, showing the construction and adjustment of the various kinds of apparatus employed directly or indirectly in therapeutics, and the descriptions follow the circuit method, all the phenomena and laws of electricity or magnetism being considered as pertaining either to the electro-static, the electric, or the magnetic circuit. The contents of this little volume, carefully studied, will impart a good groundwork of knowledge in the application of electricity, and is representative of recent advances in this most attractive and important branch of science.

A Manual of the Practice of Medicine. By George Roe Lockwood, M.D., Professor of Practice in the Woman's Medical College of the New York Infirmary; Attending Physician to the Colored Hospital and to the City Hospital; Pathologist to the French Hospital, etc., etc., with 75 illustrations in the text and 22 full page colored plates. Philadelphia, W. B. Saunders, 925 Walnut street, 1896.

The aim of the author has been to present the essential facts and principles of the Practice of Medicine in a terse and concise form. To a very large extent this has been successfully accomplished, and the result has been that the book is one to which the busy practitioner can refer with a reasonable certainty of obtaining just the kind of information which will prove useful to him. The admirable classification of Dr. Osler has been adopted, and we note that he refers frequently to him as his authority. The treatment is up to date, and he writes as if he had full faith in the remedies which he named. To those who desire an up-to-date book, and at a reasonable price, we can honestly commend this volume.

Pamphlets Received.

Evisceration of the Eyeball. By L. Webster Fox, M.D., Philadelphia.

Sarcoma of the Choroid, Glioma of the Retina, and new formed Blood vessels in the vitreous. By the same author.

Burns of the Cornea, Electric Light, Explosion, causing temporary blindness, Traumatic injuries to the eyes, Hypopyon. By the same author.

Sleep in its relations to Diseases of the Skin. By L. Duncan Bulkley, A.M., M.D., New York.

Laryngeal Neoplasms. By Walter F. Chappell, M.D., M.R.C.S. Eng. New York.

Six Years Experience in Abdominal and Pelvic Surgery. By A. Laphorn Smith, B.A., M.D., M.R.C.S. Eng., Montreal.

PUBLISHERS DEPARTMENT.

SANMETTO IN RETENTION OF URINE.

Have given Sanmetto a good trial, and find it one of the best preparations I have ever used. Case No. 1, John D., aged 70, Ireland, has been troubled for a long time, unable to pass his urine. After treatment with other remedies with no benefit, placed him on Sanmetto, with following results: The first day the pus increased in quantity, on second day diminished, by fourth day could urinate himself, before this he had to be catheterized. Dose: one drachm every four hours for the first three days, afterwards one drachm three times a day. Discharged in ten days, a complete cure of cystitis.

Bayonne, N.J.

A. C. FORMAN, M.D.,
House Phys. Bayonne Hospt.

A MAGAZINE'S INFLUENCE.

The enormous circulation of such a magazine as *The Ladies' Home Journal* can, in a sense, be understood when it is said that during the last six months of 1895 there were printed, sold and circulated over four million copies—(in exact figures 4,058,891). Figures such as these give one some idea of the influence which may be exerted by even a single one of the modern magazines.

LITTELL'S LIVING AGE.

The March issues of *Littell's Living Age* give the usual feast of good things, brought from the field of history, biography, discovery, travel, romance and poetry. Among the many valuable papers which appear in these numbers may be mentioned "John Stuart Blackie," by A. H. Miller; "Our Limited Vision and the New Photography," from the *London Lancet*; "Reflex Action, Instinct and Reason," by G. Archdall Reid; "A Sister-in-Law of Mary Queen of Scots," from *Blackwood*; "The Two Dumas," by C. E. Meitkerke; "The Evolution of Editors," by Leslie Stephen; and "Florian," by Augustus Manston. LITTELL & CO., Boston, are the publishers.

APPLETONS' POPULAR SCIENCE MONTHLY FOR MARCH, 1896.

Mr. David A. Wells continues his account of "Taxation in Literature and History" in *Appletons' Popular Science Monthly* for March, giving methods employed for raising revenue in ancient Greece and Rome. Under the title "The Failure of Scientific Materialism" this doctrine is sharply attacked by Prof. Wilhelm Ostwald, of Leipsic, who affirms that it should be replaced by a theory based on energy. Herbert Spencer contributes to this number a chapter on the "Painter" in his series on Professional Institutions. Prof. E. W. Hilgard shows that the salts in our alkali lands consist largely of plant food, and tells what means may be used to neutralize the harmful constituents. "Exercise as a Remedy" is discussed by Henry Ling Taylor, M.D., who shows how potent a curative agent exercise may be when carefully prescribed and how injurious it may be in some cases. Prof. William R. Newbold writes on "Normal and Heightened Suggestibility," giving some of his experience with hypnotic patients. James Rodway describes in a bright, chatty manner "The Coming of the Rains in Guiana." A scientific examination of the problems of "Acclimatization" and their bearing on the future of tropical regions is contributed by Prof. William Z. Ripley. Among illustrated articles are an account of an archæologic find by Prof. C. F. Holder under the title "The Ancient Islanders of California," and "The Story of a Monkey," by M. Dybowski. Prof. W. K. Brooks concludes his "Study of Inheritance" in this number; Prof. M. V. O'Shea contributes a thoughtful paper on "Educational Values in the Elementary School," dealing with the question, What studies are of most worth? and Gifford Le Clear corrects a misconception as to certain measurements of "The Velocity of Electricity." "A Sketch and Portrait" are given this month of the Ohio scientist William Starling Sullivant, who was acknowledged as the greatest American authority on mosses. "The Nature of Liberty" and "The New Natural History" are discussed in the Editor's Table, and the other departments are well filled with scientific brevities. New York: D. Appleton & Company. Fifty cents a number, \$5 a year.

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Original Communications.

COMPARATIVE PATHOLOGY.

By ANDREW MACPHAIL, B.A., M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.

Professor of Pathology, University of Bishop's College.

It is no longer possible even to survey the field of medicine; it is difficult to deal adequately with one portion of it. Even men whose chief business is pathology are compelled to restrict themselves to some one part of the subject. And human pathology is not all pathology; the whole animal creation is groaning and travailing in the pain of disease, and many of these diseased conditions still await investigation. But this is not all. The work will be incomplete until the diseases of plant life are also worked out and brought into a proper relation with those which are incident to the more complex forms of life.

In any proper course in physiology the student is first taught the elements of physiologic processes in plants. There he sees the cell in its simplest form, and obtains a primary notion of what protoplasm really is and what it can effect in virtue of its own inherent life. He is then in a position to work his way up to a knowledge of the in-

finitely more perplexing problems which are associated with the higher cells and their intense differentiation.

In the same way a true and wide notion of pathology is obtained by working up from plant life, for plants have their hemorrhages from injury and their exudations under attacks of parasites. They have their own necroses from impairment of the circulation, an alteration in their fluids from disease and a development of new products such as gallic acid. Again a perverted nutrition gives rise to ischaemia, chlorosis, icterus and gangrene, and even cancerous growths. There are the sclerotic changes induced by the fungi, and a wide door is still open which will lead to much knowledge through inoculation and infective experiments upon plants. A bruised plant bleeds and sloughs, open wounds are liable to microbic infection, there is a coagulation of the fluids, with pathologic secretions under specific irritation, which appear as tragacanth, manna, and other resinous materials. In plants one does best see the tendency to repair and to neoplastic growths. These are the tumors commonly grouped as xylomata, which probably differ widely from each other, and which the student knows only vaguely and incompletely as the source of certain astringent drugs.

Coming to the lower animals one sees commonly enough the epithelial neoplasms and sarcomata in fishes: sarcoma of the testicle is common in the testicle of the dog and pig, and melanotic sarcoma in the anal region of the horse. Cartilaginous tumors in the breasts, psammoma in the brain, lipoma, osteoma, and fibroma are all well distributed. If one ventures into the field of medicine numberless illustrations crop up. Garrod remarked that gouty patients are a kind of birds. Goitre affects animals in those districts where it is common in man. Calcareous deposits occur in the oviducts of birds as in the human prostate, and eczemas are a heritage of plants as "scab" of the lower animals and of man.

The importance of all this is not without recognition, and many universities are now teaching the subject in an orderly manner.

Nor must the economic value of the subject be lost sight of. The work of Pasteur upon the silkworm disease, splenic fever, chicken cholera and rabies is of prime economic importance, and this feature will give an immense impulse to comparative pathology.

The present object, however, is to call attention to the practical results which are now being reached by a study of diseased conditions in the lower animals. In the United States the work is well systematized, and is under the direction of the Bureau of Animal Industry. The report is published annually, and 50,000 copies are distributed throughout the country. The report deals with the work accomplished during the year. The one at hand describes the measures taken for the extirpation of contagious pleuropneumonia, the efforts to regulate the transportation of Southern cattle in order to prevent the spread of Southern cattle fever, the results of the investigations instituted by the Bureau into the nature and treatment of actinomycosis in cattle, of Southern cattle fever, the use of mallein for the detection of glanders in horses, and tuberculin for the diagnosis of tuberculosis. Besides all this purely scientific work the department deals with the inspection of export cattle and meat, transportation and quarantine.

The Division of Animal Pathology is under the direction of Dr. Veranus A. Moore, and it is in this department the most interesting work is being done. There is a publication at hand issued in January, 1896, which describes an investigation into the nature of a disease in cattle not distinguishable from rabies which merits some attention. Whilst Dr. Moore was engaged in researches upon "toræmia maidens," or "Cornstalk disease"—a disease of which the cause is yet unknown—his attention was called to a mysterious outbreak amongst cattle in Northern Iowa. His investigations led to a diagnosis of rabies. This suggests the possibility of the occurrence of rabies in cattle without the intervention of rabid animals. Besides there was much evidence indicating a casual relation between the conditions under which the animals were kept and the disease. In any case some consideration of the evidence upon which this opinion is based will be of interest.

Late in June a steer was found dead, in July another, in September another, and in October six more. The animals were all pastured on wet land; those on high pasture land escaped. About twelve miles away several animals were bitten by a rabid dog a year before, and died. In the present case the closest enquiry failed to disclose any connection with the bites of rabid dogs. The symptoms observed in the animals were those commonly in animals

dying of rabies. The autopsy and bacteriological examination revealed no other cause of death. The inoculation experiments were exhaustive, and all the rabbits died with symptoms which could not be distinguished from those observed in rabies. At the same time a series of inoculations was made upon rabbits and calves with virus obtained from the cord of a dog known to be affected with rabies, and the results in the two series were observed to be identical. Dr. Moore gives notes of several similar outbreaks, and concludes by saying :

“Until the specific cause of rabies is demonstrated, we are able to recognize the virus in the brain substance of the affected animals only by its ability to reproduce the disease when properly inoculated into other animals. As shown in the inoculation experiments, the filtrate (through a bougie of a Pasteur filter) of a suspension of the brain substance of a rabid animal would not produce the disease, while the injection of the suspension was followed by characteristic symptoms and fatal results. This fact, which confirms the results of other investigators, indicates that the specific cause is not a soluble substance. The extensive bacteriological investigations made by several European workers indicate that the virus of rabies is not bacterial in its nature, and the presence of other microscopic organisms have likewise not been demonstrated. The results of this series of investigations indicate that rabies, or a closely related disease, sometimes occurs among cattle kept under certain conditions without the intervention of rabid dogs or other animals.”

Parallel with these cases is an account in the “British Medical Journal,” 2nd May, 1896, of eight cows being bitten by a dog declared to have been rabid. They have shown no symptoms after seven months, yet two calves born during that time died of a disease which the Brown Institute declares was rabies. The incident tends to confirm the news that rabies may exist independently of infection by rabid dogs, since it is hardly conceivable that foetal infection was a factor.

THE PATHOLOGY AND COMPLICATIONS OF HYDROCELE.

By THOMAS H. MANLEY, M.D., New York.

The primary and ultimate derangement of function and finer structural changes which lead to hydrocele are not well understood.

Whether the serous fluid is the result of a low grade of local inflammation, or consecutive to pathological changes, is certainly a matter yet unsettled, although the weight of opinion is in favor of the former view.

The local changes in structure which we find, point to degenerative changes of an inflammatory origin; thus we have as an accumulation, an exudation similar to what we find in inflammatory effusions in other serous cavities, with all those shades, gradations witnessed in any cavity, the seat of inflammation.

In some instances, we have evidence of a primary plastic adhesion between the visceral and parietal surfaces within the vaginal tunic; while in others, the fluid is shut off in locules, from the development of fibrous partitions succeeding the deposition and lamination of organized lymph. This type of hydrocele is well described (Varieties of Hydrocele of the Tunica-vaginalis-testis, and some anomalous states of the Tunica-vaginalis, by Joseph Griffith, A.M., M.D., F.R.C.S. (*Journal of Anatomy and Physiology*, 1893-1894, p. 291).

He calls attention to the many apparent anomalies in the processus vaginalis and tunica-vaginalis-testis. He cites four cases which he carefully examined (*post mortem*) in men who suffered no inconvenience from them during life. The history of these cases points to their pathological rather than to their anatomic basis.

Humphrey, in Holmes' System of Surgery, mentions bags of water which were multiloculated and each pouch connected with the peritoneal cavity.

Griffiths believed that as these multiloculated hydroceles were usually small they seldom underwent treatment. These evidently belong to the same class designated by Berard as "Hydrocele-Diverticulaire," in some cases of which, by the injection of melted wax, he was enabled to trace them to the peritoneal cavity. He believed that they were formed either by a thinning and bulging

of the tunica-vaginalis in places or by the dilatation of septa. The inflammatory character of the mutations leading to this type of scrotal-ascites with consecutive changes, has been decried, because many of its clinical features are absent. Pain is seldom or never present, until by weight and pressure a dragging on the cord and compression are experienced. The clinical evolution of this process is certainly unique, and this is what gives it its distinguishing characteristics which belong to no other serous cavity, though every observer knows that when senile changes begin, especially in their regular order after middle life, the sensations are more or less blunted, and what we designate as inflammation may advance to a dangerous degree before the salutary warning is given. The exudation of hydrocele varies in quantity and quality.

A large number of the smaller varieties are borne unnoticed, and it is probable that a considerable proportion, perhaps provoked by various excesses or constitutional disturbances, disappear spontaneously when these have been discontinued or removed. In those tapped the quantity removed has varied. From the celebrated historian Gibbon, Mr. Cline removed at one sitting something more than a gallon and a half. In Dujato's 1000 cases the quantity varied from 10 to 100 ounces. The composition of the withdrawn fluid varies. Spermatozoids entire and partly disintegrated, have been found in the evacuated fluid of hydrocele. In the average fluid withdrawn, we will find on inspiration cholesterine crystals. In one case, from which Mr. Curling had withdrawn 570 grammes of fluid, he was able to extract 45 centigrammes of cholesterine. The source of this in hydrocele is obscure. Cholesterine is well known as a product of the decomposition of fat, and is often found in cysts lined by epithelia as mammary or ovarian, when it is assumed to be a derivative of metamorphosed epithelia. The fluid is of an alkaline reaction. Sir Wm. Ferguson and Vidal have both reported instances in which the fluid withdrawn was of thick, white, milky consistence. In the former's case chemical analysis proved it to be an emulsion of fat. Vidal termed these "Galactoceles." It does not appear whether a microscopical examination was made, as chemistry was alone resorted to, in examinations of liquid exudates until the last twenty-five years. It is my impression that these cases were probably first serous, then suppurative, and finally, by a free admixture of these with the alkaline secretions, a chylication or saponification occurred, producing the emulsion described. The case in my own practice seems to have been of the same class.

In May, 1887, Dr. N. C. Donahue, of the dispensary service of Harlem Hospital, sent a case of hydrocele in, for operation.

The patient was a man of 40 years of age, of good physique and apparently good general health. He was single, had gonorrhœa twice; never had stricture or orchitis. He stated that three months before, without any apparent cause, he noticed that his right testicle began to swell; it continued until it attained so great a size that he could only conceal it with difficulty. About the time, while in a skating rink, he sustained a fall, after which this scrotal tumor began to give him more pain, but he was still able to work as a milkman, by wearing a suspensory bag. Its size had diminished somewhat, he believed, since he had injured it, but an uncomfortable sensation remained, and now he came to have it tapped. This was done in the dispensary department, but it was found that nothing would run through a trocar. On examination no trace of the testis could be found. The fulness which was extreme, followed up the course of the cord as far as the internal ring. The scrotum was somewhat more sensitive over the swelling than on sound side; but the temperature was about the same. Fluctuation could be easily recognized. Incision was advised and consented to. The parts having been thoroughly prepared and a limited area cocainized, an incision was made through the overlying tissues. When the vaginal tunic was reached it was found thick and congested from a pachy vaginitis. On opening into the cavity, a thick, whitish, creamy fluid gushed forth. About nine ounces were pressed through. After this ceased to flow the testis was sought for, but it seemed greatly enlarged. After extending the wound it was about to be raised up, when a thin partition broke, and there issued through a colorless, colloid material. Now the hydrocele was treated by the Volkman and later prompt recovery followed. A microscopic examination was made of the contents of both locules; except in consistence both locules were occupied by the same material. In the larger there were less stringy shreds of albumen. Both contained fat in great abundance, broken down epithelia and pus corpuscles. Many of the latter showed degenerative changes. There were a few blood globules with an excess of granular material.

This, then, clearly, was a case of ordinary hydrocele undergoing transitional inflammatory and degenerative changes consecutive to a transformation,

Chronic untreated or unrelieved hydrocele cannot fail to

induce consecutively other pathological conditions, both directly and indirectly, the former by pressure on the cremaster muscle, so straining it as to induce a destructive atrophy of it, with a further falling of scrotum toward the knees, pressure atrophy of the testicle and epididymis, with an absorption of the secreting tubular structures. It is my belief that a large hydrocele favors hernia on the side involved. The shape of one of these masses is always conical. The effusion always begins at the base where the vaginal tunic is the widest. As it augments in volume the fluid follows the direction of the funicular process, the summit of the bag taking the shape of a pointed cone. Advancing upward to the external ring, it enters the vaginal canal, and is only arrested where the processus-vaginalis ends and the spermatic cord begins. This is the point where the coverings of the cord begin.

COMPLICATIONS OF HYDROCELE.

The complications of hydrocele are of almost infinite number. No work that I am familiar with enumerates them all, or attempts to exhaustively consider their pathology.

It can be readily understood that anything which produces an irritation of the albugenic or vaginal serosa will provoke an exudate in varying quantities.

My purpose in the present instance will be to only chiefly consider very briefly the pathology of the most frequent disease which we find associated with dropsical effusions into the pouch of the testis.

This is hernia, and this alone can be at present considered. We find scrotal effusion in large quantities chiefly in two types of hernia in the adult. In all cases of strangulated hernia the amount of fluid in the sac varies, though in many it constitutes the bulk of the tumor.

The new type of adult hernia occasionally associated with hydrocele is chronic inguinal, although cystic pouches may be encountered in rupture anywhere located.

There is no pathological condition of the external genital pouch so commonly the cause of confusion and difficulty in diagnosis as the pressure of localized effusions with hernial protrusion. At the very outset of the consideration of this part of our subject the question arises :—Do these watery accumulations precede or are they consecutive to hernia? If we include all fluid formations in the category of hydroceles as some pathologists do, then there can

be little doubt but in some cases, probably the minority, the neoplastic cyst is an active, etiological factor. Lying sausage-shaped, as it sometimes does, within the inguinal canal, it opens widely the bore of the funis; its tip like a Barnes' dilator encroaching on and finally by pressure-atrophy opening widely the internal-ring. With the absorption or sudden withdrawal of the fluid resistance to visceral descent having been displaced we will soon find the passage favorable to the evolution of a hernia. In most voluminous incarcerated ruptures of long standing we will find on dissection an extensive degeneration or transformation of tissue with locules of fluid of various consistence, bearing different relations to the thick cartilaginous sac and the contained viscera. These liquid formations under these circumstances are dependent on degeneration of structure ensuing in consequence of interference with the vascular supply, affecting the nutrition of the parts. It is probable, too, in a considerable number, a low grade of inflammation often supervenes from the strains and contusions which the exposed parts here are subjected to, when the plastic, serous or other deposits fail of absorption. It is most extraordinary how rapidly a small scrotal hernia may enlarge by the augmentation of the fluid of an hydrocele, and how often symptoms of strangulation may suddenly develop in those complicated cases by changes within the hydrocele. The following is an example.

In the autumn of 1884, a man of large frame, fifty-nine years old, was admitted in Ninety-ninth Street Hospital, suffering from symptoms of strangulated hernia.

He said that for twenty years he had had a fulness in his scrotum on the right side. The doctor had informed him that it was not a rupture and advised him to wear a suspensory bandage. This he did, and he had no serious inconvenience until four days previous when he was kicked by a horse, the blow falling with force against the tumor. The next day, suffering considerable pain, and finding that his scrotum was greatly enlarged, he sought medical advice. Soothing applications were ordered with rest in bed, but as it continued to give him pain with convulsive vomiting, he was sent to hospital. On entrance he presented many of the constitutional symptoms of hernial strangulation; he was very weak, with a quick, thready pulse and was vomiting a greenish mucous material. His scrotum was as large as a medium-sized cocoanut, hard and resistant. The testis on the left side could be felt; but the one on the side involved was indistinguishable. The fulness up

the direction of the cord through the inguinal canal produced a distinct bulging. On reflected light the transparency of the tumor was distinct. This, then, was a case of hydrocele probably attended by hernia. There was one clinical feature in connection with the case that inclined me to doubt this. Within an hour after he entered the hospital he had a free movement of the bowels. The night before he had been given a dose of castor oil he informed us. In the evacuation which he had it could be seen in vessel mixed with urine that there were particles of floating oil which made it evident that the laxative had traversed the entire alimentary canal; something impossible in the presence of a stenotic intestine. Having carefully considered all the puzzling features in the case, it was finally decided to locally anæsthetize the scrotum, make a free incision, drain away the effusion, and then if a hernial strangulation was found give ether and relieve it.

When the tunica-vaginalis opened, more than a quart of turbid, yellowish brown fluid came away. Then the index finger was introduced when a mass of thick gelatinous substance was brought away with the finger-nail which was adherent to the epididymis and tunica-albuginea. Carrying the finger up the inguinal canal passage made by the distended vaginal tunic no visceral protrusion was detected, and on impulse in coughing the finger's tip pressing over the nude fascia-transversalis, no evidence of an incipient protrusion could be felt. Now the cavity of the sac was thoroughly irrigated with strong mercuric bichloride and a gauze drain applied with the usual dressings. The symptoms of strangulation quickly disappeared when the pressure was removed. His recovery was rapid and uneventful. In this case, in the regular sequence of their occurrence, were first, hydrocele; secondly, a tumor producing an acute vaginitis with large effusion, and thirdly, the reflex constitutional disturbances, resulting in pain, great hydrostatic pressure on the testis and strain on the spermatic cord.

Mr. Thomas Bryant (*Medical Times and Gazette*, January, 1861), reports case of woman sent into his service for operation for strangulated hernia in whom he found on opening the canal of Nuck, no hernia, but a protruding cystic distension. He observed that "there are no symptoms of hernia which these may not present." Payne has reported a case of strangulated hernia in a man complicated by hydrocele (*Medical Record*, New York, May, 1879).

Gross has recently published notes on a kindred pathological condition lately observed in a female. His patient was first lapara-

tomized for a ruptured ovarian cyst and again operated on for a crural hernia. In the first he encountered a mucous-serous fluid, this patient making a good recovery. Five years later he was called to operate on the same person for a hernia. On incision he discovered that the projecting mass consisted of a mass similar to what he had seen in the ovarian cyst; hence he designates this pathological condition "herniare neoplasique." He observes that this inner surface is studded by mucoid vegetations which become easily detached on opening the cyst. He believes that they are not of the same genus as the malignant mucoid described by Mallassez and yet are unlike the benign variety of Pèan. (*Gaz. Heb.* Feb. 2, 1896.)

A somewhat similar case of multilocular hydrocele associated with hernia has been reported by J. W. White (*University Med. Mag.* 1893-1894, vol. vi. p. 190).

A single case of acute hydrocele of the spermatic cord is reported by B. Johnson Taylor in *British Medical Journal*, 1892, vol. II, p. 107. The patient was suddenly seized with pain after his supper; operated on for strangulated hernia same night. Everything went well until morning of the sixth day, when severe pain, with bulging of the parts, began along the course of incision. Under the impression that there was a re-descent of the intestine, the wound was again opened, when a large hydrocele of the cord came into view; this was opened and drained, when the case went on to full recovery,

In Boyer's surgical writings he makes an extended observation on this complication of hydrocele and hernia, and gives, with considerable fulness, the two remarkable cases of Pelletan and Le Dran. Curling mentions, in his work on the diseases of the testis, a type of hydrocele of a rather peculiar pathological character. He alleges that sometimes after a hernia is reduced, the neck becoming obliterated, the sac which has been left in the scrotum may take on active secretion and produce hydrocele. Boyer supported this view on the occasional anatomical view of hydrocele (*Malad. Chirug.*, vol. III p. 301). It is usually assumed that when a part is without function it soon wastes and disappears, and that in hernia after the viscera have left their abode in the sac the surfaces of the sac become adherent, and atrophy disintegrates it. But that we may have a hydrocele of this character has been demonstrated in my own practice last winter, 1895-96.

On the 2nd of January, I operated on an active young man

for the cure of an inguinal hernia, in whom the protrusion came well down into the scrotum. The O'Hara operation was employed, a procedure by which the sac is left in situ after division of the neck. Everything went well until the third day, when, the dressings becoming loose, the patient discovered that the fullness in the scrotum was larger than before operation. He sent for me in haste to inform me that the operation was a failure and the rupture had returned.

On examination it was found that this was not the case. Through the lower edge of the incision—not yet solidly united—I passed the top of a probe into the sac, when there issued up about two ounces of straw-colored fluid. It did not reaccumulate, and recovery was no further impeded. Curling designated this variety of scrotal effusion, “spurious hydrocele.”

Percival Pott detailed the history of such an unusual case under peculiar circumstances. A young man suffering from strangulation came under his care. He found the scrotum greatly distended with fluid, and no history of a previous rupture. Dissecting down he came on to a thickened hernial sac filled with serum. When he opened this a large escape of fluid followed, with immediate collapse of the swelling, but on passing his finger up he came on a loop of intestine which had made its way through the formerly closed neck; here it was strangulated. He divided the constriction and returned it.

Scarpa observed in reference to these mixed cases that “whatever difficulty these complications may oppose to exact diagnosis of reducible intestinal hernia, they do not occasion any with regard to operation whenever the hernia is effected with strangulation, or the symptoms accompanying incarceration of the intestine show clearly the nature of the principal disease, and, moreover, render this operation necessary; by means of which we have at the same time the advantage of laying bare what caused the complication of the hernia and radically curing both at the same time.” (Treatise on Hernia [p. 230]. By Wishart.)

As an illustration of the surprising rapidity with which a hernial sac may enlarge and simulate hydrocele, Scarpa cites the case of a stout young man who had a small incarcerated inguinal hernia of eight years' standing.

While on a journey on horseback his truss broke. When he alighted he noticed that his scrotum had become enormously distended; besides, colic and vomiting soon set in. The tumor

measured 16 inches in circumference, and had buried up the penis. The whole thing looked like a hydrocele and might have been mistaken for one—he adds—if it were not for the symptoms of strangulation, and “I could with difficulty persuade myself that this large tumor was formed for the most part by water collected in the vaginal coat of the testis or in the sac of a hernia, as the patient never had the smallest mark of serous effusion in the scrotum, as well as because of the repeated assertion of the patient that the hernia never before exceeded the size of a hen’s egg, and there was no reason for believing that so large a quantity of fluid could have descended from the abdomen, otherwise in good health. There was no question about the impossibility of reducing the parts without an operation, as the symptoms were increasing in severity. After incision three pints of serum escaped. At the upper part of the sac a knuckle of intestine about three inches long was nipped. This point was divided and the intestine returned, when recovery speedily followed.”

Adams, Cloquet, Morris, Bouisson and many others both in this country and Europe have reported vast serous accumulations in the sacs of old incarcerated, scrotal herniæ. In many such complicated cases we are informed that great relief followed the tapping of the bag of water.

In Bouisson’s case, on the first tapping he removed 28 pints of fluid. No ill results followed. The behavior of fluid accumulations within the cavity of the tunica-vaginalis as contrasted with other serous cavities is singularly unique and it is the same with respect to the vascular arrangement on which this pathological condition primarily depends; and likewise in its disappearance when spontaneously disposed of. The arterial supply to the brain is by various directions and the venous flow is through large vessels, this blood current being favored by gravity. Serous effusions between or beneath the meninges seldom occur in sufficient quantities to compress the brain, except in tuberculosis. Late observations demonstrate that in pleurisy with effusion tuberculosis is in operation in more than a third of the cases. The proximity of the pleuræ to the heart necessarily implies an active vascular supply, and hence, in large serous effusions here, we will sometimes note the surprising rapidity of resorption. Ascites we seldom or never see, except as a secondary lesion as in hepatic, cardiac or tuberculous diseases. It rarely appears except when the constitution is shattered and the integrity of some organ vital to life is

destroyed. The circulation though complicated here is active, still it is through mechanical impediment that transudation follows. The testes occupy a dependent position and are swung like two plummets from the spermatic cords. Aneurism or atheroma in the spermatic arteries we seldom see. The arterial supply of the testis and cord is through these vessels. It is the contrary, with the vast venous plexus which must carry its blood against gravity. The pampiniform plexus though endowed with much thicker walls, than any other veins in the body, are not entirely unlike arteries, and are frequently the seat of degenerative changes after middle life and often before it. As their walls begin to weaken, we will encounter varices in some ; in others we will find evidence of failure of vascular integrity by an elongation of the testis, particularly in old men. This is partly due to an atrophy of the cremaster muscle, but the chief cause is in the vessels. The remarkable elastic tensile property of the spermatic cord we will notice to good advantage in castration. When we cut off the cord low down, near the head of the epididymis, in an instant the proximal end is out of sight far up the inguinal canal. The course of the emulgent vessels of the testis is very tortuous and their length greater than any other in the body. This element in the circulation in this region must, in part at least, if not entirely, account for the want of spontaneous resorption of fluids within the vaginal-tunic, for we have good and authentic reasons for believing that the veins in the scrotum participate but slightly in drawing away the deoxygenated blood of the parts included in the serous investments of the testis. The complication of a hernial descent must necessarily embarrass the circulation and interfere with nutrition. But slight, if any, constitutional disturbance marks the presence of hydroceles if uncomplicated and of moderate volume. Those of the most robust health may have them as well as the more frail, and there is nothing to point to their development in any manner depending on constitutional conditions or disease of a central important organ. But when attended by an enterocele or a large omental mass their weight becomes burdensome, sympathetic vesical irritation is liable to supervene and occasional attacks of colic are common. Scrotal effusions, then, within the tunica-vaginalis are dependent on local changes in the environment of an organ not essential to life ; their pathology being disassociated with constitutional disease or organic changes in a contiguous or remote viscus, it is evident that the basis of treatment here must be radically different from what obtains in other serous cavities.

PURE MILK.*

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There is no subject which demands the attention of physicians, journalists, sanitary organizations and the public generally so urgently as that of a city's milk supply. Much is written about it in the medical journals of the United States, especially in reference to the condition of the supply in several of the leading cities, and the difficulties to be contended with in these centres are similar to what exist to a greater or less extent in all towns and cities, and the methods adopted, which have proved effectual in promoting the removal of the possibilities of milk adulteration, may with profit be considered and their application urged. As with the advances of civilization, especially where the people are massed together, there is among women, owing to inattention to the demands of hygiene, in the way of insufficient exercise, improper ventilation of houses, injudicious dietary and a too close conformance to the false conventional ideals in the matter of dress, a marked physical deterioration which necessarily has associated with it an inability to properly nurse and sustain their offspring, and as cow's milk, modified to suit each case, is now recognized as the best food for infants deprived of their normal maternal or healthy wet-nurse supply, it is of the greatest importance that only a pure normal and unadulterated quality should be supplied. But dishonest milkmen and dealers, in order to increase their profits, are prone to make additions, sometimes harmful only by lessening the nutritive value of the milk, or deleterious substances may be added. There may be improper feeding and care of the animals supplying the milk; improper methods of milking, which permit the entrance of impurities and germs; improper care of milk after it is taken from the animals, and ignorantly they may supply milk from diseased herds. All these difficulties can only be avoided by spreading knowledge as to how they are to be surmounted, and having qualified inspectors to enforce the necessary regulations and examiners capable of detecting every abnormal constituent.

A pint of normal milk contains as much nutriment as six ounces of beef, and consists of about 87 per cent of

* Read before the Montreal Medico-Chirurgical Society, May 29th, 1896.

water and 13 of solids, made up of about 4 per cent fat, 4 of albuminoids, 4 1-2 lactose, and ash. Average milk should have about 8 or 10 per cent. of cream, but this varies according to the breed of cow and among individuals, Alderneys yielding sometimes as much as 20 to 30 per cent. Uniformity is better obtained by mixing the milk of different animals, which for children is always preferable to the prevailing idea of using the milk from one cow. It may be faintly alkaline or neutral, sometimes feebly acid, if the animals are not pasture fed, sp. gr. 1029.7. Thompson states that if the lactometer floats below 1029 the milk is watered; if above 1033 it is skimmed.

In regard to the impurities in milk which have to be guarded against, they are found to be many. Diseases may be conveyed from the animal, such as tuberculosis. It is now a well-established fact that tubercle bacilli can be found in the milk of cows afflicted with tuberculosis, even where the udders are not apparently affected, and may produce in the infants using such milk the tuberculosis of infancy. It is estimated that about 7 per cent of cows suffer from tuberculosis, 18 per cent in 3,000 examined in the United States, and in slaughter houses in Hanover and Pomerania the percentage has reached as high as 50 to 70 per cent, hence the importance of having skilled veterinarians examine all herds from which a supply is taken, and destruction of the animals and thorough disinfection carried out. The utility of Koch's tuberculin, from which so much was expected a few years ago, seems limited to its recognized power of detecting the existence of tuberculosis, and is therefore available for this purpose. Diphtheria and the foot and mouth disease, enteritis, anthrax, erysipelas, septic fevers, etc., may also be conveyed direct from the animal in the milk.

The most common contaminations of milk, however, are received between the time of milking and its consumption, and few samples run this gauntlet unscathed. Numerous varieties of disease germs and bacteria may gain access from many sources. Disease may be conveyed through milk from the hands of the milkers, through using impure water for cleansing the utensils employed, from dried fecal matter and other particles dropping into the milk pails, or where impure water is used for adulteration. In this way typhoid, diphtheria, scarlatina, cholera and

other infectious diseases may be conveyed; germs may come from unclean udders and from the vessels used to convey the milk, and with dust from numerous sources. Milk being a good culture fluid, they develop rapidly, changing the milk, and are the cause of diarrhoea and other affections in infants. Drs. Hunter, Stewart and Young recently read a paper on the subject of Bacteria in Milk before the Edinburgh Royal Society. They found three hours after milking that in a cubic centimeter of milk in winter there were 24,000 bacteria; in spring and early summer, 44,000, and in late summer and autumn, 173,000. It was further found that in dairies supplied by milk from the country the average number of micro-organisms five hours after milking was 44,000 per cubic centimetre, while in the milk from town byres the average was 352,000, and according to Sedgewick milk may contain a million bacteria to the cubic centimetre before it comes to the table for use. An inferior quality of milk results where the refuse from breweries or glucose factories or swill is used in feeding, and cleanliness in the care of the animals, and pure drinking water are essential. Dr. Rowland G. Freeman, of New York, and Fokker, in Germany, state that milk has a germicidal action, and that there are fewer bacteria at the end of twelve hours, and sometimes twenty-four hours, than during the earlier hours after milking and contamination, but many circumstances may militate against the exercise of this immunitive attribute. On the other hand, various poisonous substances are produced in the milk by the bacterial growth, and some of these denote their presence by developing coloring substances, hence the blue color produced by the *oidium lactis* and the bacterium *cyanogenum* and yellow by *B synxanthum*. There are ten different varieties of bacteria which induce lactic acid fermentation.

The foregoing represent most of the features of impure milk. How can they be mitigated? Here is afforded an opportunity for the health officer of any city to confer a substantial benefit upon his fellow-citizens by developing among the members of the health committee a proper appreciation of the great importance of the subject and the remedies to be applied. Capable inspectors should be appointed who cannot be bribed, and comprehensive legislation should be secured which will enable health departments to supervise the milk industry through its various stages from the feeding and care of the animals and the exclusion of all those

diseased or below the standard in the milk they produce, and have stringent measures adopted to secure the proper care of the milk until it is delivered to the consumer. This would involve the daily examinations and certifications in large dairies by a competent physician or veterinary surgeon as to the condition of the animals and quality of milk sent out. The milk should be used within the first twelve hours from the time of milking, and not later than twenty-four. Much of the milk which comes to the city by train from distant places is conveyed miles over rough roads to the station, often morning and evening's milk together, and twenty-four or thirty-six hours may elapse before it is available for distribution. Absolutely full and sterile cans, and aseptic methods of milking, and the placing of the cans in cold water at the farms and on ice in the cars, would lessen the disadvantages of this supply. Keeping the milk below 60 degrees hinders the multiplication of bacteria, and it should be kept below this temperature until it reaches the consumer, and until used. The destruction of all germs in milk by sterilization, by heating to 212 degrees, is a sure means of securing pure milk, but such milk is inferior (if the heating is prolonged) in nutritive value and less digestible, and both the milk sugar and the amylolytic ferment are destroyed. Hence Pasteurization is preferred in which the milk is exposed for from ten to twenty minutes to a temperature of 160 to 170 degrees, which destroys all pathogenic or other bacteria, if repeated on one or two successive days in bottles properly sealed it becomes perfectly sterile, and may be preserved indefinitely. This temperature does not coagulate the envelope of lactalbumin around the fat globules nor injure the lactose.

The removal of cream or the addition of water to milk are the chief methods employed to defraud the consumer. Milk should have 8 to 10 per cent. of cream by volume ascertained by the creamometer or lactometer, the latter giving the sp. gr., which should be 1030.

Milk diluted with water becomes bluish, hence coloring matters are added. In this city some dealers have been discovered using bichromate of potash for this purpose, a substance which would be injurious to the digestive tract. A product from the seeds of a tropical American tree is most frequently used for this purpose, called annatto;

antiseptics are sometimes added, such as boric and salicylic acids, and borax, soda or other alkalies to lessen acidity, all of which would be objectionable in infant feeding or where this food is used constantly. To thicken it, sugar, chalk, whiting, flour, arrowroot and magnesia are added.

It will be seen that for inspection to be worthy the name of such the services of expert veterinarians, chemists and bacteriologists are indispensable. We find in the statutes of this province a fair recognition of the difficulties to be contended with and provision made for proper inspection, and if properly carried out, and the laws enforced, we should have a good milk supply. A license is required by all who sell milk in the city, but the standard of 3 per cent butter fat is too low, especially in this, the best district of the continent for dairy products. The total of solids demanded, 12 per cent., is also too low a standard. An excellent method has been adopted in Essex County, New Jersey, an account of which is given in the "New York Medical Journal," January 25, 1896. A medical milk commission is formed of medical men from different parts of the county, who certify as to the quality of the milk furnished by certain dairymen:

The members of the commission disclaim any pecuniary interest in the sale of the milk to the character of which they certify, and assume no obligation further than that of enforcing the contracts made with them by dairymen and that of publishing among the medical profession the results of the investigations made by the chemist, the bacteriologist, and the veterinarians employed by them. In the contract the dairyman agrees to pay for the chemical and biological examinations of the milk and to defray the cost of bi-monthly inspections of his dairy stock.

They employed the following examiners: Professor Albert R. Leeds, Ph.D., chemist; Rowland G. Freeman, M.D., bacteriologist; Professor Alexander Liatard, M.D., D.V.S., William B. E. Miller, D.V.S., and Walter Runge, D.V.S., veterinarians, Professor Liatard serving in a consulting capacity. These gentlemen make reports to the commission in writing, and the commission passes upon them. The specimens of milk are delivered to the commission, and issued by it to the chemist and the bacteriologist. The chemist's report gives the

specific gravity of the milk and an analysis showing the percentage of water, that of the total solids, and those of the fat, lactose, and albuminoids contained in it, also the percentage of ash. The bacteriologist examines the specimen for micro-organisms and states whether or not he finds it in accord with the commission's requirements. The veterinarians visit the dairy and investigate the condition of the animals and their hygienic treatment, the quality and amount of food given to them, the quality of water supply from all sources, the sanitary condition of the stable and the surroundings, and the hygienic state of the attendants. They also determine what feed and fodder shall be given to the cows and in what quantities.

In the way of preventing the spread of disease by milk, Dr. Rowland Godfrey Freeman, of New York, sums up as follows at the conclusion of an excellent paper in the "Medical Record" of March 28th, 1896:

"A Study of These Epidemics Teaches Us—1. Whenever a case of communicable infectious disease is reported, inquiry into the source of the milk supply should be made.

"2. Milk traffic should be separated from houses where people live. The dairy building should be at least one hundred feet from either the house, barn, or privy, and should be on a higher level than any of these, and should have a pure water supply of its own. At this dairy building all the dairy work should be done, including the cleansing of pails and cans.

"3. It should be unlawful for any one who has come in contact with a sick person (when this sickness is not positively known to be non-contagious) to enter the dairy building or barn or to handle the milk.

"4. All men connected with the milk traffic should be compelled to notify the authorities on the outbreak of any disease in their respective abodes, and to abstain from their work until permission to resume is given them by the authorities notified.

"5. Cities should accept milk only from dairies which are regularly inspected and where all the cows have been tested with tuberculin and those giving the characteristic reaction have been killed and the premises disinfected.

"6. The tuberculin test should be applied to all cattle, and those which react should be killed, the owner being reimbursed from State funds. The premises on which such

tuberculous cattle have been kept should be thoroughly disinfected. All cattle which are brought into the State should be quarantined until the tuberculin test has been applied.

"7. The use of one long trough for the purpose of feeding many cattle should be avoided, since it is a ready means for the conveyance of pathogenic germs from one animal to another.

"From the excellent regulations of the New York City Board of Health for the sale and care of milk I take the following important rule: 'Milk shall not be kept for sale or stored in any room used for sleeping or domestic purposes or opening into the same.'

"Undoubtedly the adoption of the above regulations would do much in reducing the amount of sickness due to the conveyance of pathogenic organisms by milk. It does not seem probable, however, that any regulations can entirely eliminate this danger.

"I would, therefore, add one word of caution for physicians who order milk diet. Use some sufficient sterilizing process, so that in case the milk supplied contains pathogenic organisms, they may be destroyed before the milk is used by the patient."

Modified milk is a means adopted to secure a pure quality with any desired proportion of the various constituents of milk, thus making it available for every variety of disease and condition of the individual patient. Physicians write a prescription for the proportion desired. The Walker-Gordon laboratory of Boston, established in 1892 under the supervision of Dr. Rotch, has proved a success in diminishing the mortality among infants using it. A similar laboratory has been opened in New York, and one is now in existence in this city, but even these must be under competent supervision in order to secure the confidence of the profession, and get the best fruits of the system.

We cannot do better in closing this resume than give the conclusions of an exhaustive report, as quoted in the "Medical Record" of April 18th, 1896, by Drs. S. C. Busey and G. M. Kober, of Washington:

When we recall, say the authors, the many ways by which milk may acquire morbid properties, we see the necessity for the proper protection of the public by placing dairies, the herds, and the milk market under a strict sani-

tary control. The owner of a dairy should be required to subject his stock to frequent inspection by a competent veterinarian, and all animals found to be suffering from diseases like tuberculosis, erysipelas, anthrax, pleuro-pneumonia, foot and mouth disease, septic and other fevers, specific enteritis and other intestinal disorders, rabies, tetanus, garget and other inflammatory conditions of the teats and udder; and also those animals which are being treated with medicaments for any or all causes, all of which are disqualified from producing a pure or sound milk, should be excluded. The milk of animals five days before and after parturition is likewise unfit for human consumption.

The pasturage of the animals should be looked after with the greatest care; the animals should be groomed daily, and before milking the teats and udders should be thoroughly washed with water previously boiled. The necessity for this has been repeatedly pointed out and is of special importance, since we consider the presence of excrementitious matter and faecal bacteria in milk next in danger to the presence of disease germs. The requirements of cleanliness apply with equal force to the milkmen and as to their persons and clothing, and they should be requested to keep their finger nails free from dirt and to make a careful toilet just before milking. All persons engaged in handling the milk should be free from disease. No family ever thinks of employing or keeping a cook afflicted with a communicable disease, and yet not the slightest restriction is placed upon, nor a question asked about, the persons who handle our milk supply, which we know affords an excellent culture medium for disease germs.

A most excellent suggestion of the authors is that the products of each ten cows should be mixed, not only to insure uniformity but also to diminish the danger of transmitting disease germs in concentrated doses from any one animal.

Absolute cleanliness, of course, should be observed in transferring and bottling the milk, and the retailer should be duly registered and be required to furnish the health officer with a list of customers. These lists should be arranged at that office on the "index-card system," so that the simultaneous occurrence of infectious diseases in a number of families supplied by the same milkman may be promptly discovered and the mischief checked.

On the subject of "Milk Standards" the authors conclude, after an examination of the best data on the subject, that we have a right to expect a milk containing 12.52 per cent. of total solids, composed of 8.75 per cent. non-fatty solids and 3.75 per cent. fat, and also that the legal standards should be modified accordingly.

The official standards in force vary from 13 to 12 per cent.; it seems to us that the standard should be at least 13 per cent., as in Massachusetts.

The authors go on to say that while it would be manifestly unjust to condemn a milk as adulterated when it has more than 87.5 per cent. water, on the other hand the adoption of a minimum standard would result in the sale of a very large quantity of adulterated milk, which, apart from diminishing the nutritive value of the milk—a matter of great importance in infant-feeding—is often the immediate cause of transmitting disease germs by the addition of infected water. In the opinion of the writers all this can be prevented and milk of uniform standards can be obtained by encouraging the establishment of milk depots like the Walker-Gordon laboratory of Boston. In the management of this establishment farm and herd are under the absolute control of the laboratory, and are used for laboratory purposes only; the cows, their food, their stables, their pasture, and their drinking water are subjected to the frequent, paid, critical examination of the best veterinary surgeon that can be procured in Boston. The dairymen dress in white suits before milking, each having previously had a bath. The cows are milked into glass pails, and the milk, after being aerated and cooled to about 44 degrees Fahrenheit in a tank of ice and water, is delivered at the laboratory in Boston within four hours of the milking.

At the laboratory a ventilating engine keeps up a constant change of air, and a hose keeps the enamelled brick walls and stone floors wet to prevent any remaining dust from contaminating the milk while it is being "modified." The whole milk, after being "Pasteurized," passes through a Stockholm separator which makes sixty-eight hundred revolutions a minute, yielding a cream of an almost constant 16 per cent fat. It not only does this, but it removes all dirt that from unavoidable causes has gained access to the milk, thus yielding a clean, skimmed milk, practically free from fat (only 0.13 per cent. remaining).

Such milk laboratories would accomplish the following objects:

1. The source of the original milk would be closely controlled.

2. The producer would be paid according to the quality of the milk.

3. The milk would be Pasteurized before it reached the consumer.

4. The milk would be sold under uniform standards of "full" and "skimmed" milk, and its sale perfectly controlled by the sanitary authorities.

5. The milk could be modified in the laboratory according to the wishes of the consumer, and for invalids and bottle-fed children according to the formula of physicians, with a justice and accuracy not possible by any other method.

6. Condensed milk preserved in glass bottles is a special necessity during the prevalence of blizzards or other interruption of the milk traffic, also upon long journeys; and, since a higher standard than the present is demanded for correct infant-feeding, the milk could be modified by the addition of sugar of milk and thus form the best possible basis for condensed milk of a proper standard.

Finally, we sincerely trust that this excellent report will cause an immediate and widespread agitation throughout America for proper legislation as to the milk supply and the establishment of "milk laboratories" and of milk-cattle inspection.

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

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A REPORT ON ANTIPHTHISIN.

In November, 1895, the Parish Medical Society of New Orleans appointed a commission for the investigation and a public test of antiphthisin, as to its value in tuberculosis, to be made in the Charity Hospital of New Orleans.

The treatment of cases was begun on November 27th, and the commission's final report was presented to the Parish Medical Society at its regular meeting, on March 28, 1896. We learn that the report, which is voluminous, will be published in full. The following are the conclusions arrived at:

CONCLUSIONS IN SURGICAL CASES.

A consideration of the three cases of improvement would certainly lead us to believe that antiphthisin has decided value, and we should commend its careful tentative employment in such cases, in conjunction with general measures and the usual appropriate operative treatment. The glandular case we consider especially encouraging. This case would seem to have required a most serious operation for the removal of the gland, with great uncertainty of ultimate benefit. The improvement under antiphthisin treatment would alone justify us in stating that we have in this remedy a most valuable aid in the management of such cases. We beg to call attention in this connection to the case of Dr. Ambler, of Ohio, reported recently in the "New York Medical Record," as confirmatory evidence of the value of antiphthisin in glandular tuberculosis. The hypodermic employment of the remedy would seem to be especially advantageous, with careful aseptic precautions.

CONCLUSIONS IN MEDICAL CASES.

In nearly every case the area of lung involved decreased, if it did not clear up entirely. Auscultation bore

out the results of percussion, vesicular respiration replacing morbid breath-sounds in a greater or lesser degree. In cases which were classed as cured, the departure from health is only such as is due to the results of every continued pneumonic process. Secretion was diminished even in the cases marked only improved, and entirely absent in others. Bacteriological reports in most of the cases bore out the results obtained in physical and other examinations. The general condition of the patients improved in the large majority of cases, even in those whose physical examination did not show any great improvement. The use of the remedy was not attended with any danger to the patient. Finally, antiphthisin does seem to have curative, and not simply palliative qualities.—*New York Medical Journal*, April, 1896.

SYPHILIS FROM AN INSURANCE POINT OF VIEW.

Dr. P. H. Maclaren, of Edinburgh, in considering this subject without reference to general mortality statistics, from which it is difficult to obtain accurate information, states that he is inclined to classify for insurance purposes all syphilitics under the three following groups:

1. If a man has been properly treated, the probabilities are that, provided he is of good constitution and habits, no complications will arise, and the expectation would be that he will go through life with scarcely more appreciable risk than one who has never had the disease.

2. If proposer has not undergone a sufficient course of treatment, and applies for insurance before the expiration of six years, the period at which the disease normally terminates, and yet is not suffering from any tertiary manifestations, and is otherwise satisfactory, the chances are that he may escape the malign form, but a 10 per cent. extra should be charged until the expiration of the six years, and the case then reconsidered.

3. When tertiary symptoms have developed, the proposal should be absolutely declined, because, while treatment may temporarily remove these, it cannot eradicate the tendency to recurrence; and clinical observation has shown that those so affected rarely live beyond a term of ten years, and often much less where palliative treatment is not carried out.

While his personal experience is almost absolutely favorable regarding the prognosis of the cases included in Class 1, it is questionable when the cases are looked at, with the interests of the offices perfectly safeguarded, if they should not practically be treated in the same way as those in Class 2.—*Edinburgh Medical Journal*, March, 1896.

MICRO-ORGANISMS IN THE BLOOD OF SCARLATINA.

Dr. Crajkowski secured blood from scarlatina patients by a needle prick of the ear, and from it made cultures and cover-glass preparations ("University Medical Magazine"). The culture media used were glycerin agar, agar with haematogen, blood serum, gelatin, bouillon, serous transudate from the peritoneum and from the tunica vaginalis testis. The cover-glass specimens were dried, fixed, and stained in Chencinski's mixture. These specimens showed micro-organisms in the form of diplococci. They were found in relatively small numbers—one or two in a field of vision—and generally occurred singly, though sometimes in twos or short chains. They were never seen in the blood corpuscles. The shape of the individual was oval, though with ordinary magnification no difference between the diameters could be observed. They were not stained by ordinary methods and decolorized readily when stained by Gram's method. The specimen from fresh blood had a surrounding capsule which was absent in the dried form. The growth of the organisms on culture media was carefully studied. Upon the solid culture media it was very slow. Upon all the solid media the colonies appeared under the microscope as minute dewdrop-like points measuring one-half by one-half millimetre, and not becoming confluent for months. The organisms continued vital upon the solid media for from three to four months if protected from drying. In liquid culture media, especially in bouillon, the organisms formed a yellowish-white, finely granular, light precipitate, at the bottom of the glass. The inoculation of the organisms beneath the skin and into the blood of rabbits was without result. Inoculated mice died in three days with the cocci distributed through the blood.—*Medical Record, April 18, 1896.*

SPECIAL MILK FOR INFANTS.

Dr. Edmund Cautley, of London, has had a special milk for infants prepared by taking an equal quantity of mixed cow's milk and a 10 per cent. solution of lactose, the whole being passed through a separator so arranged that the two outgoing streams are equal. It is thus divided into two equal parts, one of which contains practically the whole of the cream and may be termed cream milk, while the other contains practically no cream and may be termed skimmed milk. That the cream milk closely resembles human milk will be seen by the following table:

	Cream Milk.	Human Milk.
Total solids.....	13.11 per cent.	13.20 per cent.
Proteids..	1.82 "	2.00 "
Fats..	4.02 "	4.00 "
Lactose....	6.88 "	7.00 "
Ash..	0.39 "	0.20 "

The milk was well taken and digested by infants, but it was found that the percentage of fat was higher than some of them could digest, and this was reduced to 3.7 per cent., with excellent results. The milk is supplied in air-tight bottles and is previously Pasteurized at a temperature of 160 degrees Fahrenheit (71.1 degrees C.). It is rendered faintly alkaline.

The advantages of a milk supplied of this nature are, according to the author, numerous and obvious. 1. By the process of separation a large number of deleterious substances which accidentally contaminate milk—such as particles of manure, epidermal scales from the hands of the milker or the udder, hairs, dust, etc.—are removed. Needless to say, such constituents are very liable to be injurious to an infant. 2. By the process of Pasteurization the countless organisms present in milk are destroyed. It has been shown that a temperature of 160 degrees F. (71.1 degrees C.) destroys the bacilli of tubercle, typhoid fever, diphtheria, and many others. The liability of the transmission of disease to the infant by the milk supply is consequently abolished. 3. A substitute for human milk is supplied ready for use, and the trouble involved in the methods at present adopted is abolished.

An infant weighing 3,000 grammes (6½ pounds) would require of this milk during the first week, 30 grammes (1 ounce); second week, 37 grammes (1¼ ounces); third week, 44 grammes (1½ ounces); fourth week, 51 grammes (1¾ ounces). During the second month the amount may be increased gradually by a quarter of an ounce a week, the total amounting to 3 ounces (93 grammes) by the end of the ninth week. From the age of nine weeks to six months from 3 to 4 ounces (93 to 125 grammes) are sufficient for a feed, and from six to nine months from 5 to 6 ounces (155 to 186 grammes) are enough. After the second month six or seven feeds may be given in the twenty-four hours at intervals of three hours. When the child is first put upon this milk it is advisable to give it diluted for a few days in order to gradually accustom the stomach to the change in diet. This is especially necessary in the case of children under three months of age, on account of the difference in the relative proportion of proteids from those of human milk. (Lancet, January 11, 1896.)—*The Universal Medical Journal*.

QUININE IN ENURESIS.

Dr. Charles S. Rotts, instructor in nervous diseases, University of Pennsylvania, in the "University Medical Magazine" for March, advocates the use of quinine in enuresis. This disease, he states, is due in most cases to a weakened or deficient inhibition exerted over the vesical

centre in the cord, and as quinine stimulates inhibition, it seems rational that it should be of value in this condition. In one case reported, a child, aged 12 years, who had since birth suffered from this condition, and had had four attacks of chorea, four grains, three times a day, produced some improvement, but four grains four times daily led to a complete cure of both affections in about six weeks. In a second case, that of a young woman, aged 19, four grains three times daily caused the trouble, which had existed since childhood, to entirely disappear.

ALCOHOL AS AN ANTIDOTE TO CARBOLIC ACID.

Dr. Donald B. Fraser, of Stratford, Ont., in the "Medical Record," reports a case where a woman, attempting suicide, after experimenting with mixtures of carbolic acid and beer, took a large quantity of equal parts of alcohol and carbolic acid, it did not have a corrosive action on the mucous membranes, a condition of unconsciousness existed for eight hours, vomiting for twenty-four hours, and then rapid convalescence. Locally, also, alcohol counteracts the corrosive action of carbolic acid; if the alcohol is applied continuously, until heat ceases to be developed in the pad soaked with alcohol applied to the burn, the pain and staining disappear.

GYNÆCOLOGY.

By A. LAPHORN SMITH, B.A., M.D., M.R.C.S., Eng.

Fellow of the American Gynecological Society, Gynecologist to the Montreal Dispensary and to the Samaritan Hospital; Surgeon to the Western Hospital, Professor of Clinical Gynecology in Bishop's University.

OPERATIONS FOR RETRODISPLACEMENT OF THE UTERUS.

These form the topic for numerous papers and endless discussion in the medical journals and at the medical societies, not only in America, but throughout Europe. That some better treatment than that by pessaries is needed does not seem to require discussion, for no one hardly ever says a word about the necessity of operative treatment. A few words on this point may therefore be opportune. It must be admitted that a considerable number of patients with retroversion have been cured by simply replacing the uterus and allowing the intestines to fall in behind it; and even when in some of these cases the uterus fell back again, if not supported, it has remained up permanently after the patient has worn a pessary for from three to six months. Other patients again are kept cured by becoming pregnant, and only require the help of a pessary for the

first few months, after which the uterus rises out of the pelvis and falls forward. I cannot deny this, for I have had many such cases. But, on the other hand, there are many other cases in which the uterus falls back again time after time as soon as the pessary has been removed, and these are the patients who, becoming impatient of the chains that bind them to the doctor's office, finally demand from us some treatment that will hold out a reasonable hope of a permanent cure. By these women an operation, which is entirely devoid of danger, is not only consented to, but gladly welcomed. But why, we are sometimes asked, is any treatment required at all? We are frequently told that retroversion, even very marked, does not cause any discomfort. This is a mistaken idea; these women do suffer very seriously some of them, otherwise they would not travel around as they do from one physician's office to another, spending their money and time; nothing but real discomfort or suffering would induce them to do so. Patients have over and over again been sent to me for pain in the back, coccygodynia, constipation and piles, pain in the ovaries, dysmenorrhoea, frequency of micturition, menorrhagia and headache, all of which I attributed to a markedly retroverted uterus pressing on the great sympathetic nerve and obstructing the circulation of the rectum, uterus and bladder. And yet when attention has been called to the condition of the uterus, the attendant has told me that that did not cause her any inconvenience, while the blame has been put upon a trifling laceration of the cervix. The result fully justifies the operative treatment, as all operators are agreed, provided always that the cases are suitable ones. On this point of selection of cases, a very important one, there has of late been a great deal of discussion, and the opinions of a great many different and widely scattered authorities seem to have crystallized into the following proposition: In all cases of retrodisplacement, uncomplicated with marked disease or any adhesions of the uterus or appendages to the sacrum, Alexander's operation alone is indicated; in all cases of retroversion, with adhesions, ventrofixation is the only satisfactory one. At some of the most recent discussions a new alternative has been advocated, especially by Polk, of New York, namely, the opening of the vaginal cul de sac and the breaking down of adhesions until the uterus can be brought easily into proper position, after which it is held there by shortening of the round ligaments. According to many operators, a great improvement takes place in even very diseased appendages within a few months of their restoration to the normal position. Many, if not all, are agreed that, as much as possible, ventrofixation should be reserved for these cases of retroversion in which the appendages are hopelessly diseased, and must therefore be removed. The reason for this is that

in several cases in which they have been left, the woman has become pregnant, and the uterus has either torn away from its adhesions or else a miscarriage has taken place. I have only left the ovaries half a dozen times when I have performed ventrofixation, and so far as I am aware, only one of these patients has become pregnant, and she miscarried, so that I have had but little experience of the dire results mentioned by others. Neither have I lost any case of ventrofixation. But I feel inclined to follow Polk's procedure in future, and by first breaking up adhesions by the vaginal opening in Douglas' cul-de-sac, replace a comparatively safe abdominal section by an absolutely safe shortening of the ligaments. I say absolutely safe, because I can hardly conceive how a death could follow this simple although delicate operation, if performed with the same precautions as we are accustomed to employ in all abdominal work. Mackenrodt, in Germany, introduced a few years ago a new operation for retroversion called vagino-fixation, consisting of opening the anterior vaginal cul de sac and stitching the uterus into the opening. This has been followed by such bad results in subsequent pregnancies that the operation has now been abandoned, not only in Germany, but even by the inventor himself, although it still finds a few defenders in New York. Although I was opposed to Alexander's operation at first, I have been completely converted to the opinion, which is now almost general among gynaecologists, that it is one of the best methods of treating every case of retrodisplacement without adhesions, and the more often it is performed, of course, the easier it is to find the ligaments and draw them out. I am certain that in no case operated upon by me has the operation been followed by hernia.

LARYNGOLOGY.

"Fatal meningitis caused by exploring the frontal sinus with a sound," is the subject of a paper by Dr. Mermod in the April number of "Annales des Maladies de l'Oreille," etc. Every possible antiseptic precaution is claimed to have been taken before passing the instrument. The lesson is drawn that it were better to open the sinus externally with antiseptic measures than pass any instrument internally, for the information gained in the former case would be definite, and afford the opportunity to operate further if necessary, while in the latter it would be more or less uncertain, while the risk would be certain. The method described by Schaeffer, of opening this sinus internally, by passing a trocar inside the nose from below upward is condemned most strongly, as being in the highest degree dangerous, and unwarranted.

AUTOSCOPY OF THE LARYNX AND TRACHEA.

Dr. Kerstein, of Berlin, describes this manner of examining the throat without a mirror, and claims some advantages over the usual method when it can be done. He discovered that operations could be done on many persons under the direct control of the eye without mirror or prism. The method is claimed to secure very important practical benefits, yet the practice of one does not exclude the other. The instrument consists of a long hollow tongue depressor, sufficiently long to overlap the epiglottis (the latter being previously cocainized); a cover to elevate the jaw, upper lip, etc., and a handle. By tilting the head backwards and inserting this instrument sufficiently far, the entire larynx, trachea and division of bronchi are seen. After practice it is said this instrument facilitates the extraction of tumors much better than the old way, by mirror illumination, and the posterior laryngeal wall is better shown than by any other method, and autoscopy in expert hands should be neither hurtful nor cause nausea.

TONSILLITIS AS A FACTOR IN RHEUMATIC FEVER

Is discussed by Sir W. Wade in the April number of the "British Medical Journal." The poison of rheumatism is believed by some to be fabricated in the mouth and throat, gaining entrance to the system through the tonsils, producing first a tonsillitis, then rheumatism. Wade sustains the theory that tonsillitis is a primary infective disease of the lacunae; rheumatic fever a secondary disease, arising from the absorption of microbes or their products into the system. The microbic theory of rheumatism is claimed to be gaining ground, hence the above theory. The basis of this theory is: 1. That the clinical phenomena of this disease corresponds in every particular to an infective disease. 2. Cases have been noted where rheumatism was undoubtedly transmitted from one person to another. 3. Various species of coccus and bacillus are found in the lacunae during the acute stages. Wade concludes his argument by stating that the facts and considerations occurring in his experience have convinced him there is a very high degree of probability that rheumatic fever is directly due to microbic poison. But to confirm this further, clinical evidence is wanted of the association of the disease with slight throat disorders.

RÖNTGEN RAYS IN LARYNGEAL SURGERY.

Have not thus far proved of much practical benefit owing to imperfection of apparatus. This will soon be remedied, and in the locating of foreign bodies we may expect the best results with improved appliances. McIntzie is preparing a good demonstration for the next meeting of the British Laryngological Association.

HARD CHANCRE OF THE TONSIL.

Bayer relates to the Belgian Laryngological Society an undoubted case of this nature. He was consulted regarding a tonsillitis of three weeks standing, which had received daily cauterizations. Considering these the cause of the continued inflammation, he gave palliative and antiseptic treatment. Later the inflammation increased with glandular swelling, leading him to suspect syphilis, and under treatment for the latter the disease at once improved. The appearance soon after of the characteristic rash left no room for doubt.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, January 23, 1896.

F. S. FINLEY, M.D., First Vice-President, in the Chair.

PATHOLOGICAL SPECIMENS.

Dr. C. F. Martin showed two fallopian tubes removed by Dr. W. Gardner, interesting as illustrating a condition mentioned by many observers, i. e., a large dilated tube simulating a hydrosalpinx, but which, from the history and microscopic examination, was probably an old pyosalpinx, the cellular elements having been absorbed, leaving a clear fluid. They were dilated with thickened walls, and shreddy mucous membrane, both containing a clear watery fluid, with some granular contents, but no cellular structures. Examination of walls showed chronic progressive thickening, with small round-cell aggregations at various points. No evidence of tuberculosis.

Dr. Gardner said the case had been unusual also in its history. The patient was a woman of 35, healthy, with the exception of profuse menstruation up to within eight weeks of operation, when she was attacked with sudden and severe pain in the pelvis, "cramps," vomiting and fever, confining her to bed up to the time of operation. On admission her evening temperature was two to four degrees above normal, and externally, a tender mass could be felt on the right side of the pelvis, but not large enough to project the abdominal wall. The uterus was found bound down into the pelvis by masses, that on the right side being the larger. He had not been able to decide on the most suitable operation until the patient was under ether, when he had chosen abdominal incision, on account of the firm fixation of the uterus made out under anaesthesia. The operation had been an unusually difficult one owing to the dense adhesion and involvement of the intestines. The vermiform appendix had been found in the mass, and re-

moved. The extensive bleeding surfaces left by removal of mass he had packed with gauze. The case had not done well; convalescence had been slow, and a suppurating sinus and faecal fistula had formed. The speaker felt that a vaginal incision would have given better results, its better drainage obtained by that method being a great advantage. In view of the difficulties mentioned, a double operation, part of the work being done by the vagina and part by the abdomen, might have answered best. The microscopical examination had been disappointing to him. There had been no evidence of any form of septic infection, puerperal, gonorrhoeal, or other, and the macroscopical appearances had led him to expect the presence of tubercular disease.

Dr. Laphorn Smith thought the amount of thickening and the dense adhesions could not have been formed during the short time the patient was complaining of pain. He thought it more probable that she had become infected at the time of her marriage, and the ends of the tube becoming sealed, had produced sterility.

Dr. G. E. Armstrong asked Dr. Gardner for his experience in relation to the connection between disease of the uterine appendages and the appendix vermiformis. In this case they had been incorporated in the same mass. He had himself operated several times for appendicitis, and found pus in the pelvis in connection with the ovaries and tubes. A French anatomist had described a layer of peritoneum passing from the neighborhood of the appendix to the tube, and had stated that it was not uncommon for septic infection to pass down along this to the pelvis and set up local trouble there. He would like to know if any bacteriological examination had been made. The speaker thought the abdominal method was to be preferred in these cases, as it offered an opportunity for removal of a diseased appendix, if such were present.

Dr. Gardner, in reply to Dr. Armstrong, said that his experience in finding the appendix involved was small. He did not believe that the condition was common.

AORTIC ANEURISM.

Dr. H. A. Lafleur exhibited the specimen, which was from the case alluded to by him on the 8th of March, 1895, and he felt would be of interest. The history of the case briefly is as follows: The patient, a man aged 69, had suffered from aortic insufficiency for fifteen or sixteen years, and had exhibited the well-known signs of that disease. A short time previous to the date on which he had referred to the case, symptoms of pressure upon the trachea had appeared, and Dr. Birkett, on laryngoscopic examination, had detected an aneurism as a small pulsatile tumor projecting into the lumen of the trachea. The symptoms then

subsided, and the case again became one of aortic regurgitation merely. There had been no signs of intrathoracic pressure, no increased area of dullness and no obvious pulsation beyond that due to the enlarged heart. Tracheal tugging was detected after the aneurism had been made out by Dr. Birkett.

The specimen showed a little projection into the trachea, less marked post-mortem than it had been during life. Dr. Lafleur thought that the early deposition of lime salts in the walls of the aneurism had prevented its growth, the whole expanded portion of the vessel being walled in by calcified masses.

Dr. F. G. Finley asked if there had been any pressure by the aneurism on the left bronchus, or if, in any way, the explanation given by the late Dr. MacDonnell of tracheal tugging was borne out.

Dr. Lafleur, replying to Dr. Finley, could not say that there was any pressure upon the left bronchus. He was not prepared to say how the tugging in this case had been produced, but the aneurism was closely and intimately related to the trachea. The tugging could not have been due to the small aneurism, as here pulsation was directed towards the centre of the trachea, not downwards. In reply to Dr. MacDonnell, he stated that there had been no difference in the radial pulses.

PAROTITIS IN PELVIC DISEASES.

Dr. W. S. Morrow read a paper with the above title, in which he alluded to a form of parotitis little mentioned in text books, but none the less interesting, occurring in disturbed functions of the male and female generative organs, and in pathological conditions of the urinary and digestive system and abdominal parietes. As far as he knew, the most complete account of this condition was to be found in a paper by Dr. Stephen Paget, in the "British Medical Journal" for March, 1887. In that paper Dr. Paget had collected 101 cases of parotitis in connection with derangements of the abdominal and pelvic organs; of these the generative organs were the original site of the trouble in fifty.

These cases were important, first, because their correct diagnosis saved the patient the inconvenience of isolation, and, secondly, because they opened up the interesting question of connection between distant organs.

The writer then reported three cases occurring in his own practice. The first was during a pelvic peritonitis of moderate severity, the temperature keeping up for about three weeks. A fortnight after the onset of peritonitis, one parotid became swollen, tense and tender. In two days the inflammatory process had extended beyond the capsule, and the face became puffy up to the middle of the forehead. A free incision into the gland resulted in an alarming

hemorrhage, but no pus was found. The inflammation then rapidly subsided in both gland and pelvis, and the patient was up in a little over a week.

The second was associated with suppression of the menses in a patient of 25, with a history of no exposure to mumps, but a week previously, had taken a walk while menstruating, and caught cold; menses ceased, followed by pelvic pain. In two days the left parotid was inflamed and painful, and followed by the right side. When first seen, the gland first affected had recovered, and under simple treatment the remaining gland became better, and pelvic pain disappeared.

The third case was similar to the last, and had been associated with suppressed menses, due to exposure to cold while menstruating. The day following the left parotid became sore and swollen, with a temperature of 100 degrees Fahrenheit. It was painted with iodine, and a calomel purge given, and in thirty-six hours was quite well, and menses had started again. She had not been exposed to mumps, and the course was not typical, the whole duration of the case being only forty-eight hours.

The course has been found to vary very much in these cases, and, according to Dr. Paget, the severity of the gland inflammation depended largely on the systemic condition at the time. Where it ended in suppuration it was because the powers of resistance had been diminished by some other disease, so that almost any inflammation would tend to run an unfavorable course. Considerable interest centered about the question of how parotitis was set up by morbid processes having their seat in the abdomen. A certain number of cases might be due to bacterial infection through the blood or secretory duct, such as occurred in many of the infectious and septic fevers, and almost invariably went on to suppuration. But there was a group of cases, often milder in type, and especially frequent in connection with pelvic disease, which did not admit of any such interpretation. For these we had to choose between the metabolic theory and the nervous. Against any metabolic theory we had the great number of tissues which might be the seat of the primary affection. Parotitis had been reported by Dr. Paget and others as accompanying or following pregnancy, delivery and abortion, menstruation (which it sometimes replaced), pelvic cellulitis and haematocele, operations on the vagina and uterus, ovariectomy and oophorectomy, the use of the catheter and sound, blows on the testicle, operations and diseases of the bowel, gastritis and gastric ulcer, disease of the pancreas, and injuries and diseases of the abdominal wall.

This varied origin excluded almost absolutely any metabolic theory and favored a nervous one. And there was not wanting considerable circumstantial evidence that

the nervous system was the medium through which the effect was produced.

Some cases, like the last one reported in the present paper, seemed to be rather transitory hyperaemias than true inflammations, and suggested a vasomotor change as the primary one.

It was known that both the pelvic and the other abdominal organs had a powerful influence on the vasomotor centre, as evidence the flushes of menstrual irregularity and of dyspepsia.

Moreover, there were other facts which seemed to indicate a nervous connection through unknown paths between the parotid glands and the generative and digestive systems.

Among these facts might be mentioned the salivation of pregnancy, the dry mouth from which some women suffered during menstruation (Goodell) and the changes in salivary secretion observed in so many affections of the stomach and bowel.

The nervous theory was supported by those who had given most attention to the subject, and until more facts had been obtained, it might be taken as the most probable hypothesis.

Dr. Wm. Gardner had only seen two or three cases of enlargement of the parotid after abdominal operations; one, however, following extirpation of the uterus for fibroid and procidentia, had been very severe. He remembered having read only one paper on the subject, and that was by Goodell, entitled, "Parotitis following Ovariectomy." Probably the reason so little had been written about it of late years was that better and cleaner surgery was being done than formerly. He always looked upon this condition as due to some form of infection.

Dr. J. B. McConnell, referring to Dr. Morrow's first case, said he could not understand how a pelvic peritonitis could exist and have such a speedy cure. He thought that possibly it was an attack of la grippe with manifestations in both the abdomen and the parotid gland. He thought the fact that parotitis in these cases was usually unilateral would point more to bacterial than to reflex origin.

Dr. F. A. L. Lockhart was much interested in the subject of Dr. Morrow's paper. He referred to a case of double suppuration of the parotids reported in Toronto, as having followed vaginal extirpation of the uterus for cancer. The case had done well until the tenth day, when there was a rise of temperature and swelling of the parotid; the second gland became infected also, and both ultimately suppurated, the patient dying on the forty-eighth day after operation. Several observers reported parotitis occurring on the third or fourth day after operation, but in no case had the disease commenced as late as the twelfth.

Dr. Wesley Mills drew attention to the fact that we were just beginning to understand something of the physiology of the ductless glands, and the relations to one another of the organs of the body. Whatever the origin, the connection between enlargements, etc., of certain glands in the throat, and changes in the generative should not be lost sight of.

When we dealt with groups of organs histologically alike we could understand how changes in one might affect the other. He would not say the enlarged parotid was due to vasomotor change, but thought it probable. That the parotid was affected, and not the other salivary glands, was perhaps due to the fact that the parotid had a different nerve-supply. The nervous system influenced metabolism otherwise than through the vasomotor nerves.

Dr. Laphorn Smith quoted three cases, one of orchitis, one of ordinary delivery, and one of pelvic peritonitis with pus tubes, all followed by a parotitis. The fact that in deficient menstruation the breast swelled showed the nervous relations between these organs and the ovaries, and bore out Dr. Mills' remarks.

Dr. H. A. Lafleur said that in no other instance in the domain of pathology was an inflammation caused by excitation through the nervous system alone, and he thought that every other possible cause ought first to be excluded.

Dr. James Stewart mentioned (at Dr. Martin's request) that he had produced inflammation of the skin, from simple erythema to blistering, by suggestion under hypnotism.

Dr. W. F. Hamilton referred to a case, an old lady of 82, with an abdominal tumor, connected probably with the uterus or ovaries. Five days before death a symmetrical parotitis of stony hardness, with intense tenderness, had set in. He had regarded it as due to septic absorption from the mouth, which was dry and very foul for some time before death.

Dr. F. G. Finley remarked that inflammation of the parotid was not uncommon in typhoid fever, but he had always been inclined to attribute it to septic infection from the mouth.

Dr. W. D. Morrow, replying to Drs. Gardner and Lafleur, said that Dr. Paget, in his paper, mentioned fifteen cases of parotitis secondary to disease outside the abdomen and pelvis, and in all these cases their septic nature could be inferred from other symptoms present; whereas, in 101 cases having their original seat in the abdomen or pelvis there were signs of septic infection elsewhere in less than 10 per cent., although there was local suppuration in the parotids in something over 50 per cent. of the cases where its presence or absence was specially noted. These differences had to be explained. Pain and swelling of the parotid

gland resembling parotitis were set up by very slight causes in some people. Jonathan Hutchison related the case of a woman where the parotid glands became swollen on fatigue, and the swelling disappeared rapidly on resting. Dr. Morrow thought that this was explained by the anatomical structure of the gland; with large blood supply and a tense capsule it was not surprising that hyperaemia caused inflammation.

In reply to Dr. McConnell, he gave further particulars of the cases, showing beyond question the correctness of his diagnosis.

In reply to Dr. Lockhart, he said that Dr. Paget's notes showed the time elapsing before the onset of parotitis to be from three days up to twelve.

Dr. Finley had referred to its occurrence in typhoid fever, and suggested that here it was due to the sepsis. It had been shown conclusively in England that it was proportionately greater in typhoid than in other fevers, and Dr. Paget's explanation of this was that in typhoid the local lesion was found in the bowel.

HODGKIN'S DISEASE.

Drs. A. E. Vipond and C. F. Martin read a report of this case.

PRIMARY CANCER OF THE LIVER.

(Digest of Paper.)

By Drs. C. F. Martin and W. F. Hamilton, read before the Montreal Medico-Chirurgical Society, Feb. 21, 1896.

The exceptional occurrence of a primary cancer of the liver, with secondary involvement of the stomach, rendered the present case of some interest. While, however, they did not regard the condition as undoubtedly of hepatic origin, there seemed, nevertheless, to be many points in favor of that view, while the growths found in the stomach and elsewhere seemed to have been secondary.

The clinical notes on the case were briefly summarized as follows: N. McL., aged 60 years, presented himself for treatment at the Royal Victoria Hospital, complaining of weakness, diarrhoea and pain in the abdomen, chiefly localized in the region of the liver and stomach.

He had been failing in health for six months, and during the last four months had been unable to work. The pain complained of, as well as the abdominal swelling, had troubled him for about three months.

His history gave no evidence of gastric disease, further than recurring attacks of gastritis, following on excesses in alcohol, to which he had been addicted for many years.

His condition was that of one extremely emaciated, and feeble, with rough, dry skin. The abdomen was dis-

tended. There was ascites and some diarrhoea. Examination in the region of the liver showed that organ enlarged. Its margin was felt about 2½ inches below the costal margin in the mammary line. It was hard, and through the thin abdominal wall its surface was felt to be uneven. There was no jaundice.

No tumor was palpable in the stomach, abdomen, testicles nor rectum.

Oedema of lower extremities developed, and the pulmonary signs indicated oedema of the lungs.

The patient died of asthenia after a few days sojourn in the hospital.

The autopsy, performed eight hours after death, gave the following results in brief:

Muscles much wasted; 200 c. c. turbid red fluid in abdominal cavity; suprarenals; pale centres; kidneys, firm capsules adherent, deep red colored, surface dotted with cysts, cortex narrowed, with evidence of interstitial new growth. Bladder dilated, walls thickened. Liver, 4340 grms; common ducts showed swelling of mucosa at duodenal orifice, dilated above; loose adhesions to diaphragm on upper surface of liver, which was much enlarged; surface reddened and dotted over with yellowish nodules, largest 5 cm. diameter, mostly soft, some semi-fluid; outlines fairly well defined, surrounded with usual cyanotic atrophy; organ was of firm consistence, and showed on incision almost the entire parenchyma of right lobe replaced by one large firm rounded mass of whitish color; reddish-yellow towards the periphery, 18 cm. in diameter, fairly spherical, and nowhere covered by more than 2 cm. of liver tissue. Incision at various levels showed the mass almost everywhere of equal consistence, and that it radiated from a small central cyst, around which the tissue was dense. The periphery, however, was softer, and presented a few hemorrhages, and some bile pigment. The surrounding liver cells were pressed into concentric layers, and presented secondary nodules of infiltration. Left lobe presented a number of smaller nodules similar to those described. Gall bladder, flattened, pushed to one side; contained some viscid green bile. Cystic duct free; periportal glands enlarged, softened and irregular in outline; centres broken down. Vena cava showed on inner surface three small areas where neoplasm protruded into lumen, producing parietal thrombi, portal vein free. Mesenteric glands and thoracic duct, normal. Pancreas small, soft; no evidence of infiltration enlarged cancerous gland size of walnut near tail.

Stomach distended with gas with about 50 c. c. greenish semi-fluid material, free from hydrochloric acid. Mucosa thickened and reddened in patches. Along lesser curvature in posterior wall 4 cm. from cardiac orifice, a round, elevated, circumscribed nodule 3 cm. in diameter;

moderately firm, and not very dense. Serosa involved from within; no protuberance or adhesion externally; no nodules in immediate vicinity, but 10 cm. from it were five or six fine, elevated masses, submucous, largest $1\frac{1}{2}$ cm. in diameter. Lungs, little of note beyond slight bilateral pleural adhesions. Other organs presented usual post-mortem appearances of an old alcoholic subject.

Microscopic examinations confirmed macroscopic diagnosis, epithelial cells large, irregular and polygonal, nowhere any indication of true glandular type of growth. Stomach growth showed superficial necrosis of gland structure, great thickening and infiltration of epithelial cells in submucosa, and a very small fibrous stroma. Cells in some places filled with blood vessels; in others, lymph spaces. Nothing of note in remaining organs.

CONCLUSIONS.

The conditions then found presented a neoplasm in the stomach of small size, well circumscribed and circular in outline, with but little evidence of erosion and ulceration, while microscopically the constituent elements were chiefly cellular, with an inappreciable amount of fibroid change, i. e., a growth apparently of very recent date. In the liver, on the other hand, the cancerous tumor was of enormous size, of markedly dense consistence from fibroid change, and on minute examination was seen to be made up of fibrillated masses out of all proportion to the insignificant amount of cellular growth—in other words, a neoplasm of long duration.

In endeavoring to make a pathological diagnosis as to the primary seat of the disease, the general appearances, though of great use as a guide, would not in themselves have been sufficient as evidence, for it was everywhere recognized that growths in the stomach might for a long time remain small and apparently quiescent, while the secondary foci grew to enormous proportions; yet one would have expected in such cases that there would have been evidence either of chronic ulceration or of fibroid change, but neither of these conditions was manifest in the case reported.

Again the neoplasm in the stomach was circular, slightly elevated, regular in outline and well circumscribed, thus corresponding in general characteristics to the description given by Grawitz among the rare cases of secondary cancer of the stomach formed by metastases.

Were insistance laid on this organ as the primary seat of the neoplasm, one should surely render cautiously in future a diagnosis of primary cancer of the liver when the original focus could for so long a time retain characters incident only to the very early conditions of growth, for it might well be argued that on the same basis such growths

in the stomach might remain still smaller, even invisible to the unaided eye, while the secondary foci grew to enormous extent. Considering, on the other hand, that the disease had originated in the liver, we had in favor of the view the evident duration of the growth as seen from its size and minute characters.

From the enormous variations in type of cancer cells it was not always possible to differentiate the original seat by microscopic examination, and the case reported would come under such a category.

There were three chief modes whereby secondary cancers of the stomach might arise: 1. By direct extension from neighboring organs, such as the pancreas, liver, glands and oesophagus, or by the newly formed lymphatics in adhesions between these organs. 2. By implantation from the oesophagus, such as might occur from an ulcerating carcinoma of the tongue. In these cases, which were rare, the cancer cells dropped down, or were carried down into the stomach, and, becoming fixed in their new situation, they proliferated and formed secondary tumors. It was in this way also that secondary peritoneal cancers were so frequently formed in Douglas' pouch by the gravitation of the malignant cells from the serous coats of the stomach or the liver. 3. Secondary cancers of the stomach might form by haematogenous metastases; these last, though extremely rare, had been put on record by Grawitz. In these cases, the tumors had been well circumscribed, circular, and regular in outline.

Further, the possibility of cancer cells travelling against the stream of the circulation was to be noted; in this way moving along the portal vein and mesenteric vessels and lymphatics, and setting up secondary growths in the stomach, just as occurred in involvement of the left supra-clavicular glands, when cancer cells travelled along the course of the thoracic duct.

Stated Meeting, February 7th, 1896.

A. D. BLACKADER, M.D., President, in the Chair.

DISSEMINATED SCLEROSIS.

Dr. F. G. Finley presented a patient with this disease and read a report of the case.

INTRA-CRANIAL NEURECTOMY.

Dr. G. E. Armstrong showed a woman upon whom he had successfully operated by Hartley & Krause's method.

Dr. James Bell said that he had shown a woman two and a half years ago before the Society on whom he had operated for the removal of the Gasserian ganglion for in-

veterate neuralgia of over twenty years standing. In his patient the infra and supra-orbital nerves had previously been stretched, with the result of giving only temporary relief. Two years after the patient reported perfect freedom from pain. A small anaesthetic area on the cheek and inability to masticate on that side. At the time he had undertaken it, this operation of Hartley and Krause was comparatively new; only a small number of cases had been operated upon and the operation had been too recent to allow of a fair judgment of the results. Now a considerable number of cases had been operated upon by this method, and a sufficient length of time had elapsed to justify an opinion on the results, which could be said to be excellent. So far as he knew, there had been no return of pain in any of these cases; the deformity was almost nothing, and the disabilities trifling. No other operation, except that of Mr. Rose, which aimed at effecting the same results by another method, had yielded more than very temporary relief. This operation was infinitely preferable to that of Mr. Rose, in which the ganglion was approached from the base of the skull behind the pharynx. A few points in the technique which Dr. Bell considered worth mentioning were: 1. To enlarge the space for entrance to the cranial cavity by cutting away a portion of the temporal bone below the base of the flap posteriorly down to the level of the zygoma with rongeur forceps, thus also providing a suitable drainage space when the flap was replaced. 2. The hand of an assistant he had found much more satisfactory in retaining the brain and keeping it out of the way than any form of metal spatula. Escape of the cerebro-spinal fluid, which frequently occurred by accidental wounding of the membranes, was also a great advantage, as it allowed the brain to be pushed aside much more readily. In the case to which he had referred, so much pressure had been employed in displacing the brain that he had expected it to be followed by cerebral symptoms, but no ill effects had been observed.

PROFESSOR ROENTGEN'S NEW METHOD OF PHOTOGRAPHY.

Professor Cox, of McGill University, after briefly outlining the rationale of the method by which the negatives were obtained, and the experiments leading up to the practical application of the discovery, showed several plates, among them one of a bullet imbedded in the calf of the leg for two months, successfully located and removed by Dr. R. C. Kirkpatrick, at the Montreal General Hospital, Feb. 8th, 1896.

EXTIRPATION OF THE TONSIL FOR MALIGNANT DISEASE.

Dr. G. E. Armstrong presented a patient from whom he had removed one tonsil, and described the operation.

SPECIMENS ILLUSTRATING MEDICO-LEGAL PATHOLOGY.

Dr. Wyatt Johnston exhibited specimens from the following cases:

1. Fracture of the skull produced by a hammer (also shown).
2. Homicide by cutting the throat. The specimen itself, with photographs, and experimental lesions of the vessels of the neck and of the vertebrae, made with scissors, were shown.
3. Homicide—revolver wounds of the head, neck and chest. Shooting experiments showing the distance at which the shots were fired.
4. An old bullet-wound of the skull, with consecutive lesions of the meninges and localized softening of the brain. The symptoms were mania followed by dementia.
5. Fracture of the skull in a railway accident.
6. Fracture and fissures of a foetal skull.
7. Thrombosis of the abdominal aorta, with inversion of the intima, following a crush of the abdomen.
8. Laceration of the intercostal muscles without fracture of the ribs in a crush of the chest.
9. The relative extent of the injuries to the muscles and skin produced in cases of crushing.
10. Photographs showing lesions in the Demers and Gauthier homicide cases.

FETAL EVENTRATION.

Dr. W. W. Alexander showed a specimen of this monstrosity.

Dr. A. L. de Martigny asked if the missing portion of the leg had been found. The appearance of the stump suggested amputation by the cord.

Dr. Alexander answered that he had not found it.

Stated Meeting, February 21st, 1896.

A. D. BLACKADER, M.D., President, in the Chair.

EXTRA UTERINE FETATION—DERMOID CYST.

Dr. Wyatt Johnston showed for Dr. Alloway the following specimens:

1. An extra-uterine foetation sac the size of an egg, with a thick wall showing numerous adhesions; the embryo was not present, but chorionic villi were found.
2. A case of extra-uterine foetation, where the embryo was in good preservation; the date was about the second month of gestation.
3. A dermoid cyst showing teeth, hair, and possibly a rudimentary mamma.

Dr. Johnston called attention to the fact that the pres-

ence of a mamma within a dermoid cyst was consistent with the morphological theory that the mamma was merely a modified sebaceous gland, being derived from the ectoblast.

Dr. T. Johnston-Alloway, referring to the last case of ectopic pregnancy shown by Dr. Johnston, said it was an extremely interesting case, on which he had operated the same day. The patient, a widow for six years, had married again last year and had missed two periods. Six weeks previously she suffered severe abdominal pain, and, losing consciousness, fell upon the floor. The family physician found abdominal tenderness and Douglas' pouch filled with a fluctuating mass; the patient was put to bed and kept there until able to travel. On entering the hospital her pulse was between 130 and 140, and she was extremely anaemic. Examination revealed a mass in the right iliac region running up across the abdomen to the hypogastric region, with moderate tenderness. Operation not being thought necessary the same night, stimulants were given freely. On advice of the anaesthetist, she was not put in the Trendelenberg position. On opening the abdomen the omentum was found adherent to the tumor, which seemed to be firmly cemented to the parietal peritoneum. After some difficulty, the ovarian artery was reached and ligated at the right corner of the uterus. The way in which the condition had formed was probably from rupture of the tube six weeks previously, and nature had supplied a fibrous wall, which had prevented general fatal haemorrhage. After having tied off the artery, the clots and debris were cleaned out. The patient by this time being pulseless, only the respiration going on, the cavity was packed with gauze to prevent oozing, although there had been no fresh hemorrhage during the time the abdomen was open (twelve minutes). The patient did not suffer at all from shock.

NECROSIS OF THE JAW.

Dr. James Bell exhibited the specimen.

GALL-STONE SPECIMENS.

Dr. James Bell exhibited gall-stone specimens from six cases upon which he had operated during the previous six weeks.

1. A single round stone, about three-quarters of an inch in diameter, removed from the ampulla of the common duct, partly within the walls of the duodenum. The patient, a gentleman, aged 52 years, had suffered from complete obstruction of the common bile duct for twelve months. The jaundice was intense, the color of the face being a dark bronze, the urine very dark, and the stools devoid of color. He had fallen off in weight in the year from 225 to 140 pounds. For four or five years previous to the complete obstruction to the outflow of bile, he had

suffered from attacks of biliary colic. On opening the abdomen, the stomach, duodenum, colon, liver and omentum were all matted together with dense, firm adhesions, so that the bile ducts were exposed only after a very tedious and difficult dissection. The gall bladder and cystic duct were shrunken almost to the point of obliteration, while the common duct was dilated to the size of the index finger. A longitudinal incision was made into the duct, extending into the muscular wall of the duodenum, directly over the stone, and the stone removed, followed by a gush of bile from the incision, arrested by compression of the duct on the hepatic side. The wound was closed by a row of interrupted sutures, and supplemented by a double row of Lembert sutures. A drainage tube was retained in the wound for several days, but there had been no escape of bile. The progress of the case after operation had been uneventful, with one exception. For one week after operation there had been no diminution of the jaundice, and no evidence of bile in the stools. After this, however, bile passed freely, and the jaundice rapidly disappeared.

This experience led Dr. Bell to conclude that the patency of the orifice of the duct should not be taken for granted, as was generally done, but that it should be demonstrated before closing the wound.

2. A small stone (the size of a large pea), from the cystic duct. This patient, aged 35, had been engaged in nursing a case of typhoid fever, when she became ill and feverish, and concluded that she had contracted the disease from her patient, and was admitted to hospital under this supposition. She even developed some septic symptoms, with localized swelling and tenderness in the right hypochondrium, and was transferred to the surgical side. The more urgent symptoms soon disappeared and a swollen tender gall-bladder could be recognized. Cholecystostomy was done on the 16th of January, and the small stone found impacted in the cystic duct. On aspirating the gall-bladder, a clear viscid fluid first flowed, then flaky sero-pus, and finally pus. Subsequent history uneventful.

3. Four stones removed from the gall-bladder of a lady, aged 37, who had suffered for four or five weeks from acute localized symptoms, pointing to appendicitis. There had been a history of attacks of biliary colic extending over a number of years. The four stones were so arranged as to form a conical-shaped mass, the apex of which lay in the neck of the cystic duct. There was no adhesions, the operation (cholecystostomy) was simple, and the subsequent progress uneventful, except for a phlebitis of the right leg, which developed about a week after operation.

4. One hundred and thirty-five faceted stones removed from the gall-bladder of a woman, aged 27. There had

been attacks of biliary colic at the age of 13. The last attack began in December, 1895, and was of acute inflammatory character, localized, and suggested appendicitis. On opening the abdomen, the under surface of the liver was found firmly adherent to the stomach, duodenum, colon, and omentum. The base and inferior surface of the gall-bladder was used into the greater omentum as a hard, inflammatory mass. On separating this mass many stones rolled out, and those in the neck of the bladder and cystic duct were removed with difficulty. Great difficulty was experienced in attaching the imperfect gall-bladder to the parietal peritoneum. The subsequent history was uneventful.

5. A single large, soft stone from the gall-bladder of a woman, aged 55 years. There had been a history of biliary colic, beginning at 15 years of age, and continuing for a number of years, and then ceasing. Recently had suffered from severe chills, high fever, and at times a slight jaundice. Cholecystostomy February 15th. No adhesions, and the distended gall-bladder contained, contrary to expectation, only pure bile. Subsequent history uneventful.

6. A man, aged 55 years, intensely jaundiced and choleraemic, was admitted to the hospital with a history of sudden onset of jaundice, six weeks previously. Obstruction to the outflow of bile complete. At the operation, the gall-bladder and ducts were found empty, shrunken, and beaded with hard nodules. The gall-bladder was opened and several of these nodules examined. They consisted of hard fibrous tissue (apparently cancerous). The lymphatic glands in the neighborhood were also enlarged and indicative of cancerous infiltration. On this account the operation of cholecystectomy, which had been contemplated, was abandoned. Recovery from the operation, which was prolonged and difficult, was uninterrupted.

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Editorial.

PURE MILK.

We call attention to an article in this number, by a member of our staff, on this subject, which brings out the more salient points which are agitating sanitarians throughout the world at the present time. We trust that the medical profession as a body in this province will give this subject more attention than heretofore. The province includes the most noted district on the continent for dairy products, and as germs of disease may be conveyed in butter and cheese as well as milk, every means of securing an absolutely pure milk supply should be adopted, and many of the most useful are suggested in this article.

POST GRADUATE COURSES IN MONTREAL.

The Faculty of Medicine of McGill University have established a course for graduates in connection with the Montreal General and Royal Victoria Hospitals. The course lasts from May 5th to June 20th, and includes evening lectures, special clinics and laboratory courses. The recent improvements in the Montreal General Hospital have given us a thoroughly modern building, with every facility for the treatment of patients, and the well-furnished clinical and pathological laboratories and operating rooms have placed the hospital in as complete a condition as the Royal Victoria. Every facility is afforded, in both these hospitals,

for the acquirement of information in general medicine and surgery and the specialties. It is an absolute necessity for practitioners away from hospital centres to come to the teaching centres from time to time, to brush up their knowledge and see the carrying out of what is recent in the various departments of medicine, and we heartily endorse this movement on the part of the staff of these hospitals, and feel assured that practitioners will find that Montreal affords as many advantages for acquiring the latest information in the progress of medical science as may be obtained by visiting more distant and larger centres. Physicians while here will no doubt be welcomed to the wards of the Hotel Dieu, Notre Dame and Western Hospitals, where much good work is done.

The Canadian Medical Association holds its annual meeting in this city on the 26th, 27th, and 28th of August. A very successful meeting is being looked forward to, as a number of important papers are promised. It has been determined to make the visit to our city both agreeable and profitable. A committee of arrangements, consisting of Sir William Hingston, Drs. Roddick, Buller, Marsolais, Blackader, Armstrong, Desjardins, Perrigo, Birkett, DeMartigny and Brunelle, has been appointed to arrange the details of the meeting. Dr. J. G. McCarthy, 61 Drummond street, is local secretary for the Province of Quebec. The general secretary is Dr. F. N. G. Starr, 471 College street, Toronto.

APENTA.

We received a case of the laxative mineral water some weeks ago, and have observed its action in several cases, finding it a very reliable and satisfactory aperient. It is a bitter water, and obtained from the Ug Hunyadi Springs, Buda Pesth, Hungary. It has a sp. gr. of 1.0414, and the analysis is reported to have the following composition:

	Grns. per Gal.	Parts per 10,000
Magnesia Sulphate.. . . .	1474.2	210.6
Magnesia Carbonate.. . . .	12.8	1.82
Magnesia Bromide.....	0.85	0.12
Sodic Sulphate.. . . .	1307.9	186.84

Calcic Sulphate..	184.31	26.33
Potassic Sulphate..	5.92	0.84
Lithic Sulphate..	5.31	0.75
Sodic Chloride..	123.80	17.69
Fluorine..	Traces.
Sodic Carbonate..	33.47	4.78
Calcic Carbonate..	8.20	1.17
Ferrous Carbonate..	5.42	0.77
Ammonia (free and albuminoid)		
traces..	0.004	0.0005
Alumina..	2.10	0.30
Silica..	2.24	0.32
	<hr/>	<hr/>
Total (Anhydrous) Solids.. . . .	3166.56	452.3

Carbonic Acid Gas not determined.

This natural purgative water was formerly known as Rackoczy water, owing to the large proportion of the sulphate of magnesia and soda. It is a very active laxative, and is more agreeable to the palate than any we have knowledge of. It is being introduced by the Apollinaris Company.

THE LATE DR. SAUNDERS.

Kingston, Ont., has sustained a great loss by the death of Dr. Saunders, who died early in March, after a short illness. He was well known to some of the older members of the profession in Montreal, where he practised for a short time, previous to his settling in Kingston, and his worth was greatly appreciated by them. Dr. Saunders was Professor of Clinical Medicine in Queen's College, and surgeon to the Kingston Field Battery for over twenty years, obtaining the rank of Surgeon Major in 1894.

Miscellaneous.

THE PREPARATION OF COW'S MILK FOR INFANTS.

One of the best combinations is termed the "Dresden Method." It is as follows:

To the white of one fresh egg slowly add 13 drachms of milk sugar, and stir vigorously, taking care not to beat air into the mixture, for egg foam will not mix well with water. To this paste slowly add 1½ pints of water, stirring constantly. This emulsion is then strained through fine linen into a pint of milk. Slight stirring or shaking completes the mixture. The milk used should be of 9½ per cent. richness in fat.

The following analysis states very fairly the comparison between human and cow's milk:

	Human.	Cow.
Casein	1.2	3
Albumen5	.3
Fat	3.8	3.5
Sugar	6	4.5
Ash2	.7
Water	88.3	88
	<hr/>	<hr/>
	100.0	100.0

Cow's milk is richer in casein than human, and much poorer in lactalbumen. If water be added to reduce casein to the correct amount, the milk will only contain 1-3 enough lactalbumen, and furthermore if the milk is sterilized still further loss is occasioned, as the coagulated albumen is wasted in the scum, and also on the sides of the vessel.—*Scientific American.*

HARVARD UNIVERSITY.

The Medical School of Harvard University has just made a rule which will be a powerful aid to the cause of higher medical education: "On and after June, 1901, candidates for admission to the medical school must present a degree in arts, literature, philosophy, science or medicine from a recognized college or scientific school, with the exception of such persons of suitable age and attainments, as may be admitted by a special vote of the Faculty taken in such case. All candidates, whether presenting a degree or not, are and will be required to satisfy the Faculty that they have had a course in theoretical and descriptive (inorganic) chemistry and qualitative analysis, sufficient to fit them to pursue the courses in chemistry given at the Medical School." The latter provision is commendable.—*Cleveland Medical Journal.*

OVER-PRODUCTION IN THE PROFESSIONS.

At the Annual Convocation of the Bombay University, held on the 25th ult., the Report stated that some three thousand candidates presented themselves at the last examinations, of whom nearly one-third were successful. This, said the Vice-Chancellor, in his address, may be regarded as evidence of the growing popularity of the University, and the increased interest taken in its work by the natives of India, comprising among them Hindus, Mahomedans, and Parsees. But, asks the *Bombay Gazette*, are we quite certain that something like an over-production of qualified professional men beyond the needs of the community at large is taking place in India as well as in other parts of the world? This danger, if such it is found to be, is by no means confined to India, nor our other colonial possessions. It has probably reached its greatest development in Great Britain and other western countries, where the greatest over-production of the professional classes is taking place. In Great Britain there are twenty-four thousand medical men, and the medical schools are yearly adding to the number. The barristers-at-law number over eight thousand, of whom it is said not a thousand can live by their professional earnings. The plethora appeared so great, that last year, for the first time, the number of candidates diminished very considerably. It is the same with the other learned professions. Turn to Germany, six thousand recruits joined the great army of the unemployed of the professional classes, through the ever open gates of the universities. In France the same disproportion between the successful and the unsuccessful entering the profession prevails. To look somewhat deeper into this question, we may inquire: what becomes of that far more numerous body who strive to enter one or other of the professions, and, after spending their means and their youth, fail in their endeavor, and are flung back upon the world without resources and hope for the future? The Vice-Chancellor, the Hon. Mr. Justice Jardine, in the course of his able address, called attention to the fearful sacrifice of health and life too often entailed by students in their struggle to gain University honors. The early mortality among even the more gifted and the more successful suggests doubts as to the absolute perfection of the system which entails such lamentable results. It will not be denied that in India the benefits conferred by the better and more liberal education of the young men has done excellent service by infusing the learned professions with a higher standard of learning, and we cordially reciprocate the Vice-Chancellor's wish that the princely and wealthy classes of the community will emulate their predecessors by further endowing chairs on the medical side for the purposes of original research and bacteriological study.—*Medical Press and Circular*, 2967.

Book Reviews.

Diets for Infants and Children in Health and in Disease.

By Louis Starr, M.D., editor "American Text Book of the Diseases of Children." Published by W. B. Saunders, 925 Walnut street, Philadelphia.

This volume contains in book form, convenient for the pocket, diet lists for children in health for different ages. The quantities to be added by the physician. There are spaces for general directions, and for direction as to clothing, bathing, sleep and exercise. The second half contains forms for diet in the commoner affections of childhood, such as the various gastric intestinal disorders, scurvy, rickets, lithaemia, tuberculosis, chorea.

At the end is a list of directions for preparing various diluents and foods.

These are easily detached at a perforated line, and, besides saving the physician the time required in giving verbal directions, which are difficult to remember, valuable suggestions as to the proper food to order are also made in the comprehensive lists.

These useful forms should be in the hands of every busy practitioner, as the resulting economy of time and labor which their employment secures will repay him manifoldly for the small outlay.

Obstetric Accidents—Emergencies and Operations.

By L. Ch. Boisliniere, A.M., M.D., LL.D., late Emeritus Professor of Obstetrics in the St. Louis Medical College, etc., etc. Printed in Philadelphia by W. B. Saunders, 1896.

Ch. Boisliniere, A.M., M.D., LL.D., late Emeritus Professor of Obstetrics in the St. Louis Medical College, etc., etc. Printed in Philadelphia by W. B. Saunders, 1896.

Such is the title of one of the latest treatises on practical work. The idea is an exceedingly good one to collect together in a concise and practical form the difficulties which an obstetrical practitioner is likely to meet with, and one that would naturally suggest itself to a practical man. The late Dr. Boisliniere had a very large obstetrical practice, and as a teacher both knew the wants of the profession and how to place it before them. It is divided into three parts: Part I.—Accidents to the woman. Part II.—Obstetric operations. Part III.—Accidents to the child.

Part I. has fourteen chapters devoted to every accident possible to happen to the woman, and full of good common sense, although here and there exception may be taken to certain statements, such as under the head of Abortion, the recommendation to "wait for bad symptoms" before acting

vigorously. In the chapter on Hemorrhage, he says, for the so-called uncontrollable hemorrhage after delivery, perform Porro's operation, and again that post-partum hemorrhage may cause the death of the child, and again, in placenta praevia the chief method seems to be tamponing the vagina. There are several other statements made not quite in accord with the advanced teachings of the day, but these are only really minor points, which every reader of the work will have already probably decided for himself, and, taking the work altogether, do not really detract from it. Part II. on obstetric operations has eight chapters devoted to the subject, and is well up to date and practical.

Part III. has four chapters, and takes up every possible accident to the new-born child. There is a great deal of information not to be found in any of the works on midwifery, and it is just what is required by the majority of busy men who have not had the great experience of the author, and who desire to keep abreast of the times. We heartily recommend the book to any one needing a practical work.

PUBLISHERS DEPARTMENT.

When you meet an employé of Parke, Davis & Co., whether on the road or in the house, you meet an enthusiast. He does love to expatiate on the wonderful growth of "his" firm—the number of its laboratories, branch houses, agencies, and representatives; its twenty-nine distinct lines of pharmaceutical preparations and its six thousand different products. It reminds you of John Bright waxing eloquent in the House of Commons over his favorite theme—the prosperity of the United States.

But there is good ground for his enthusiasm and for marvel at the amazing success of this firm. Recently they have opened two new branch houses to satisfy the rapidly growing demand for their preparations—one at New Orleans and another at Baltimore.

The price list which Parke, Davis & Co. are now distributing, and which suggested these reflections, is an admirable catalogue in its completeness, convenience of arrangement, and wealth of miscellaneous information. By all means write the house for a copy.

And remember, too, that the products of this firm are so many weapons for your assistance in the perpetual, harassing warfare with disease—weapons upon which you may rely through thick and thin, in emergencies as well as in routine practice. Their label on a bottle or box means that the contents have been prepared with the utmost skill and with scrupulous deference to purity and activity.

There is always an endless surprise of good things to be found in LITTELL'S LIVING AGE, and recent numbers have been no exception to the rule. We note in particular "Recent Science," by Prince Kropotkin, the eminent Russian scientist and revolutionist, which consists of two papers, "Rontgen's Rays" and "The Erect Ape-man." The same issue contains an article by Eivind Astrup, "In the Land of the Northernmost Eskimo," and another, "The Chevalier D'Eon as a Book Collector," by W. Roberts. Notable papers in other late issues are "South Africa and the Chartered Company," by Charles Harrison; "In Praise of the Boers," by H. A. Bryden; "National Biography," by Leslie Stephen; "The Baltic Canal and How it Came to be Made," by W. H. Wheeler; "Spenser, and England as he viewed it," by Geo. Serrell; "Cardinal Manning and the Catholic Revival," by A. M. Fairbairn; "Personal Reminiscences of Cardinal Mauning," by Aubrey de Vere; "The Rival Leaders of the Czechs," by Edith Sellers, etc., etc.

The price, formerly \$8.00 a year, is now but \$6.00.

Published weekly by LITTELL & Co., Boston.

SANMETTO IN URINARY DISEASES.

Sanmetto is my medicine for all bladder and urinary diseases. I have used it in cases of fifteen years' standing where other physicians and medicines had failed—such as catarrhs, or any irritation of either bladder, urethra or tubes running from kidney to bladder, in gleet resulting from gonorrhœa or excessive drinking or any other form of irritation of the urinary organs.

SEYMOUR, IOWA.

E. H. JONES, M.D.

CHRONIC INFLAMMATION OF THE URETHRA COMPLICATED BY OLD STRICTURE.

Arthur Aulad, M.D., M.B., B.Ch., B.A. C., B.A., Rathmines, Defoe Road, Tooting, London, S. W., England, says: "I have very great pleasure in testifying to the extreme efficacy of Sanmetto. The only case in which I have used it was what I would call a test case, viz., one of inflammation of urethra of long standing, complicated by old stricture. I gave it in drachm doses three times a day, and in four days the patient was completely relieved."

ILLINOIS CENTRAL HOSPITAL FOR THE INSANE.

I have repeatedly prescribed antikamnia for various neuroses with good effect. Recently prescribed it in a case of croupous enteritis, patient adult, highly nervous, and during continuance of paroxysms, and preceding it, is

nervous and hypochondriacal, suffering intense pain. The case is one of long standing, and one where opium was objectionable because of the tendency toward forming opium habit. However, opium has been used, but the effect of antikamnia has been more magical, more persistent, and followed by no digestive disturbance, as has been the case when opium was used.

My directions have been to use antikamnia whenever a paroxysm occurs. Have also found it invincible in protracted neuralgia.

FRANK P. NORBURY, M.D.

JACKSONVILLE, Ills., September 19, 1891.

"A BRIGHT LAD THAT WAS."

A teacher told the pupils to make up a sentence or "story" from the suggestive words "boys," "bees," "bear." Quick as flash up came one hand, "I have it." "What is it, Tommy?" inquired the teacher. "Boys bees bare when they go in swimming," was the astonishing reply! A better sentence would have been—"Boys will be interested in bees and other insects, bears and other animals as well as birds, flowers, etc., as described in *The Observer*, Portland, Conn. Sample 10 cents. One year \$1.

PNEUMATIC TRUSS PADS.—Those who are obliged to wear trusses have suffered from pads that are supposed to hold up the ruptured parts, and to alleviate the pain thus caused, hard and soft pads have been devised and all proven more or less unsatisfactory.

A Pneumatic truss pad that is non collapsible has been invented by G. W. Flavell and can be used on any truss. It has been found to correct all the difficulties of the old pads and gives instant relief.

One of the new pads should be in every physician's office, and a sample can be obtained at the nominal price of 50 cents from G. W. Flavell & Bro., 1005 Spring Garden St., Philadelphia, Pa.

ELIXIR SALICYLIC COMP.

Wm. R. Warner & Co.'s Elixir Salicylic Comp. is at the present time no doubt the foremost remedy for rheumatism, gout, lumbago and kindred diseases. In acute inflammatory rheumatism, two tablespoonfuls every few hours, diminished to one tablespoonful every three hours produces desired effects.

It is a pleasant and permanent remedy, and is put up in 12 oz. square blue bottles by Wm. R. Warner & Co. It is advisable to purchase Elixir Salicylic Comp. (Wm. R. Warner & Co.) in original packages to avoid substitution of inferior imitations.

Henry Childs Merwin in *The Atlantic Monthly* for March writes a very instructive article on the Irish in American Life. Sarah Orne Jewett finishes her story entitled "The Country of the Pointed Firs." A Seminary of Sedition by John Fiske treats of the history of "The London Company for Virginia." Eugenia Shelding has an article entitled "A Holy Island Pilgrimage." F. J. Stimson's intensely interesting story, "Pirate Gold" is included in this number. It treats of Boston life during the middle of this century. Mary Hartwell Cathewood writes on French Roads. Two New Social Departures by John M. Ludlow deals with the foundation of an Industrial Union of Employers and Employed, and the holding in London of the first International Co-operative Congress. There is also a fascinating love story entitled "Public Confession," by Ellen Mackubin.

Much valuable information is gained in reading Rose Hawthorne Lathrop's "Some Memories of Hawthorne." No one is more fitted to write on such a subject as she.

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MASSAGE IN SKIN DISEASES.

By J. LESLIE FOLEY, M.D., L.R.C.P., London.

Physician to the Department for Diseases of the Skin, Western Hospital.

While in general medicine the beneficial effects of massage are well known, in dermatology it has received but little attention. It has seldom been taken up in an article, and the dermatological text-books scantily mention massage. For this reason, deeming it worthy of more accentuation, I have ventured to bring the subject before the readers of THE RECORD.

Without the skin, its layers, complexus of nerves, lymphatics, etc., the massage treatment could not well be carried out, it seems but just that when the skin itself becomes diseased, it should lend a helping hand—come to the rescue.

Pardon me if I recall to your mind the physiological actions of massage. It improves the appetite, improves bodily vigor, promotes absorption by the lymphatics (of exudates, etc.), increases the circulation of the part, dormant capillaries are aroused, the vaso-motor nerves are stimulated; as more blood passes through the masseed region it causes an increased interchange between the blood and tissues. Massage equalizes the circulation, drives the blood over the skin area, and relieves the internal organs—brain, liver, spleen, kidney, etc.—of their excesses of blood. Effleurage lightly performed contracts the superficial blood vessels locally; deep and persistent effleurage, together with petrissage, dilates them. Massage aids in the nutrition of the

part; assists digestion; increases the electrical contractility of muscular tissue; useful in removing waste products, and restoring muscular power; stimulates the flow of lymph in the lymphatics; promotes sleep; increases the oxidizing power of the blood; stimulates the sympathetic nervous system, increasing secretion and reflexly the activity of unstriated muscular fibre; relieves pain. Deep massage exerts a simultaneous influence on all the tissues within reach—the skin, fascia, muscles, vessels, nerves; the skin is made softer, suppler, finer, cleaner, smoother, and at the same time more tough, flexible, elastic; insensible perspiration when deficient is increased, and the sebaceous excretion facilitated. In the recent experiments of Lauder Brunton and Tunnicliffe on the effects of massage on the circulation, they found that it (1) increased the blood in the muscles; (2) increased accumulation of blood flow; (3) increased blood pressure and fall. Such are the principal physiological actions of massage (at present known), and to my mind there are many dermatoses where they might prove applicable.

Massage, then, may be said to be a skin tonic, as alterative, absorbent, sedative, antipruritic, skin exerciser, etc. (to coin an expression). Massage acts directly on the skin (local massage), or indirectly (general massage) extending over the whole surface, influencing the stomach, liver, alimentary canal, etc.

In looking over the dermatological classification, among its divisions there are many dermatoses which might be benefited by massage. As massage removes congestion, it should be useful in the hyperaemia, the erythemata. In acute dermatoses, it should not be used, as then it would have the same effect as scratching, barring the nails. The following are some of the skin diseases where it might be adopted: Dermatalgia, paraesthesia, dermatitis, congelationis, psoriasis; atrophy of the hair; scleroderma; sclerema neonatorum; morphoea; anidrosis; alopecia areata; eczema; acne; elephantiasis; symmetrical gangrene (Raynaud's disease); pruritus; prurigo; erythema pernio.

In ichthyosis, massage is a useful adjunct to other treatment. Comedones may be removed by massage, kneading and pressing out contents. In elephantiasis it keeps the lymph vessels and channels open. In acne, local massage is useful to free sebaceous glands. Scars remaining after burns

may be removed by massage. It may also alleviate the nervous symptoms following these. Oedema may be speedily removed under the impetus of massage. It ought to therefore prove useful in acute circumscribed oedema, or Quincke disease, a variety of urticaria. Billroth thinks he has seen tumors dissipated by massage. In cutaneous ulcers in the more chronic forms massage may aid in removing indolent infiltration, and set up a healthier action. In varicose ulcers in the accompanying eczematous conditions of the lower extremity, when poor circulation (venous and arterial) is a prominent feature, by increasing the circulation of the part, aiding the nutrition, and tending to the absorption of exudates, it may be of especial service.

In seborrhoeal affections, massage by removing the crusts and stimulating the sebaceous glands to greater effort is of benefit. In the dry forms of seborrhoea, massage is beneficial. Tone and vigor is given to the glands and hair follicles. In acne indurata, glandular swelling, excessive and deficient pigmentation, the choked-up absorbents are aroused to action, and the parts soon restored to their normal condition. Murray, of Stockholm, found that massage had a good effect in relieving the itching of prurigo.

Massage is a valuable adjunct in promoting and increasing oxidation in psoriasis and the scrofuloderma. In these and like pathological conditions the skin is rendered more active, the red corpuscles of the blood are increased and effete products removed. In some of the subacute forms of eczema, where there are grouped papules thickened and dry, massage will frequently wake up into activity the absorbents, lessen or arrest the itching, increase the circulation and restore the skin to its normal condition. It is more effective in the chronic forms of eczema, when there is a deeply infiltrated, rough, thickened, leatherly-like, hard, dry skin, and where other treatment may have failed. It is equally efficacious where the integument is covered with confluent patches of papules, or more or less infiltration of the surface, with dryness of the surface, accompanied with intense itching. The pent-up products are removed, and, massage having a sedative action, a feeling of repose follows.

In Lupus, Unna frequently uses massage as an adjunct to other treatment, using moderate friction. Cicatrices may be removed by continuous friction with fine sand pumice stone. Molluscum contagiosum, the tumors may be kneaded out.

Massage increases the nutrition and circulation of the scalp. It acts as a scalp stimulant and tonic. As the scalp is strengthened, so is the hair. It increases the circulation of the hair capillaries; more blood is brought to these. It acts as a stimulant and nutrient of the nerves of the hair. It is therefore useful in alopecia-atrophic conditions of the hair; shaft trichorrhexis nodosa; atophia propria pilorum, etc. If alopecia areata is a neurosis, as most dermatologists hold it ought to be of use here, when the scalp has become atrophic and immobile, it might do good. The hair becomes more moist and glossy after massage of the head.

In the treatment of the neuroses of the skin the neurologist and dermatologist meet on common ground. It is of especial use in the neuroses, that much unexplored and ever-widening branch of dermatology.

Pruritus.—Massage often acts like a charm in removing the intolerable sense of irritation and itching of the part. Most of the methods of performing massage may be used: Stroking (effleurage); pinching or kneading (petrissage); friction; percussion (tapotement), and should be performed over the general surface as well as the affected one, as it equalizes the circulation; removes exuded products; nullifies, through its sedative action, all nervous irritation, and is most refreshing, often procuring sleep when soporifics fail. It may prove useful in hyperaesthesia, dermatalgia and all trophic disturbances of the skin. The dermato-neuroses, with predominant inflammatory congestions (Auspitz), herpes zoster, herpes, pemphigus, eczema neuroticum, etc., ought to be benefited by massage, especially of the spinal column.

Besnier, Brocq and Jacquet, of Paris, and still later Leloir, of Lille, have described a large number of neurodermites in which massage might do good.

In drug eruptions, as they are for the most part thought to be due to nervous influence reflex or otherwise, massage might be of benefit.

Massage proves useful in a number of uterine derangements, menstrual disorders, etc. As is well known, not a few dermatoses are due to these, which would be indirectly relieved by massage. In anaemias of the skin, massage is useful. It might aid in removing the syphiloderms more rapidly, and the debility which frequently accompanies or follows syphilis.

It is beneficial in the exudativus, a class largely repre-

sented in dermatology. Massage removes crusts; gout and rheumatism are much benefited by massage. These are etiological factors in a number of dermatoses. In removing the cause we are curing the disease.

As a Skin Exerciser.—There are a class of patients of sedentary habits who take little exercise of any kind out of doors or indoors. Then, again, there are those whose occupations do not permit them to do so; consequently they suffer from a variety of skin diseases—acne, eczema, etc. To them, it seems to me, massage would prove a boon, making the skin and muscles more active, while at the same time quickening the action of the internal organs—stomach, liver, spleen, etc. Constitutionally, when applied over the general surface, it cures dyspepsia, constipation and functional derangements, which indirectly give rise to skin troubles. It affects the nervous, digestive and circulatory systems. These are etiological factors in many dermatoses.

In a paper read before the Dermatological Section of the British Medical Association, in August, 1893, Dr. Symons Eccles, of London, brought out some good points in reference to massage to the skin. Light friction produces apparently the same effects as the application of cold to the surface of the skin, but whereas the initial effects of cold, thermal and mechanical stimulations are identical if the former is prolonged, the cutaneous circulation of the part is slowed, congestion, overfilling of lymphatics, and consequent tumefaction of the part ensues, while with continued friction contraction of vessels is replaced by relaxation, pallor by warm redness, and if manipulation is increased to firm rubbing, the loose epithelium is removed; contents of sebaceous follicles expelled; dilation of arterioles; insensible sweating and perspiration ensue; lymph vessels unloaded; venous circulation stimulated. Light friction reduces surface temperature. Firm friction, kneading and rolling of skin increases the surface temperature, also the temperature of the limb on opposite side. Light friction produces no perceptible effect on the sensation of the skin. Firm friction increases tactile sensibility, and improves local sense. Kneading immediately reduces both; also temperature sense for heat, less for cold. Massage of the part decreases the resistance of the uninjured skin to the passage of electrical currents. Preliminary massage increases the rapidity by which drugs are absorbed. Dusting powders used after massage are more

efficacious than inunction without massage. Indirectly, massage may be employed over the vaso-motor-centres controlling the vascular conditions of parts affected by skin lesions. Friction and kneading over the cervical and dorso-lumbar regions, and along the erector spinae, appear to modify inflammatory conditions of the upper and lower limbs respectively, while abdominal kneading affects the peripheral tension.

It is in lesions characterized by the accumulation of inflammatory products in overloaded lymph spaces, clogged lymph channels and blocked glands, that massage proves most valuable. Three questions loom up: (1) As to the time needed to perform massage; (2) as to the skill needed for its performance; (3) as to its expense.

To the busy practitioner it is out of the question. To the less occupied it is practicable. As to the skill needed, if one has the time, one can easily acquire the necessary acquirements; but perhaps it would be better to leave it in the hands of a skilled masseur. Massage of the head might be relegated to the barber; he would then have an additional interrogation: "Massage, sir?" The expense would deprive many of the poorer class of patients from its benefits.

While disclaiming for massage great curative powers, it certainly has its use and place in dermatology. While taking from one's shelves the ponderous volumes of reference in search of a line of dermatological treatment, the thought may possibly crop up, "Aye, there's the rub."

FOODS—THEIR USE IN DISEASE.*

By GEORGE FISK, M.D.

Demonstrator of Anatomy, University of Bishop's College.

In the organic world the process of decay and repair is ever going on, and repair demands material, i.e., food. A perfect and complete food for any living thing must necessarily comprise all the elements utilized in the formation of its tissues, and that these elements be supplied in sufficient quantities. The simplest vegetable organisms require for their food nothing beyond water and the gases of the atmosphere; but man is a very complex organism, and from the thirteen constant elements, and the ten other occasional elements found in the human body, many very complex chem-

* Read before the Montreal General Hospital Clinical Society, March, 1896.

ical substances are formed. Of these elements some are in small quantities, and their uses are unknown; several are found more abundantly, but are not indispensable to life, while carbon, hydrogen, oxygen and nitrogen are necessary ingredients, and constitute the greater portion of the body. Modern science has placed the study of foods on a scientific basis by its extensive chemical analyses of the human body and its secretions, as well as an exact analysis of all foods, however prepared. With this foundation, it but remains for the student to investigate the ease of digestion and assimilation of whatever class of food is indicated.

This is certainly a very broad subject, and it is here that the old saying, "What is food for one is poison for another," appears in its true light.

The varying conditions of the human body in health and disease exert such a powerful influence on digestion and assimilation, that a systematic classification, so useful to the busy practitioner, must necessarily be incomplete and imperfect; or, on the contrary, so elaborate as to be impracticable. The classification of foods, according to their physical properties, source, or chemical formation, is very good in studying the foods by themselves, but in studying foods with regard to disease, a classification, designed to group foods according to the role they take in the formation of the human system, is to be desired. As the great objects of food are tissue formation and force production, a classification of foods as acting in one of these ways may prove practical. Chemistry shows that the nitrates are occupied largely in the formation of muscle, the phosphates contribute to the formation of the brain, nerves, and to some extent of the bones, while the carbonates are the main source of force. Let us place the foods as acting in one of these three ways, according to their chemical formation, viz.:

1. Muscle formers, i.e., nitrates.
2. Nerve and brain formers, i.e., phosphates.
3. Force producers, i.e., carbonates.

The material for muscle formation is found largely in the cereals and animal foods, the percentage varying from 6.5 per cent. to as high as 34.6 per cent. Among the grains, wheat has 14.6 p. c.; barley, 12.8 p. c.; and oats, 17.0 p. c., while peas and beans have about 25 p. c. Butchers' meats vary from 17.5 p. c. in pork to as high as 35 p. c. for ham, most of them showing about 20 p. c. Fish show a smaller

percentage. The material for nerve and brain formation is found most abundantly in fish. Most fish contain from 3 to 7 p. c., salmon heading the list with 6 to 7 p. c. Grains contain a fair amount. Barley has 4.2 p.c.; oats, 3.0 p. c., and wheat, 1.6 p. c. The phosphates in barley and wheat are deposited on the surface of the kernel, just beneath its hard covering; but in oats it is distributed evenly throughout. The pearly barley is robbed of much of this layer of phosphates in the process of milling, only 0.2 p. c. being left. The flake barley retains much of this layer of phosphates, and consequently is much better for porridge. Butchers' meat contains about 2 p. c., and ham has 4.4 p. c. In fruits, dates are richest, containing 4.5 p. c. Beans contain 3.5 p. c. The force producers are made up principally of the carbonates, i.e., the carbo-hydrates (or, starches and sugars), and the hydro-carbons (or, fats and oils). The carbo-hydrates form a very large percentage of the grain and some vegetable foods, and by their ready oxidization save much wear of the tissues, although they do not readily enter into the formation of tissue. If we consider, then, that all foods, or the component parts of all foods, act in one of these three ways, our care should be to select those foods which best replace the loss in any special case. Here a knowledge of the constituents of the various foods is of vital importance, but this is not all that is required. A selection from the various foods which contain the required elements must be made according to—

1. The ease of digestion, and resulting percentage assimilated.
2. The value in tissue formation.
3. The effects of the residue, or waste, on the system.

The consideration of the first opens up a wide field in the preparation and cooking of foods in order to obtain a large percentage of nutrition from the food. Yeo, in speaking of the partial assimilation of vegetables containing a large proportion of nitrogenous substances, says: "As large a proportion of albuminous matters as 17 p. c. may be wasted, while not over 3 p. c. of the proteid matter of animal food remains undigested." Proper preparation of these vegetable foods will remove this trouble to a great extent, yet it is quite evident that the great mass of cooks do not prepare many vegetable foods rich in nitrogenous products in a manner to obtain its full value. To illustrate, it

is well known that the horse extracts more nourishment from oats than man does from the meal, as his powers of digestion are greater. If, however, the oatmeal be thoroughly cooked, from eight to twelve hours, a much larger proportion is assimilated, as the oatmeal granules are broken up and prepared for digestion. It should be a standing rule that wheat and oat porridge should not be boiled for less than eight hours, and on cooling it will form a tender gelatinous mass. Barley porridge is an exception, and a short time (fifteen minutes) suffices to cook it sufficiently.

Much that is valuable in vegetables is lost by faulty cooking. Potatoes peeled before boiling are robbed of their potash salts, which lie just beneath the skin. During the process of boiling the potash passes out into the water, and is thrown away with it. Carrots lose their valuable iron in the same way if sliced, and beets are said to "bleed to death" when the skin is broken. In acute and serious diseases the alimentation is more directly under the physician's supervision, resulting in a more correct preparation of food. Certainly the greatest aid to the physician in the improvements in modern dietetics is the predigestion of food. Its value in both acute and chronic diseases, especially of the alimentary canal, is hardly to be estimated, and the methods of feeding infants have been completely reorganized by it. Not to enter upon a lengthy discussion of the methods of giving predigested foods, I will mention a few facts that are easily overlooked by the uninitiated attendant in regard to nutrient enemata. It is a good standing rule that all albuminous foods should be digested before given as enemata, for, experimentally, albumen is shown to be excreted by the kidneys unabsorbed when injected into the rectum undigested. The practice of giving nutrient enemata with a common Davidson syringe, with a rubber or metal nozzle, cannot be too strongly condemned. Irritation of the bowel, possibly haemorrhage, and imperfect absorption, are the result. A long pliable rubber tube should be used; a large velvet-eyed catheter does very well, and this should be passed well up the rectum to the sigmoid flexure. About eight inches of tubing should be passed up in the child, and about ten to twelve inches in the adult. There is a good anatomical and physiological reason for this, as fluids absorbed from the sigmoid flexure and upper part of the rectum are carried to the inferior mesenteric vein

through the superior haemorrhoidal and sigmoid veins, and so on to the liver through the portal vein. The veins from the lower third of the rectum pass directly to the inferior vena cava, consequently all proteid matter absorbed from the lower one-third of the rectum loses the further digestion in the liver so vital to its assimilation. If injected into the sigmoid flexure it causes less irritation, and there is less liability to rejection.

In considering the digestibility of foods their compatibility should be considered. By incompatible foods, I mean those foods which demand a widely different length of time for the completion of gastric digestion. Apples take one and one-half hours, while beets or cheese take six hours. As quickly digested parts of a meal are ready for intestinal digestion they are passed on from the stomach, leaving the more tardy parts to complete digestion. It is quite obvious that if gastric and intestinal digestion are going on simultaneously for some time both are retarded.

The second division for consideration in the selection of food, viz., their value in tissue formation, is one that is frequently underestimated. Nature always accommodates herself as far as possible to circumstances, and employs whatever material is brought to her for renewing tissue waste. It is quite evident that if inferior material is furnished, the resulting new tissue is of poor quality. This is equally true in mental or physical training, and amounts to a maximum among teachers and trainers. Scrofulous or rickety children show in the various tissues the result of improper food. With regard to what foods make the best tissues, there is room for much discussion. Some hold that flesh food is not allowable for man, while on the contrary others hold that flesh is all sufficient. Thompson remarks that, "A man cannot perform more actual muscular labor upon an exclusive diet of animal food than of starchy food. He requires abundant animal food to replace the general wear and tear of muscular tissue, but the energy for muscular contraction is not derived from nitrogenous food, but from carbohydrates, the former being used merely to keep the muscles in a state of healthy equilibrium. He who is physically feeble, and who lacks muscular power, cannot restore that power by an exclusive nitrogenous diet. A man fed upon nitrogenous diet without vegetable food may not work as well in daily labor as when given a fair proportion of the latter; but, on

the other hand, he is better fitted for sudden arduous exertion than are exclusive vegetable feeders." Hence a mixed diet is the rational one for man.

Bauer says: "The material effects of albumen and of fat in the system are in a certain sense opposed, for the former increases the tissue waste, and secondarily, the oxidation, while fat induces the opposite effect." Hence the beef (lean) and bread treatment for obesity.

Some authorities claim that an exclusive vegetable diet has a tendency to increase the deposition of salts in the tissues leading to arterio-sclerosis; but the evidence in this is not at all conclusive. On the other hand a very large per cent. of centurians were very sparse meat eaters.

In considering the effects of the residue, or waste, on the system, I shall define the waste as that part of ingested food which passes off undigested, or is undigestible. The amount of undigested food which is thrown off varies according to the amount of food ingested at a time, and the condition of the food. In many poorly prepared vegetable dishes rather a large percentage of digestible material, is thrown off owing to its being protected by indigestible cellulose. If cellulose is added to animal food, digestion is interfered with. The carbo-hydrates in wheaten flour, rice, maccaroni, etc., are utilized to within 0.8 to 1.6 per cent., whereas as much as 8 to 18 per cent. of undigested residue passes out of the body from such food as black bread, potatoes, and the like. Moreover, hard, ligenous substances, such as the bran of black and brown bread, provoke, by mechanical irritation, active intestinal peristalsis, which soon removes these substances from the action of the intestinal juices. For this reason, oat or wheat porridge is a good laxative when cooked only for a short time, while barley porridge is good in cases of diarrhoea. When large quantities of food are taken at once a larger percentage of digestible material is passed undigested. In the case of fats, however, large quantities may be taken without any increased percentage in loss. In considering the nutritive value, vegetable foods are as a rule more bulky than animal foods, hence tend to evacuate a greater amount of undigested residue. This is important in considering the food in cases of intestinal lesions.

In order to facilitate and abbreviate the consideration of the dietetic treatment of each disease, I shall group them into two main classes—acute and chronic; and after consider-

ing briefly the main line to pursue in each, shall pass on to consider some minor points which may be of some small practical value.

In all acute troubles the diet should be strictly limited to a fluid, or semi-solid, diet, which will be almost entirely digested. Foods having a large per cent. of residue are contra-indicated, particularly in enteric troubles. Water is most easily assimilated, and consequently is the best vehicle for conveying foods into the system. It is also invaluable in washing away the nitrogenous debris, which is increased in quantity owing to increased metabolism. In the acute cases, where the fever is high, it is considered well to aim at preventing the increased metabolism of nitrogenous tissues by supplying albuminous foods, which are consumed in their stead. Emaciation is to some extent limited in this way, and the patient's strength is thus reserved.

I will pass over without comment that universal food, milk, which is so valuable in all acute troubles, and will consider a few points regarding farinaceous gruels. In a certain percentage of cases, a milk diet is but poorly borne, and at best soon becomes tiresome. A discriminate use of carefully prepared farinaceous gruel goes far to supply the need in these cases, and probably are of more dietetic value than the great majority of meat broths, which, in nutritive value, are little more than a saline solution, with some gelatine and extractive matters. Stomeyer feeds his typhoid fever patients largely with oaten grits boiled for three hours without sugar. In some forms of enteric fever, with great emaciation, farinaceous gruels are strongly indicated. They must not be given too sweet, and a little cream or lemon juice may be used instead of sugar. It is often advisable to add a tablespoonful of malt extract, or some of the prepared foods, as Mellin's, Ridge's, etc. Some object to these gruels, on the ground that they cause tympany. If this is troublesome, some of the difficulty may be removed by pre-digesting the gruel.

In many cases of fever, alcohol is very valuable as a food. It enters the system and becomes oxidized, and in this way saves the tissues. Its need in the early stages of fevers is not to be compared with its needs in the latter part, and its use in the early stages as a routine practice is much to be discouraged.

Thompson speaks of it in the following terms: "In all

complications which threaten life, such as severe haemorrhage, sudden cardiac dilatation, hyperpyrexia (107 degrees Fahrenheit), pneumonia, or uncontrollable diarrhoea, alcohol must be given without stint." Alcohol, and in fact all foods, in acute cases need to be ordered and prepared with much discretion, and by close observation and attention to each individual patient, the physician may score many a brilliant success where poor nourishment would have ensured failure.

In chronic diseases the diet differs very largely with each affection. In order to prescribe a dietary for a patient, a careful analysis of the condition present will suggest the requisite elements to remedy it. On comparing the foods having the necessary elements, a selection should be made with some regard to the occupation of the patient. If the patient is an educated person, and has been following a sedentary life, using his mind more than his body, a selection of foods having a large proportion of phosphates is advisable. If the patient is a laboring man, with muscles developed more than nervous matter, foods rich in nitrogenous material will more readily regenerate. If the patient is a young, poorly nourished child, with a nervous, irritable disposition, and a suspicion of rickets, a diet rich in phosphates is indicated.

To the delicate neurasthenic lady, who has never developed her muscular system, and who is not called upon to resist cold, the nitrates and carbonates are not so necessary as to the convalescent school boy who is preparing for his athletic games, to be indulged in regardless of heat or cold.

I dare say that it would be consoling to the school boy to know that his overpowering appetite for all sweets is not a pernicious one, but a lusty call of nature for one of the most available force producers.

In prescribing a course of diet, it is well to give as large a variety as the case will allow. In some chronic cases, such as diabetes and nephritis, the diet is unfortunately so limited that it must inevitably become tiresome. Some small variety can be gained in these cases by varying the form of preparing the food, introducing new flavorings, etc. In private practice it is almost impossible to carry out to a satisfactory termination many of the reputed diet cures for various diseases, such as the various "milk cures," "whey cure," "Koumiss cure," "grape cure," etc. Not a small factor in these cures is the change of climate and other

helpful changes which usually accompany a course of treatment.

It is refreshing to see that in the most advanced training schools for nurses, special attention is given to the culinary department. Nurses are thoroughly trained in the methods of preparing these various foods, and consequently eliminate any chance of serving their patients with food that will aggravate their trouble rather than nourish them. This is a step in the right direction, which I hope will soon be followed by the establishment of a chair of Dietetics in our universities. To-day the student is instructed in the elaborate methods of preparing tinctures and fluid extracts, and all the million and one drugs of which he is unable to remember even the names, and yet his course of instruction as to the value and action of the various foods is meagre in the extreme. He is not asked to write the formula or directions for preparing any special food; he has never prepared these foods himself, and for all the assistance derived from his medical studies he could not even say whether a food was properly prepared for his patient or not.

To the physician an exact knowledge of foods is the key to success in many cases; to the anxious mother, striving to prepare some tasty morsel, each fresh hint from the physician is seized with gratitude, and forms a further bond of union; and as to the sick, who can measure their joy at the appearance of some fresh article of food to their limited bill or fare?

TWO CASES OF TUBAL PREGNANCY SUCCESSFULLY TREATED BY OPERATION.*

By FRANK R. ENGLAND, M.D.,
Professor of Surgery, Bishop's College; Surgeon Western Hospital.

Mr. President and Gentlemen—Ectopic gestation is by no means uncommon; cases are reported frequently in medical journals, and during the past two years a number have been brought before this Society; nevertheless, they are so important that it is our duty to record, at least briefly, every case. The two cases which I bring before you will, I trust, contribute something to aid in the early recognition of this unnatural and grave condition, and if they do I am content,

* Read before Montreal Medico-Chirurgical Society, 1st May, 1896.

for any advance in the treatment must arise, not from new methods, but from recognizing early, certain well known symptoms which are so characteristic of extra-uterine foetation. When one is able, by the clinical history and symptoms, to diagnose, and diagnose early, "tubal pregnancy," say at the fourth or sixth week, the treatment will be satisfactory, even if a rupture of the tube has occurred, and a considerable quantity of blood flowed into the broad ligament, or into the peritoneal cavity. An abdominal section is not a difficult matter, and is a comparatively safe operation nowadays, in competent hands.

Asepsis is of the utmost importance, and must always be secured, if our treatment is to be successful. The peritoneum must be protected against every possible source of infection. Everything which comes in contact with the field of operation must be sterile, for this is our safeguard against inflammation. Peritonitis is invariably due to the action of micro-organisms; we therefore exclude them from the cavity, and expect rapid healing without inflammation and without suppuration. A patient may lose a great deal of blood; be almost pulseless, yet, by the aid of stimulants, heat and the intra-venous injection of normal saline solution, recover, so long as peritonitis can be prevented.

Case 1.—Mrs. W. S., aged 43, married, the mother of two children, the oldest is 13 and the youngest 9 years. Until her first child was born she enjoyed the best of health. Between the births she had a number of miscarriages. The second puerperium was prolonged, and convalescence slow. She suffered after the birth from what was called inflammation of the ovaries and milk-leg. During the past nine years she has led an active life, and her health has been good until about a year ago, when I attended her for a severe attack of measles, followed by thrombosis of the left femoral vein, the same limb which before had been affected. Since the birth of her second child menstruation has been regular every month till December, 1895, in which month she was twice unwell, the flow ceasing the last time on the 25th.

In January, menstruation did not appear, though some abdominal pain was complained of at the end of the month. On the 12th of February she was suddenly seized with severe abdominal pain and weakness; no pallor was noticed nor did fainting occur. The pain lasted about two hours.

The three following days she was able to perform her household duties. On February 15th the pain suddenly returned with increased severity; a physician was called in and an anodyne prescribed. On the 17th February she was up and about, and on the 18th went down town; while shopping the pain returned, compelling her to leave the store and go home. On the 19th February I was sent for late in the evening. Found patient in bed suffering abdominal pain, which had been constant since the previous day, and at times was very severe. The pain—bearing down in character—was during the exacerbations reflected from the lower zone of the abdomen to the rectum. There was much tympanites, and the parietal muscles were tense and rigid; over the right iliac region the tenderness was most marked, and an indistinct tumor could be made out. The uterus was enlarged, tender to the touch, movable, the os patulous and dilated, admitting the finger; posteriorly and to the right an indefinite mass could be felt which was acutely painful on the slightest pressure. Temperature, 99 degrees Fahrenheit; pulse, 98. There had been no chill and no vomiting. The case was discussed with Dr. J. J. Ross, and a diagnosis of intra-peritoneal haemorrhage made, due in all probability to ectopic gestation, with rupture occurring at about the sixth week. Morphia and rest were prescribed for the night.

On the 20th February the patient passed a bad night, the pain and tenderness continuing, and was made more severe by any movement of the body. The face and lips looked paler than on the previous day; abdominal distention persists, and when the body is inclined to either side a dull percussion note is heard over the dependent flank, and extending forward nearly to the umbilicus. When the patient is turned from one side to the other for a change, a minute or two is required in this position for the dullness to occur. Temperature, 98 1-2 degrees Fahrenheit; pulse, 126.

The low temperature, rapid pulse, anxious expression, increasing pallor and great weakness, made immediate operation imperative. The patient was removed to the Western Hospital, and at 5.30 p.m. an abdominal section was performed, Drs. Perrigo and A. L. Smith assisting at the operation. On opening the abdomen (four-inch median incision), dark-colored fluid blood flowed freely from the peritoneal cavity; to prevent further bleeding, the right ovarian artery

was promptly secured with clamp forceps; the appendages were isolated; the pedicles transfixed and tied off in the usual way; the firm coagula which filled the cavity of the pelvis were then broken up and washed out by copious irrigation with normal saline solution (na.cl. grs. 45 to 17 ounces); finally the cavity was mopped out with gauze sponges, leaving it as dry as possible, and the incision closed. Her condition after the operation was extremely bad; ten ounces of normal saline solution was introduced into the median basilic vein, and a hypodermic given of morph. gr. 1-4, atrop. 1-120, also 1-20 strych. The patient was placed in bed and surrounded with blankets and hot water bottles. She came out of the anaesthetic quietly, but vomited a little several times.

February 21. Patient feeling comfortable, though very pale and weak; pulse, 116 degrees; temperature at 8 p.m., 100 1-5 deg. Fahrenheit; bowels moved slightly, and a good deal of flatus passed; no further vomiting.

February 22. Patient has had a fairly good night, sleeping about three hours in all.

February 23. Patient feeling much better and stronger; bowels moved well; taking milk and soda, tea and biscuits.

From this time on nothing worthy of note occurred; convalescence was rapid, and recovery uninterrupted and complete. The patient left the hospital four weeks after admission.

Case 2.—Mrs. S., 39 years, married, the mother of one child; menstruation began at 16 years; as a girl she was always well and regular; she was married at 20 years; twelve months later her child was born; a midwife was in attendance; her recovery was thought to be satisfactory, and she was up and about in ten days. Five years later she suffered from some uterine trouble, and was in Dr. William Gardner's ward in the Montreal General Hospital for four months. After this treatment she remained well until four years ago, when she again suffered from so-called "inflammation of the womb." Her menstrual function was regular until the 1st of March, when she missed a period. April 1st she complained of abdominal pains, and morning sickness. April 5th the pain became very severe, the face pale and great weakness, but not amounting to fainting. Dr. Springle was sent for; he diagnosed the case as one of tubal pregnancy; absolute rest in bed was prescribed. April 9th an operation

was thought advisable, when she was removed to the Western Hospital and admitted under my care. On the following day a laparotomy was performed. The peritoneal cavity was filled with liquid blood and coagula, both appendages were found diseased, and removed. Pregnancy, with rupture, had occurred in the right tube. The left ovary and tube were firmly glued together and fixed by adhesions in the pelvis. The cavity was thoroughly flushed out with saline solution, and the abdominal wound closed. The patient's condition on leaving the table was good, and her recovery was rapid and uninterrupted. The pulse at any time after the operation did not number more than 80 per minute, and the temperature did not reach a point above 99 degrees Fahrenheit. She was up and about the ward at the end of three weeks. A few days later she returned to her home, feeling as well as ever.

An abdominal bandage was advised to be worn for some time as a precautionary measure against hernia.

Selected Articles.

By J. EDWARD SQUIRE, M.D., M.R.C.P., D.P.H.,
Physician to the North London Hospital for Consumption, etc.

THE THERAPEUTIC STATUS OF TETANUS ANTITOXIN.

Whenever a new therapeutic effort is made which is based on apparently rational views, it is our duty to encourage it in every way possible, although we should at the same time regard it with judicial doubt until its success is proved. In none of the recent advances is this more the case than in respect to tetanus antitoxin. In the first place, the comparative rarity of the disease in man provides us with clinical studies few and far between; and, in the second place, the statistics as to recovery are imperfect, in that, roughly speaking, in the form of an Irish bull, all cases of tetanus under the old methods of treatment either died or got well. That is to say, the severely infected cases died, do what we could, and the mild or chronic cases, in which death did not ensue in a few days, persistently recovered, in the face of treatment which must in times past have seriously hampered their chances. It is a notorious fact that chronic tetanus is very apt to recover, and until this class of cases is separated from the severe forms in the statistics of antitoxin treatment, we can learn little that is permanent or positive.

Mawson has collected (*Lancet*, August 10, 1895) thirty-eight cases, published and unpublished, upon this subject, and points out the facts we have endeavored to express.

	Recov- eries.	Deaths.
Total number of cases collected, 38, including cases that are only mentioned as having been treated, no further particulars being given....	25	13
Number of cases treated, of which particulars are given, 22.....	17	5
Number of cases treated, of which particulars are given, and which were regarded by their recorders as "severe," 9.....	5	4
Ditto, "not severe," 13.....	12	1

He thinks that the average mortality of tetanus in chronic cases may be regarded as fifty per cent., and in acute or severe cases as ninety per cent., and he has arranged in the four following groups all the recorded cases of treatment of tetanus by immunized serum. Of the thirty-eight cases collected, only twenty-two

were fully reported ; they fall under their respective heads as follows: (1) cases in which the symptoms commenced to abate immediately after injection, and then steadily disappeared, nine ; (2) those which remained *in statu quo* for a short time after injection, and then gradually improved, six ; (3) those in which no further muscles became involved in spasms after commencement of treatment, though occasionally an aggravation of certain other symptoms (as trismus and difficulty in swallowing) occurred, two ; and (4) those ending fatally, notwithstanding treatment, five. Space does not permit of a detailed notice of the cases, but, in spite of the unfavorable result of the case treated in the Staffordshire General Infirmary, he has come to the following conclusion : there is no doubt that the antitoxic serum has a favorable effect in certain cases of tetanus, and those not always of the mildest form. This serum may be justly called a remedy for the disease of such importance that up to the present time no other method of treatment can bear comparison with it. Mawson thinks, therefore, that the antitoxin serum is destined considerably to decrease the mortality in tetanic cases.

Washbourne also calls attention in the *British Medical Journal* to Kantnach's statistic in the *Medical Chronicle*, and from these it would appear that the treatment is useless in acute cases with a short incubation period and rapid onset of spasms, while the chronic cases, with long incubation period and slow onset of spasms, often recover ; but this latter class of cases frequently do well with other methods of treatment. A definite opinion cannot be formed until a much more extensive trial has been given to the remedy. It must be remembered that in tetanus there is no characteristic lesion at the spot of infection, and a diagnosis is only arrived at when the disease is far advanced ; consequently, treatment is commenced at a late stage, and analogy with the experiments conducted upon animals renders the prospect of success not very hopeful.

Further instructive information on this topic is presented by Howlett, who tells us in the *British Medical Journal* that, although it is very difficult to arrive at an accurate idea of the proportion of cases which pass to a fatal issue, he has, by careful comparison of the statistics from various sources, come to the conclusion that the mortality may be stated at somewhere about seventy-five per cent. Now, as to the antitoxin treatment, Howlett, collected statistics of sixty-one cases treated with antitoxin, with twenty-two deaths, giving a mortality of only thirty-six per cent. There are however, several fallacies to be guarded against. There is always a tendency to publish successful cases only. Although it is stated that the Italians have suppressed fatal cases, we do not think that this source of error would materially influence the result, for, being a new treatment, it is probable that the greater number of cases have been published. There are, however, other fallacies, notably: (1) that a favorable result was independent of the antitoxin

treatment; and (2) that a number of chronic cases, which tend to recover under the old treatment, make up the apparent successes. He then goes on to say that the antitoxin issued by Tizzoni differs from the others in that it is obtained by precipitation of the serum by means of alcohol; in the other cases the serum is issued either in the usual liquid form, or is reduced to a solid by being dried *in vacuo* over sulphuric acid. All these antitoxins possess a very high immunizing power; this should never be less than 1 to 1,000,000, and Roux has succeeded in getting it much more powerful still.—*Therapeutic Gazette*.

HEREDITY IN RELATION TO INSANITY AND IDIOCY.

The opinion that a neurotic inheritance is the chief predisposing cause to insanity is now very generally held. Some alienists are disposed to go even further, and declare that it is mainly to the original constitution of the brain that we must look for the first and chief cause of mental breakdown, the ordinarily assigned causes being none of them, in themselves, sufficient to bring on insanity. It can scarcely be called into question that what is called rather indefinitely "the neurotic inheritance" does render the brain more liable to be affected by such proximate causes; and the belief is now general that, whether we can discover the fact of such inheritance by outward and visible sign or not, its existence and evil influence are indisputable. Indeed, the opinion has by a recent writer been rather dogmatically expressed in the statement that "the condition common to all mental disturbance is to be sought in inherited and inherent brain-defect." This is exclusive of the forms known as septic or toxic insanity and those instances of aberration of mind symptomatic of cerebral exhaustion, traumatism, and other pathologic lesions.

In view of the present etiologic importance assumed by this neurotic inheritance, or hereditary predisposition, it would be well to define this condition and determine its definite relationship to insanity and idiocy. The views of a distinguished German alienist are pertinent to this consideration, and may be briefly quoted. In the preface to his work on Psychiatry, Prof. Theodor Meynert expresses dissatisfaction with the statistical method, which, in his opinion, has laid inordinate stress upon hereditary predisposition, and which broadly teaches that predisposition itself is a form of disease and not a condition antecedent to it. Nor is he content to accept what he terms the "mystical conception of heredity," but he insists upon certain anatomic peculiarities in patients which constitute this predisposition. The existence of such peculiarities is to be inferred not only from symptoms and external signs, but also from due consideration of all abnormal proportions of the body. The doctrine of heredity,

according to Meynert, is carried to an extreme in the assumption of the existence of innate ideas, and, in clinical medicine, has led to the erroneous theory of moral insanity. With DuBois Reymond and Weissman, he criticizes Darwin's theory of acquired faculties, and quotes approvingly Weissman's words: "Talents do not depend upon the possession of any special portion of the brain; there is nothing simple about them, but they are combinations of many widely different psychical faculties." At the same time, Meynert fully recognizes the possibility of an abuse of the doctrine of inherited anatomic peculiarities and of hereditary predisposition, even from the standpoint of actual fault of organization as its tangible basis, on account of the constant suspicion of mental defect attaching thereto. But he reminds thinking physicians that they may avoid this danger by distinguishing between the many who are possibly called to disease and that fortunately smaller number of persons who are, in the saddest sense of the term, chosen for disease.

The following conclusions upon this subject have been formulated at our request by Dr. John B. Chapin, a distinguished American authority, now in charge of the Pennsylvania Hospital for the Insane at Philadelphia:

1. Physical characteristics, those distinguishing the human species, for instance, are transmissible by inheritance.
2. Knowledge, genius, culture, being dependent on the influences of education and environment upon the individual, are not transmissible; but what may be termed mental receptivity, and degrees of cerebral evolution and development, may be inherited. Psychic qualities are not necessarily an inheritance, as they require favorable surroundings and circumstances for their growth and development.
3. Insanity, as a disease, is not transmissible by inheritance, but may be acquired or evolved, especially where a neurotic heredity exists as a basis.
4. A neurotic predisposition is transmissible by inheritance; but there is no absolute rule that it will be transmitted in every case.
5. As regards the formation of a neurotic heredity, the inbreeding of neurotic temperaments is most conducive to its creation.
6. Idiocy and imbecility may be the resultant of certain defects having origin in consanguineous marriages; in pre-natal conditions, accidents, arrested cerebral development, infantile meningitis, tuberculosis, and lack of potency on the part of one or both of the parents from unexplained causes.

Premature closure of the sutures in the cranial vault has also been recognized as a cause of imbecility, and for the relief of this condition linear craniectomy has been proposed and performed, without, however, a gratifying amount of success. Indeed, Bourville asserts that the theory of Lannelongue in regard to

craniotomy in microcephalus has no anatomic and physiologic basis, in fact, and that the operation should be banished from the list of justifiable surgical procedures. It is clear that a distinction is to be made between those microcephalic cases in which there is premature synostosis with arrest of cerebral development, and those in which the head is small because the brain itself is small. Among the unexplained causes of lack of potency on the part of one or both parents, alcohol may be placed, according to very prevalent popular belief. Not only may the mental endowment of the child be unfavorably influenced by acute alcoholism at the time of conception, but also the cerebral changes and nerve degeneration, and inflammation, resulting from chronic alcoholism, are distinctly prejudicial from the standpoint of heredity.

To broach the topics of degeneration and atavism would take us beyond the limits of the present article, although they are closely related to the subject of the relation of heredity to insanity and idiocy. But to sum up the foregoing, it is evident that Meynert recognizes an anatomic peculiarity, which may or may not manifest itself by symptoms of aberration. Chapin holds that neurotic instability may be transmitted by inheritance, yet it is capable of exerting only a potential influence in the later development of mental disorder, which may be evoked by social condition, environment, or pathologic changes in the cerebral cortex. Imbecility and idiocy, however, may directly result from defective cerebral development or pre-natal disease.

The whole subject of the etiology of insanity is a complex and difficult one, and, as pointed out by Holland some fifty years ago in his "Medical Notes and Reflections," it is rendered more abstruse by the fact that the pathologic change may be so minute as to defy the search of the pathologist, although sufficient to produce disturbance of intellection, while, on the other hand, great organic changes in the brain are not incompatible with the occurrence of a lucid interval, which, if we are not on our guard, may lead us to entertain false hopes of recovery.—*The Journal*.

CHRONIC DYSPEPSIA IN CHILDREN.

By J. WALTER CARR, M.D., M.R.C.P. Lond., F.R.C.S. Eng.,

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In *American Journal of the Medical Sciences*, December, 1895.)

Everyone recognizes dyspepsia in adults in its protean and omnipresent forms, every medical man knows its importance in infancy in association with errors of diet; but between these two periods of life is one in which its frequency and the varied symptoms it produces are perhaps less commonly realized, although possibly it is hardly less prevalent than in adult life, and scarcely less important than in infancy. Childhood—especially boyhood—

is a period when the digestive and assimilative powers are supposed to be at their maximum, when the capacity for taking food—and even that which can hardly be termed food—with impunity seems to be almost unlimited, or when at most a sharp but transient attack of gastritis or gastro-enteritis, with pain, diarrhoea, and vomiting, seems to be the only penalty for even the most apparently outrageous violations of the ordinary laws of digestion. True, during the stage of rapid growth and development, the ingestion of a large quantity of nourishment is essential, and digestion and assimilation must needs go hand in hand with appetite, but because the functional activity of the alimentary canal is great, it does not follow that its work must always be properly performed in face of all difficulties; nay, rather, the more active the digestive mechanism, the more readily are those activities deranged, just as a rapidly moving body will be turned by an obstacle further from its course than a slowly moving one; or just as a complicated machine, capable of a great output of work, may be more easily and seriously damaged by a slight injury than a less efficient but simpler instrument.

We need, moreover, to recollect that digestive disturbances must necessarily be more important in their consequences during childhood—the period of development—than in adult life, for in the latter case adequate repair is alone interfered with; in the former, not repair only, but also growth. In fact, the activity of the process in early life is a measure of the harm likely to result from any interference with it. In adults, dyspepsia is a frequent result of overfeeding, and may be a natural protection from more serious consequences; how many pay in gout the penalty for too good a digestion? In children, on the other hand, excessive feeding is rarely a cause of much harm, the punishment, instead of being deferred, comes at once, and an acute attack of vomiting is the usual penalty for and cure of a surfeit; improper food is more likely to be the cause of chronic digestive trouble, and there is no compensation for the resultant mischief, no protection from other evils.

Another point to bear in mind, especially in treatment, is that—in accordance with the general rule that all abnormal conditions in childhood are less localized than in adults—the intestines are generally affected along with and in the same way as the stomach, so that, though we speak as a rule of chronic gastric catarrh, it would be more correct to term it chronic gastro-enteritis.

Etiology.—In considering the causation of dyspepsia, we need, of course, to remember that there is usually more than one factor present, but I think that not in childhood only, but also in infancy and adult life, we do not lay sufficient stress upon the influence of heredity as a very frequent predisposing cause. Even some babies will thrive upon what appears an eminently unsuitable diet, whilst others, as well or even more favorably circumstanced in other respects, fail to digest even the most carefully selected and pre-

pared food ; the same differences exist in childhood, differences only explicable by hereditary or congenital defects, and hence some children always require infinitely more care than others in regard to their food.

A second great cause of dyspepsia, one which is, if possible even more potent than in adult life, is town life and indoor life because children even more readily than their seniors suffer from unhygienic surroundings. In this connection it seems probable that universal compulsory education, by keeping children together indoors from a very early age, during the lightest hours of the day, and often in badly-ventilated buildings, must largely increase the prevalence of digestive disturbance. Much of the dyspepsia arising from these causes is, of course, a part merely of general debility and anæmia, all the organs perform their functions badly, and those of digestion are naturally as much, if not more, affected than others.

The third cause, and certainly the great exciting one, is improper feeding—irregular meals, odd things between meals, tea, sweets, pastry, cakes, etc., and an excess of carbohydrates, particularly of potatoes, all tend to produce and maintain digestive disturbance.

Besides these three great factors there are several other important though less frequent causes of dyspepsia ; it is a common sequel of the acute specifics, especially of measles, that diseases of the respiratory mucous membrane follow measles is well known, but its after-effects on the gastro-intestinal tract, though probably more frequent and hardly less important, are not, I think, sufficiently recognized. Nothing is more common than for the convalescence in this disease to be retarded or incomplete owing to gastro-intestinal catarrh, which may be very persistent.,

(Throughout childhood, in fact, the respiratory and gastro-intestinal mucous membrane are much more closely connected pathologically than in later life ; in the acute bronchitis of adults the tongue is usually furred out of all proportion to the amount of fever, but in children this conjunction is much more marked, and hence in early life diarrhœa is a frequent attendant upon bronchitis and broncho-pneumonia.)

Chills, from the clothing being insufficient, or, as is more frequent, improperly distributed, are an important cause of dyspepsia in childhood, though less so probably than in infancy.

The condition of the teeth as another possible factor is even more often overlooked in children than in adults, but the possibility of painful decayed teeth preventing the proper mastication of the food should not be forgotten ; and in this connection may be mentioned also the inveterate habit which some children have of bolting their food.

So frequent is dyspepsia from one or other of these causes that, in the ordinary routine of hospital out-patient work among children of say from two to ten years of age, a very large proportion—if not the majority—of the cases are brought for digestive disturbances or their consequences.

SYMPTOMS.—The symptoms of dyspepsia in childhood are both local or direct, and reflex or indirect, and differ widely from those met with in adults. We will take the direct symptoms first : the appetite is capricious and irregular, there being often a craving for unsuitable articles of diet, with distaste for more wholesome but plainer food ; hence follows one of the most important symptoms, viz., wasting ; simple dyspepsia in adults is rarely associated with much wasting ; in children it is necessarily different, for the anorexia at a period of rapid growth must necessarily markedly affect nutrition ; at the same time the child is usually pale, irritable and listless, taking little or no interest either in its play or its work.

The tongue is commonly furred with prominent papillæ, and often presents the curious irregular patchy distribution of furred and overclean areas, sometimes termed the mapped or geographical tongue. The bowels are generally costive, but may be irregular, especially in younger children, constipation and diarrhœa tending to alternate. The abdomen is usually distended, and this is the more noticeable owing to the natural prominence of the belly in children from the small pelvic development. Pain, referable either to the stomach or bowels, may be complained of, but is seldom severe in chronic cases.

But besides the direct symptoms, there are others which illustrate very markedly the reflex consequences, which in children so readily result from irritation of any organ, and especially of the stomach, and which, unless rightly interpreted, may be a cause of much trouble in diagnosis and treatment. Headache particularly in the morning, is a very usual symptom, also grinding of the teeth ; night terrors may occur in neurotic, excitable children, and may be wrongly and ineffectually treated unless their true cause be understood. Syncopal attacks may undoubtedly be due to dyspeptic conditions, although the possibility of *petit mal* must not be overlooked. A dry, hacking cough is by no means rare, and its significance is frequently misinterpreted. Hensch has pointed out that serious asthmatic symptoms—with cyanosis and rapid breathing—may be due entirely to irritation of the nerves of the stomach in gastric catarrh. Of course more acute gastrointestinal attacks, with severe pain, vomiting and diarrhœa, and often exaggerated reflex symptoms, are particularly apt to supervene in children who already suffer from chronic gastro-enteritis.

DIAGNOSIS.—At times this is clear enough, the local symptoms—loss of appetite, furred tongue, and constipation, with markedly unsuitable diet and defective hygienic surroundings—sufficiently indicate both the disease and its cure, but in many instances there are few conditions which give rise to greater difficulty in diagnosis than that of chronic dyspepsia. The child is brought, perhaps, with a history of wasting and persistent cough ; the parents naturally suspect consumption ; a physical examination yields somewhat equivocal results, owing to the distinct

bronchial breathing heard in a child in the upper interscapular region, over the large bronchi, and especially on the right side. Even if we exclude pulmonary tuberculosis, we naturally think of the possibility of that well-nigh undiagnosable condition, early caseation of the bronchial or the mesenteric glands, and the difficulty is increased by finding, as we often do, that the evening temperature is generally somewhat above normal, whilst the nervous symptoms may excite a suspicion of commencing tubercular meningitis. In many such cases only time and the results of a carefully regulated dietary will clear up the diagnosis, but oft-times, unfortunately, under the mistaken apprehension of incipient tuberculosis, the child is dosed by the parents, and frequently by the medical man, with cod-liver oil, "chemical food," syrups, etc., as well as with a supposed nourishing diet—a line of treatment which only aggravates in the highest degree the real malady.

Next, perhaps, to consumption the most frequent parental diagnosis is that of worms, and, indeed, they are often present, especially thread worms, but to regard them as a cause of the symptoms is a reversal of the true state of affairs; we need more and more to try and impress upon the public mind that intestinal worms (excluding perhaps tape-worms) exist in the alimentary canal because it is in an unhealthy condition—in a state usually of chronic catarrh—and that the symptoms which they are supposed to produce are, as a rule, not due to worms at all, but to the catarrhal state of the bowel which permits their existence. Worms are, in fact, to a large extent a symptom rather than a disease, and we shall best get permanently rid of them by treating the abnormal condition of the intestines.

On the other hand, we have to beware of the danger of mistaking for mere dyspepsia, especially in children who are known to be subject to it, the early stages of tubercular diseases or of typhoid fever, a slight but persistent tonsillitis, of which the child may make no complaint, or a chronic rheumatic condition with very little joint trouble, a by no means rare occurrence in early life.

TREATMENT.—The first and most important step is, of course, to recognize the true cause of the varied symptoms for which the child may be brought; it is so easy to get into the habit of treating worms, night-terrors, cough, constipation, etc., purely symptomatically; but the most frequent and serious error is to regard the case as one simply of anæmia and debility, or else of threatened tuberculosis, to be treated by tonics—cod-liver oil, "chemical food," iron, etc.—and by feeding up, both with unsuitable food and at too frequent intervals, with the result of increasing and perpetuating the already existing digestive disturbance. Even in cases in which tonics will eventually be needed, they must not be given until the alimentary canal is in a fairly healthy condition, or they will do more harm than good.

In the great majority of cases the first point to which to attend is careful regulation of the diet; the food should be given at regular intervals, and nothing between meals, tea should be forbidden, and all cakes, buns, biscuits, sweets, jams, pastry, etc., these being the more pernicious because often given at odd times to tempt, as is supposed, a poor appetite. Potatoes should be allowed in very small quantity only. On the other hand, we may recommend an ordinary meal of fresh meat once a day, about noon, with green vegetables and a milk-pudding after. For the other meals, fresh fish, porridge, bread and butter, eggs, fruit, and milk in abundance, but as a food, not a beverage. There are, of course, some children, just as there are some adults, who have idiosyncrasies in not being able to digest some special article of diet; but these peculiarities obviously cannot be considered in a general statement—each case must be dealt with on its merits. The parents will often say that children will not take the plain, wholesome diet recommended, and can only be got to eat fancy things, sweets, etc. Owing to long-continued pampering and improper feeding this may be true, but no child will starve itself to death because it cannot get just what it wants, and when it finds its whims ungratified, in default of anything else, it will soon learn to partake of a suitable dietary.

Having regulated the food, the next important matter is to insure a full and regular daily action of the bowels; even though they are said to act every day, a mild aperient is usually desirable, in order to prevent any undue retention whatever of intestinal contents, or any accumulation of mucus, which is often produced abundantly in catarrhal conditions of the bowels in childhood. If there has been constipation and the tongue is much furred, one or two grains of calomel will be useful at first, otherwise rhubarb and soda, or gray powder and soda, should be given every other night. If either round or thread worms be present, a few grains of santolin may be added to either of the above powders, and given before breakfast for three or four mornings. When convalescence is well-nigh established, half a teaspoonful or so of the compound liquorice powder forms perhaps the most suitable and agreeable habitual laxative.

Thirdly, the child should be out in the open air as much as possible. There is great danger that when, as so often happens, these dyspeptic children suffer from cough they may be kept indoors either altogether, or at least on the slightest approach of cold or damp weather; nothing could be more injurious, and the reason why in large cities the poorest class of children, for whom the street is the habitual play-ground, are often more healthy than those of a slightly higher social scale, is probably the far greater amount of at least approximately fresh air which the former get. In many cases of town-bred children, in whom the dyspepsia is a part mainly of general debility and anæmia, a change to seaside or country air is the most rapid if not the only cure.

The suitability of the clothing must, of course, be seen to ; its quantity is not, as a rule, at fault, but rather its distribution. In this respect old traditions as to hardening the skins of children die slowly, and the chest is not uncommonly enveloped in four or five layers of flannel, whilst the arms, legs and thighs are left almost entirely bare.

Last, and in many respects least, we come to drugs: A combination of bicarbonate of soda (7 grains), tincture of rhubarb (20 minims), tincture of nux vomica and spirit of chloroform (4 minims of each), may be given to a child of five years three times a day, about half an hour before meals, and if anæmia be very marked 2 grains of citrate of iron and ammonia may be added. After food, if the tongue be not much furred, one or two teaspoonfuls of maltine may be given twice a day. In the later stages, when the dyspeptic symptoms are much improved, a mixture of liquor strychninæ (2 minims), with two or three teaspoonfuls of vinum ferri citratis, is useful. Cod-liver oil is best avoided, except in the winter months and when convalescence is quite established ; probably all "chemical foods" and tonic syrups are injurious, owing to the sugar they contain causing fermentation and flatulence. If the nervous symptoms, such as night-terrors, are prominent, some bromide of potassium may be given with the other drugs mentioned ; but such symptoms should never be treated by nerve sedatives only.

Finally, as an additional incentive to the prompt and active treatment of these cases of chronic dyspepsia, we should remember that if long continued, it must lead to enlargement of the Peyer's patches and mesenteric glands, a condition which facilitates in the highest degree the lodgment of any tubercle bacilli which may be taken in the food, a lodgment which is still further promoted by the lowered general vitality in these cases ; thus chronic gastro-enteritis becomes an important predisposing cause—first of abdominal, and eventually, perhaps, of general tuberculosis.

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

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LEUCOMAINE POISONING.

B. K. Rachford, M.D., of Cincinnati, Ohio, in "The Medical News," May 16, 1896, communicates an article on this subject. In a paper read by him a year ago before the Association of American Physicians, Washington, he presented evidence to show that leucomaine poisoning was an important phase of auto-intoxication, which may manifest itself as (1) leucomaine headache (true migraine); (2) leucomaine epilepsy (migrainous epilepsy); (3) leucomaine gastro-neurosis. The present paper describes another type, leucomaine asthma. The attacks are similar to the ordinary bronchial asthma, and come on in the early morning hours. The urine contains an excess of paraxanthin and other leucomaines of the uric acid type which are produced in excess. The condition, however, in all the types being produced by paraxanthin rather than by xanthin or heteroxanthin. He thinks that the convulsion seizures of chronic alcoholism, and the delirium tremens symptoms, are due to a similar cause, and also the paroxysmal headaches, the epileptoid convulsions, the gastro-intestinal attacks and the dyspnoea, which so much resemble the symptoms observed in marked gout. He quotes Naunyn as saying that lead like alcohol produces these effects, not as a direct poison, but indirectly, in consequence of abnormal nutrition of the whole system brought about by the continued circulation of a foreign poisonous material in the blood. Cases are given illustrating this perverted metabolism where paraxanthin was demonstrated in one quart of urine; according to Salomon, it can only be demonstrated in nine litres of normal urine; its presence is demonstrated by chemical tests, and the production of paraxanthin poisoning in a mouse, in which a clonic convulsion later becoming tetanic, is a marked feature. In the examination of a number of urines, he found, in regard to xanthin and paraxanthin, that when either was abundant, the other was to the same extent absent. In the closing note of his paper he produces evidence pointing to the fact that paraxanthin poisoning has something to do with the symptoms observed in uraemia.

THE CONSIDERATION OF UREA IN THE URINE.

This is the title of a paper by Dr. James Dudley, Morgan, Washington, in the "Virginia Medical Semi-Monthly," April, 1896. He animadverts upon the disproportion observed by him between the active symptoms and the marked diminution of urea in the urine in certain diseases. Cases are reported of fifteen grains of urea in twenty-four hours, with no symptoms of retention. He believes with Schultze and others, that the excretion of uric acid is a fairly constant quantity, while urea has a wide range of variation, contrary to Haig, who considers that a constant proportion is maintained of 1 to 33 of urea. The other constituents of normal urine, such as allantoin, creatinine, and the uric acid leucomaines, are usually diminished in the same proportion. Some of these latter are poisonous, such as paraxanthin, xanthin and gerontin; and xanthin creatinine, uric acid paraxanthin and xanthin have been found in increased quantities after attacks of migraine and epilepsy. Uric acid and other xanthin bases are also secreted from the intestinal mucous membrane. Variation in the quantity of urea secreted constitutes an expression of the changes in nitrogenous metabolism, which may depend on the amount of food taken, or on certain diseases. Urea is claimed by some to be non-toxic, and a diuretic, hence its deficiency means diminished excretion of the poisonous constituents of urine. Urea and uric acid are formed chiefly in the liver, but the poisonous constituents are the bile salts.

GENERAL TREATMENT OF ANÆMIAS.

There is no disease in which therapeutics may become more perfunctory or routine than in the different forms of anaemia. All varieties except pernicious anaemias are apt to improve under iron, in whatever form it is given, and the variation in the methods of treatment in common use is chiefly between the different preparations of iron, especially between the organic and inorganic. Many obstinate cases would probably yield much sooner if a clearer understanding of the causes of anaemia were attained.

Three conditions are present in the majority of anaemias: first, gastro-intestinal disturbance, with imperfect digestion, assimilation and excretion of food, producing some form of ptomaine-poisoning, or intoxication, which causes marked changes in the blood; second, failure in the action of the liver, which is the most important agent in checking the activity of the poisonous elements absorbed from the intestinal canal, and in preventing these elements from entering the general circulation; third, the uric-acid diathesis, which is closely associated with most marked gastro-intestinal troubles, and produces more or less decided blood altera-

tions. These three agents are intimately connected with nearly all cases of anaemia, and due attention should in every case be shown to their influence upon the symptoms.

If any of the occasional causes of anaemia be present, such as gastric ulcer, hemorrhages of any kind, or poisoning by malaria, syphilis, tuberculosis, lead, or uraemia, no headway will be made in curing the patient until these are first properly treated by appropriate drugs.

To produce the most satisfactory results in treating anaemia it is necessary to follow closely the mechanism of blood-reproduction after any of the diseases affecting the red blood-cells. This takes place largely through the agency of the red bone-marrow. As the only drug which acts directly on the metabolism of bone and marrow is phosphorus, it would seem a very important addition to our means of treating anaemia from any cause.

It should be given in a pill containing phosphorous, or in the palatable elixir phosphori N. F. (1.64 grn. in each fl. dram). If hypophosphites are used, Ringer says that they should never be combined in the same prescription with cod-liver oil or alcohol.

To hasten the production of new red blood-cells, a preparation of bone-marrow has been proved to be valuable, either in the form of raw freshly extracted marrow from the bones of young lambs or calves, spread on bread or in the more permanent form of a glycerin extract. W. G. Thompson, however, regards marrow as merely an assimilable form of fat, and rather doubts the specific action on human bone-marrow and red blood-cells. There is only about 1.56 grn. of iron to an ounce of marrow, so that its favorable action is not due to the iron contained in it; but such excellent results have been obtained by it that, whether regarded as a food or a drug, it should be faithfully used.

In the diet, milk should be given in large amounts, frequently repeated during the day, for the amount of fluid in the circulation is frequently far too small and the capacity of the heart and vessels correspondingly reduced.

If milk is not well borne, a mixture of cream and hot water, with a little bicarbonate of soda and brandy in each glass, is the best substitute. Free use of cream and butter may take the place of cod-liver oil in supplying the fat which is needed in most cases.

The extent to which carbohydrates are to be used in the diet depends upon whether the patient is too lean or too fat.

Albumin in all cases must be increased. Rare meat two or three times a day is advisable (2-3 oz. per diem, according to Van Noorden). A careful variation in diet to suit the condition of the digestive organs and general nutrition is advisable.

There is no disease in which general massage is followed by such satisfactory results as in anaemia. Massage should

be applied to the muscles of the trunk and extremities, but more especially to the abdomen, giving particular attention to this part of the body to increase the physiological activity of the gastro-intestinal tract, the spleen and the liver. Massage properly administered will frequently cure cases of chlorosis without the use of any drugs.

Those forms of hydro-therapeutics in which bathing is followed by a prompt reaction and general stimulation of the entire system are valuable, but constant daily cold sponging or bathing must be used with great caution, lest they gradually lower the tone of the system by minute degrees. Not only cold bathing, but cold weather also, will do this. Murri and Rosenbach have made a careful study of certain types of anaemia limited to cold weather and disappearing in the summer. Either a warmer climate or some treatment that will fortify the system against cold is necessary in such cases.

Rest in bed will serve to cure many forms of anaemia without the use of drugs, and should always be insisted upon as far as possible; even the milder cases will be helped by resting in the mornings and evenings. If these general hygienic and dietetic methods, with the careful use of iron in any form that can easily be tolerated by the patient, assisted by measures affecting the gastro-intestinal system, liver, and bone-marrow, fail to affect the anaemia, the substitution of arsenic with strychnine will frequently be followed by a cure.

In many cases arsenic acts directly by its anti-malarial influence, especially in those forms of anaemia accompanying old malarial cachexias, where quinine has little effect. H. C. Wood states that the drug acts on many forms of anaemia in an indirect manner, by removing the morbid agent of the disease, and allowing the recuperative powers of the system to assert themselves. In other cases its action is due to the usual effect of arsenic upon general nutrition. Even in pernicious anaemia there is frequently observed a temporary improvement of the patient, which is coincident with an increased output of red blood-corpuscles. In many cases this temporary gain may be made permanent by following the arsenic with another course of iron, with the idea that the arsenic has removed the cause that previously made the iron ineffective. But the attempt to cure anaemia of any kind by the use of iron alone, without any of the other forms of treatment, hygienic or dietetic, is unscientific.—*American Medico-Surgical Bulletin*, May 9, 1896.

THE LEUCOCYTES IN TUBERCULOSIS.

Stein and Erbmann (*Deutsches Archiv für klin. Med.*, Bd. 56, p. 323, the "American Journal of the Medical Sciences," April, 1896) contribute a timely article on this subject. They have avoided the more serious causes of

error in previous work in the same line by using a larger number of cases—sixty in all, by making very numerous blood-counts, and by counting more leucocytes than is usually done. In many cases the clinical diagnosis was confirmed by post-mortem examination. In counting the white corpuscles a modification of the method of Thoma was used, in which, instead of counting the corpuscles in the squares of the blood-counter, all those in a number of fields were counted, after estimating the contents of the space covered by the field. For many interesting details the original should be consulted; the following conclusions give the most important results: In beginning phthisis the number of leucocytes is normal. In advanced cases, but where cavity-formation has not taken place, the number is also normal. After attacks of hæmoptysis there is usually moderate leucocytosis, which disappears after the cessation of the hemorrhage. In advanced tuberculosis with chronic infiltration, but where destruction of tissue is slight, or has not yet begun, the leucocytes may be normal. Increase of leucocytes is encountered in cases with cavity-formation; in cases with chronic suppuration as the result of carious processes; in final exudative processes; and in cases with hyperplasia of lymph-glands. As regards cavity-formation, the following statements are important: If leucocytosis occurs in a tuberculosis case in which there is no chronic suppuration and no exudation, ulcerative change, i.e., cavity-formation, may be diagnosed. If in a case with normal leucocytes for a long time an increase takes place, excavation may be concluded. As long as the leucocytes are not increased the existence of a cavity, at least one of considerable size, may be excluded. The cause of the leucocytosis is not the tuberculous poison itself, but a secondary infection, a septic process, which may be the result of various bacteria.

THE RELATION BETWEEN THE ACIDITY OF THE GASTRIC JUICE AND THE ACIDITY OF THE URINE.

Mathieu and Treheux, after reviewing the work of others on this subject, give the following conclusions as the result of their own observations:

1. There is a relation between the acidity of the gastric juice and the acidity of the urine.
2. The more acid is produced in the stomach, either from normal secretion or food-fermentation, but especially from the fermentation of milk, the more the excretion of acid by the urine, during digestion, is increased.
3. Under normal conditions the acidity of the urine diminishes considerably during the three to five hours following digestion, and later increases again. This diminution

in acidity may be preceded by a passing increase during the first hour of digestion, as if a certain amount of acid was immediately passed on with the ingested fluids and rapidly excreted.

4. As a rule, there is an almost absolute parallelism between the curves which represent the relative acidity (acidity per 1000) and the absolute quantity of acid excreted. This parallelism is wanting when a certain degree of polyuria exists after a meal; the curve of the relative acidity is then elevated, whilst that of the absolute acidity is depressed.

5. When a notable quantity of acid secretion is removed from the stomach, either by vomiting or lavage, this removal is followed by a notable diminution in the acidity of the urine. The urine may become alkaline under these conditions.

6. The average quantity of acid eliminated hourly by the urine is higher in those with increased acidity of the stomach-juice than in those with diminished acidity.

7. The ingestion of milk notably increases the quantity of acid excreted by the urine; this is due, without doubt, to the fact that milk rapidly gives rise in the stomach to the formation of a notable quantity of lactic acid, and that this acid is rapidly carried to the kidneys on account of the increased diuresis.

8. It is not yet possible to trace the curves of urinary acidity during digestion in such a manner as to be able to diagnose the chemical variety of dyspepsia present. It seems very probable that such curves cannot be traced.

9. It is necessary to exclude milk from test-meals given prior to the study of these curves. The test-meals must be identical in all cases.

10. The cases studied must be submitted to a constant regime during a sufficiently long time, as we have seen beer consumed the day previous sensibly elevate the proportion of acid found.—*Archives Générales de Médecine*, November 1895.—*American Journal of the Medical Sciences*, April 1896.

ACUTE LEUKÆMIA.

An important contribution to the study of leukaemia is made by A. Fraenkel (*Deutsches med. Wochenschrift*, 1895, Nos. 39-43, and 45, "*American Journal of the Medical Sciences*," May, 1896). He had the unusual experience of seeing ten cases of this disease within a short time. Six of the patients were males, four females. Four were between 13 and 18 years of age, six between 24 and 34 years of age. The duration of the disease varied from twenty days to sixteen weeks. Even in the cases of comparatively long duration the onset was sudden and similar to that in the more rapid ones. Hemorrhagic diathesis was an early feature. In eight cases in which examinations of the blood were

made a striking similarity was found, the condition being quite different from that in chronic leukaemia. The leukaemic character of the blood was found to be due to a great increase of mononuclear cells of various sizes, but having the structure and the staining peculiarities of lymphocytes. The larger of these have large nuclei, almost filling the body, sometimes irregular in shape, or in various stages of division. They do not stain deeply. Eosinophile and neutrophile myelocytes were not present, but basophile granulations occurred. The number of polynuclear cells was extremely small. In three cases mitoses were found, but not in all parts of the capillary system, so that Fraenkel believes that this process may occur in certain parts in which the conditions are favorable, perhaps on account of slowing of the current, as suggested by Troje. Nucleated red corpuscles were usually rare. Preparations from various organs show that the mononuclear cells are formed especially, but not exclusively, in the lymph glands. There is lymphæmia in the wide sense; the young forms of cells do not pass on into the more mature forms. The proliferation of the lymphocytes must take place with great activity, and they must soon enter the circulation, hence the clinical picture.

From the similarity of the symptoms and the condition of the blood a single etiological factor would seem probable in all the cases. The course seems to point to an infection. In two cases the absence of bacteria in the blood was demonstrated. The possibility of infection from the alimentary canal must be remembered, however, and Fraenkel shows that the early and constant implication of the cervical lymphatics suggests an invasion from the mouth or pharynx.

In two of the cases an intercurrent bacterial infection was followed by rapid decrease of the number of leucocytes, without an increase of polynuclear forms. This has also been observed by others, and Fraenkel alludes to the possibility of using such observations in devising treatment.

ARE NERVOUS DISEASES INCREASING?

The rational and encouraging view in which Dr. Philip C. Knapp, of Boston, in the current number of the "Century," treats the question, "Are Nervous Diseases Increasing?" goes far toward mitigating the offense of presenting medical subjects in popular magazines. In this article it is asserted with all the authority that can be drawn from as yet incomplete statistics, that the increase in the relative number of insane among the more highly civilized nations is more apparent than real. This is owing to a number of reasons, the chief of which are the change of view entertained toward insanity and its treatment by society, who now look upon it as a disease and not a disgrace; and the present facilities for its better and more frequent detection.

Dr. Knapp also shows that, although Americans are more restless—or rather more active—than other nations, they are not more prone to nervous maladies. The so-called American disease, neurasthenia, constituted only 10 or 11 per cent. of all nervous cases presented at the clinics of several American charities, whereas in Paris 12 per cent. are so classified. Moreover, a large number of the cases treated in America are among our imported population. In the matter of hysteria, its percentage in Europe is several times greater than obtains in America. The relation of nervous disorders to, and their dependence upon, other physical defects, either inherited or accidentally acquired, is duly emphasized, after which it is proven that, as a race, we compare favorably in almost every particular with any other, and are hence not more liable to nervous disease, a fact which is borne out by the mortality tables of life insurance companies, as well as other sources of reliable information. The increasing vigor and self-reliance of our women has fastidiously much of the semi-affected nervous vagaries of the past and replaced them by an admirable power of resistance and self-control. With a better understanding of their causes and a daily improvement in scientific methods for their prevention and control, it is concluded that nervous diseases are not increasing, but on the contrary, the natural inference may be drawn that they should be expected to diminish.—*Medical News*, May, 1896.

ANTIPHTHISIN.

The remedy prepared by Dr. Klebs is not an antitoxin. It is a derivation of Koch's tuberculin, the germicidal constituents of which it is supposed to possess, separated from the toxic ones. According to Klebs's most recent analysis, tuberculin contains (1) tox-albumins, precipitated by sodic iodide of bismuth; (2) alkaloids; (3) an albuminoid derived from the bodies of the dead bacilli; (4) a soz-albumin, precipitated by absolute alcohol after the removal of the toxic ingredients. It is claimed by Klebs that an aqueous solution of this soz-albumin, prepared by him, and named antiphthisin, possesses the germicidal and curative properties of tuberculin without any of its toxic effects. With this product he claims to have caused the complete cure of tuberculosis in guinea pigs, and to have obtained 90 per cent. of good results (whatever that may mean) for all stages of phthisis in the human subject. He states, however, that it will produce its fullest benefits in the very early stages of the disease, for which stages alone it is recommended as a specific remedy; and that in advanced and complicated cases the prospects for its successful use are less certain. Dr. von Ruck, who is associated with Professor Klebs, reports as his experience of nearly one hundred cases of phthisis

treated with this remedy, that it has unmistakable influence over the fever, that under its use percussion dullness becomes perceptibly less, bronchial and harsh breathing give place to puerile and then vesicular respiration, the lung capacity increases, the cough diminishes, the sputum loses its purulent character and lessens in quantity, while the bacilli therein diminish in number and show marked signs of degeneration. Dr. C. Denison, of Denver, reports that most of the cases treated by him with antiphthisin gave evidence of its germicidal and healing effects, "in the lessening of the number of germs to the field found, and their degenerative or incomplete forms thrown off when good-sized doses were reached, as well as in the clearing up of consolidated or infiltrated tubercular lung tissue." Antiphthisin is prepared by Professor Klebs at the laboratory of the Winyah Sanitarium, Asheville, North Carolina, where he is now located. —*Pacific Medical Journal*, April, 1896.

OBSTETRICS.

IN CHARGE OF

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WARNINGS TO BE GIVEN TO MOTHERS.

J. M. Mabbott, in "Medical Record," April 4, says the following warnings should be given to mothers: Warn them not to neglect any hemorrhage during pregnancy; warn women during confinement to keep the hands away from the vulva and vagina; warn nursing mothers never to fall asleep with the infant at the breast.

TREATMENT OF PUERPERAL SEPTICÆMIA BY ANTI-STREPTOCOCCIC SERUM

C. Vinay, in the "Lyon Medical," January 26, considers that puerperal septicaemia may be successfully treated by serum therapy. He used the serum of a horse immunized against diphtheria in four cases. His conclusions are that the serum may be all powerful against recent infection of the blood, as seen in two of the cases, but it is inefficacious against once established organic lesions, as shown by the other two cases. He also states that the local treatment of the infected mucous membranes must not be neglected, especially at the beginning. The best method of employing this treatment would be to always make a culture from the cervix, and to use the serum only in cases shown to be dependent on streptococci. This, however, means loss of

time; therefore, if we have chills, and a rise of temperature to 40 degrees C., we may assume the presence of streptococci. The best time to give the injections is in the evening.

PUERPERAL SELF-INFECTION.

Dr. Chas. Jewett, after an exhaustive study of the question, concludes as follows:

1. There is no clinical proof that puerperal infection can occur from normal vaginal secretions.
2. All child-bed infection in women previously healthy is by contact.
3. Prophylactic vaginal disinfection as a routine measure is unnecessary, and even in skilled hands is probably injurious.
4. Its general adoption in private practice could scarcely fail to be mischievous.
5. In healthy puerpurae, delivered aseptically, post-partum douching is contra-indicated.
6. A purulent vaginal secretion exposes the woman to puerperal infection.
7. In the presence of such discharges at the beginning of labor, the vagina should be rendered as nearly sterile as possible.
8. In case of highly infectious secretions, the preliminary disinfection should be followed by douching, at intervals of two or three hours during labor.
9. The safest and most efficient means for correcting vicious secretions is a mild antiseptic douche repeated once or more daily for several days during the last week of pregnancy.
10. It is the duty of the obstetrician to know before labor the amount and character of the vaginal discharge.

PUERPERAL SEPSIS.

Is hysterectomy for puerperal infection justifiable?

R. R. Kime, "Journal American Medical Association," April 4: Puerperal infection is of two general varieties, viz.: 1. Putrid infection, or sapremia. 2. Septic infection, or septicaemia. The first is a local infection due to decomposition of the uterine contents by putrefactive bacteria only, without migration of the bacilli, not contagious, non-progressive by invasion, due to absorption of ptomaines, not inoculable. In sapremia remove the putrid material from the uterine cavity, irrigate, disinfect, drain, and ninety-nine per cent. of the cases will recover. Hysterectomy would relieve these cases, but it would be criminal to sacrifice the generative organs when such cases can be treated more successfully and with fewer deaths by less heroic measures. The second class is due to germ development, their rapid migration and invasion of new tissue, even entering the general circulation;

if at first local, it soon becomes constitutional, highly infectious, and inoculable from case to case. The septic germs soon extend beyond the endometrium, invading its muscular structures, the lymphatics, the blood vessels, etc., and cannot be removed by ordinary surgical measures, and it is very doubtful if hysterectomy could completely remove the infected tissues in severe cases. If any foreign substance is in the uterus, remove it with the forceps, wounding the endometrium as little as possible; irrigate the uterine cavity thoroughly with an antiseptic solution, and introduce a drainage tube of as large a size as the uterus will admit. Repeat irrigations and cleansing of the drainage tube at least once or twice in twenty-four hours. Give salines and calomel if needed, with systematic use of quinine, strychnine, tonics, and good nourishing diet. This treatment properly carried out will save more lives than the combined use of the curette, tampon and hysterectomy. Hysterectomy has a limited field of usefulness in septic metritis, multiple abscesses in the uterine wall, and thrombo-phlebitis, if it is possible to be positive in the diagnosis; but in doubtful cases drainage is to be preferred.

Herman E. Hayd ("Medical Record," May 2) believes that puerperal fever is of local origin, and that its treatment must be largely topical. The great surgical axiom is to operate early, before too great blood infection and dyscrasia have taken place. Most cases of puerperal infection recover under simple treatment; when, however, suppuration occurs, tentative, tonic, and building-up treatment is out of the question, and a laparotomy, vaginal hysterectomy, or simple incision through the vaginal vault is the only course to pursue. —*American Journal of Obstetrics.*

INTERMEDIATE PRODUCTS OF METABOLISM AS A CAUSE OF ECLAMPSIA.

W. H. Massin (cent. f. gyn) gives the following as a result of his investigations:

Physiological experiments show:

1. The importance of normal hepatic function for the proper oxidation of animal products.
2. The physiological and toxicological significance of carbonic acid, which is a product of incomplete oxidation of nitrogenous substances, and causes symptoms of intoxication similar to eclampsia.

Microscopical researches show:

1. That the parenchyma of the liver is subject to serious pathological changes, which must disturb its physiological functions.
2. That other parenchymatous organs as the kidneys show changes indicative of a severe general intoxication.

A careful analysis of the urine of eclamptic women by Hahn, of Berlin, and Prof. Nencki, failed to show any

increase of carbonic acid over normal urine. After these analyses, Massin turned his attention to other products of defective oxidation, especially leucomaines. Prof. Paehe showed by his analysis:

1. That there exists an aleto-intoxication in eclampsia.
2. That the oxidation of nitrogenous substances in eclamptic women, measured by the proportion of the total nitrogen in the urine to the nitrogen of the urea, is considerably diminished.
3. That the quality of the leucomaines in the urine previous to an attack is increased from two and a half times to thirteen times above normal, but decreases after an attack. These results seem to justify the assumption that eclampsia is an intoxication by leucomaines, or, in other words, leucomainoemia. If the liver, one of whose functions is to destroy the leucomaines, is unable to perform this oxidizing function, a general overwhelming of the system with leucomaines occurs, producing clonic and tonic spasms, and inducing acute disease of the parenchymatous organs, as liver and kidneys, thus rendering the elimination of the poison impossible. Deficient oxidation may be found in the urine of pregnant women not eclamptic. Why, then, is eclampsia so rare? They may tolerate it until some irritation of the nervous system occurs, and this is best found in severe and prolonged labor pains, or great anxiety. These conditions are met with most frequently in primiparae, and so also is eclampsia.

PHARMACOLOGY AND THERAPEUTICS.

IN CHARGE OF

ROBERT WILSON, M.D.,

Professor of Materia Medica and Therapeutics University of Bishop's College.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON, AND PHARMACOLOGY.

That the Royal College of Physicians of London, a body corporate, and entrusted, under the General Medical Council, with the duty of maintaining the standard of efficiency in candidates for the practice of medicine (as distinguished from surgery) in the United Kingdom, should have removed Pharmacology from the list of subjects for examination, seems so incredible that, were it not that "The Medical Press and Circular" (May 13, 1896) comes out so strongly condemnatory of such action, one would doubt the evidence of one's sense of sight. To quote:

"It is satisfactory to find that the curious and indeed inexplicable action of the Royal College of Physicians of London, in expunging pharmacology from the list of subjects for examination, has not been allowed to pass without protest on the part of various eminent therapeutists. We learn on the one hand that Dr. Lauder Brunton has decided to resign his post as examiner in *Materia Medica*, of the college, and it must be admitted on all hands that the loss of the services of so distinguished an authority is of itself no light matter, especially as it is rumored that other resignations are not unlikely to follow. Dr. Murrell and Dr. MacAlister, of Cambridge, have each entered their individual protest against this retrograde step, and matters have assumed such a serious aspect that Dr. Clifford Allbutt and Dr. Bradbury have also publicly formulated their views on the subject. The process of 'climbing down' is never an agreeable or graceful proceeding, and it must be peculiarly repugnant to the haughty directors of this venerable, but not always venerated, institution. That some such process, however, will have to be gone through is probable, even if, to bring it about, the supreme powers of the General Medical Council have to be invoked." The "Press," after pointing out the issues at stake, and the almost disastrous effect on the standard of medical education were the schools to drop a subject which the licensing body had declared of not sufficient importance to examine in, continues: "It is not, however, so much on the general principles of increasing competition, requiring more stringent examinations, that we take our stand in urging the abrogation of this ill-timed resolution, but upon the intrinsic importance of the branch of study so summarily eliminated from the scheme of requirements. Pharmacology, as we have already remarked, is even more indispensable to the education of the medical practitioner than is anatomy to the surgeon; yet none, so far, has had the courage to suggest that anatomy should be discarded by the curriculum."

The subjects doubtlessly will be brought up at the spring meeting of the Council, and there ought to be no question but what the unfortunate decision will be reconsidered. England already is far enough—as far as she can afford to be—behind Continental countries in her devotion to the realms of research in drugs. Already Germany excels in researches in synthetical chemistry, which has yielded, and is continuing to yield, many new agents to the therapeutist, and France has long been famed for her studies in remedial measures. It is no exaggeration to say that should the announcement not be withdrawn, it will prove the most serious blow to the prestige and standing of English graduates and recipients of the degree yet experienced, and will undo the years of hard work, untiring effort and constant watchfulness which has brought the degree to the present status in the medical profession of the world.

APOLYSINE.

(Monophenethydin.)

Drs. Leon V. Nevcki and Joseph van Jaworski, in a series of experiments on animals, themselves, and their colleagues, and finally upon a large number of clinical cases, have demonstrated the superiority of apolysin to phenacetine, which it closely resembles. Both phenacetine and apolysin contain para-phenetidin; but in the latter, a citric-acid radical takes the place of the acetic acid radical of the former, which replaces the H atom in the amide group. Apolysin is a yellowish-white crystalline powder, with a sour taste, and faint odor soluble in 50 parts cold water, 25 of hot water, in alcohol and glycerine. So far as therapeutic effect is dependent on chemical composition, we should think it would be harmless, and would be decomposed in the body into para-amidophenol and para-phenetidin, ethyl, and citric acid, the last further oxidized into CO₂ and water. The first two probably depress the temperature, and the ethyl relieving pain. The drug was tested clinically in pneumonia, scarlet fever, pyaemia, follicular tonsillitis, erysipelas, hemicrania, sciatica, headache, neuralgias and lumbago, and was generally given alone, only occasionally combined with caffeine or bromides. The general conclusions were that it depressed febrile temperature, diminished the pain and hyperaesthesia of neuralgia, caused no unpleasant after-effects, but should not be given on an empty stomach, or where there was gastric hyper-acidity. Being very soluble, it was quickly absorbed, and effects were correspondingly rapid; and being non-poisonous, large and frequently repeated doses could be given. The usual adult dose is from 8 to 30 grms a day, though three times the latter quantity can be safely administered.—*Allgemeine Med. Cent. Zeitg.*, 1895, 60-61-62, *American Journal of Medical Sciences*, March, 1896.

BORO-SALICYLATE OF GLYCERINE.

Boric and salicylic acids, when heated in the presence of glycerine, dissolve in large proportions; but on cooling, the mixture soon becomes turbid, forming a thick and granular mass. If this mixture be now heated anew until it boils, and a small quantity of calcined magnesia added, the solution, after cooling, remains perfectly limpid. The product thus obtained is miscible with water in all proportions. This boro-salicylate of glycerine enables the operator to obtain extemporaneously a solution containing equal parts of the two acids at a degree of concentration impossible with any other method. Moreover, the microbicide and antiseptic properties of the salicylic and boric acids are in no wise affected by their being transformed into a neutral or basic salt. The following is the formula:

Boric acid.....	Grms.
Salicylic acid.....	10
Distilled water.....	10
Thirty per cent. distilled glycerine.....	40

Heat the mass in a flask until it boils, then add one gm. calcined magnesia; reduce heat and evaporate all the water, obtaining after cooling 50 c.c. of the glycerine, or boro-salicylate, 5 c.c. of which will contain exactly one gm. each of salicylic and boric acids.—Coblentz, "The Newer Remedies," 1896.

POCKET SODA WATER.

An invention has been perfected, which professes to enable anyone to carry a dozen bottles of soda water or other "mineral" in his waistcoat pocket. It consists of a special stopper to an ordinary soda water bottle, and a small steel capsule, into which is compressed about a drachm of solid carbonic acid gas. The bottle is filled with drinking water, either flavored to taste or not; the capsule is placed in position on the stopper, and the bottle is closed. By the act of closing, the capsule is penetrated by a pin which is in the stopper, and the CO₂ is set free. A few shakes of the bottle, and the soda water is fit for drinking. But the longer it is kept the better it is. Messrs. Read, of Broad street, London, are the patentees.—*Medical Press*, No. 2975, May, 1896.

IODIDES AS TÆNICIDES.

J. H. Newington (*Med Weekly*, XV. 1895).

Newington reports one of his patients as passing a large tape-worm after having taken the following mixture :

Potassium Iodide,	35 grains.
Iodine,	11 ½ grains.
Water,	1 fl. oz.

Dose—ten drops three times daily.

On subsequently giving the mixture to several patients having tape-worms, in every instance the tænia was passed dead, and no relapses ever occurred.

TASTELESS SYRUP OF IODIDE OF IRON.

(*Pharm. Leitsch. f. Russl.* XXXIV, 1895.)

Tasteless ferrous iodide is first prepared, as follows :

Iodine 81.85 grms., mixed with sufficient quantities of iron and water to form iron iodide; solution is filtered, and in the filtrate 40.87 grms. iodine are dissolved: 130.25 gm. citric acid are dissolved in sufficient water, and exactly neutralized with potassa; the two solutions are mixed, and as soon as a green coloration appears, the whole is evaporated to dryness. The resulting crystalline mass is stable except in direct sunlight, the required quantity of this salt is then dissolved in a little water, and syrup added to correspond to pharmacopœal strength.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, March, 20, 1896.

A. D. BLACKADER, M.D., President, in the Chair.

PLASMODIUM MALARIÆ.

Dr. F. G. Finley demonstrated specimens of the malaria plasmodium taken from a patient suffering from tertian ague, acquired six months previously in Massachusetts.

He stated that plasmodium was now universally recognized as the etiological factor of the disease in Europe and America, although a number of Indian medical men still denied its presence altogether, or regarded it as being of accidental occurrence.

All Western observers, however, agreed in regarding the parasite as being constantly present in malaria and in no other disease. Unfortunately the organism had not yet been obtained in pure culture outside the human body, but inoculations of blood from malarial patients into man have produced the disease in a number of instances, the incubation period being usually eleven or twelve days.

In making observations on malarial blood, strict attention to technique was necessary. Cover glasses and slide must be carefully cleansed in alcohol and ether. A small drop of blood is taken from the finger after being washed with alcohol, the cover glass brought in contact with it, and the cover laid on the slide, so that the drop spreads out in an even and thin layer. The preparation, if successful, should show neither rouleaux nor crenated corpuscles. The plasmodium was picked out readily by the minute specks of pigment in the blood corpuscle, when examination with 1-12 immersion lens showed the rapidly moving amoeboid body within the corpuscle and the pigment at its periphery. Different forms, representing some of the phases of development and their relation to the stages of the paroxysm, were shown and described.

Dr. J. G. Adami called attention to the rather curious fact that in the East, where malaria is so prevalent, instead of the tendency being to confirm the observations of Laveran and of the Italian and American observers, the opposite appeared to be the case, and there was showing itself a remarkable amount of scepticism on the part of some of the leading medical men in India, Hong Kong, &c. Probably in these regions the very frequency of malaria complicating other conditions was the main cause of the doubt that was beginning to find definite expression.

Dr. H. A. Lafleur did not think that any observations made in the East at all weakened the evidence that the plasmodium malarie was the cause of malaria. If there was one disease in which observation was conclusive, it was malaria. To claim that the parasite was present in patients suffering from diseases other than malaria, was begging the question. The consensus of opinion now was, that when the parasite was present, one was dealing with malarial infection no matter how atypical the symptoms might be. This was particularly the case in chronic forms with symptoms of anaemia and splenic enlargement, in which by repeated examination crescentic bodies could be demonstrated. The history of the discoveries made in malaria illustrated the point that a disease is often best studied where it is not very prevalent.

Dr. T. D. Reed had had an opportunity, while in Baltimore recently, of seeing a brilliant diagnosis by Dr. Osler. Observation of a slide was made, happily, just at the time to find a peculiar appearance of the organism which precedes a chill. The patient had a chill just as predicted.

PRIMARY CANCER OF THE VAGINA.

Dr. F. A. L. Lockhart exhibited the specimen and related the history of the case.

GANGRENE OF THE LUNG.

Dr. J. G. Adami exhibited specimens from a case.

Dr. C. F. Martin referred to the point that in abscesses of the liver caused by the amoeba of dysentery, the products of purulent inflammation were generally absent. One did not get pus cells, but necrotic material. In two cases of abscess of the liver, which he had recently examined, he had searched in vain for the amoeba of dysentery. The contents, however, had also shown this sort of necrotic material, and yet cultures had not shown the presence of bacteria. The question was thus raised, whether, in an abscess of the liver, the leucocytes were especially apt to be broken down and nothing but detritus to be found. Possibly the structure and nature of the liver tissue would account for this tendency to the necrosing of cells.

Dr. H. A. Lafleur had seen a similar case in Baltimore which had been looked upon clinically as one of pulmonary tuberculosis, although the examination of the sputum failed to show the bacilli. At the autopsy there were found patches of interstitial pneumonia with several necrotic areas, which were looked upon by Dr. Welch as due to pressure of the sclerosed tissue cutting off the circulation. He (Dr. Lafleur) once, while examining a horse, had met with a condition exactly similar to Dr. Adami's specimen, and had thought that it was tuberculosis until the veterinary clinician explained that that disease was very rare in the horse.

THYROID FEEDING IN THE TREATMENT OF INSANITY.

Dr. T. J. W. Burgess read a paper on this subject.

Dr. Wesley Mills was surprised that there had not been more applications of this remedy reported before the Society. He referred to a dog, shown by him three months before, from which he had removed one-half of the thyroid gland. After the animal had thoroughly recovered from the operation, he had removed the other half, when the dog had presented the same symptoms as after the first operation. He had, the day before, commenced feeding the dog (as well as an intact dog, as a control experiment) with thyroid extract. Within two weeks he had commenced to emaciate, etc., but finally developed tetanic spasms and died in a fit, just two months after the operation, while the usual time was less than two weeks. The feeding with the extract was continuous and the dose varied from one to three (mostly two) of Armour's five grain tablets daily.

Dr. W. S. Morrow, referring to the marked effect of thyroid feeding in cases of Cretinism, related the following case: On February 27th he was called to see a baby five months old, and found its tongue greatly swollen and almost filling its mouth. The large size of the tongue had been noticed immediately after birth. He put the case upon $\frac{1}{4}$ grain doses of Armour's desiccated thyroid, and in a few days there was marked improvement in the prominent symptoms which had been dyspnoea and constipation. After three weeks treatment the tongue was now almost down to normal size. Enquiry as to the occurrence of goitre within the family of either of the parents had resulted in negative results, and the only fact he thought likely to be of interest was that they were both natives of Glengarry where goitre was fairly common.

Dr. W. E. Deeks referred to a case which he had reported a year previously of what he supposed to be ichtthyosis simplex, and

he had administered desiccated thyroids in five grain doses, and very soon the case was completely cured. Since then another marked case had been treated, but so far without benefit.

Dr. J. G. Adami, referring to the tremor that had been observed in overfeeding with thyroid extract, pointed out that a similar tremor had been noted in the lower animals in the very opposite condition, namely, after removal of the thyroid gland, and asked Dr. Wesley Mills whether he had, in the animals experimented upon by him, been able to distinguish between the two tremors.

Stated Meeting, April 3rd, 1896.

A. D. BLACKADER, M.D., President, in the Chair.

ANGIOMA OF THE SKULL.

Dr. G. E. Armstrong showed a patient on whom he had operated.

Dr. J. G. Adami pointed out that small naevi were occasionally to be found in connection with the vault of the skull. During the last year, in performing autopsies at the Royal Victoria Hospital, he had come across two examples of the condition; in each case, upon baring the cranium, he had noticed small dark areas close to the longitudinal sinus of roughly spherical shape, and in one case actually rising slightly above the general level of the bone. These were situated close to the longitudinal sinus, but upon examination were found to be, not as might have been expected, pacchionian bodies, but were distinctly of naevoid character. Possibly Dr. Armstrong's case was a development of such naevoid conditions, starting in the diploe.

DISSECTING ANEURISM.

Dr. J. G. Adami showed a specimen of this case.

A YEAR'S EXPERIENCE IN THE BACTERIOLOGICAL DIAGNOSIS OF
DIPHTHERIA.

Dr. Wyatt Johnston read a paper on this subject.

Dr. F. W. Campbell thought that the profession in this city owed a great debt of gratitude to Dr. Johnston, for the way in which he had carried on the work. The question of not waiting until the diagnosis was confirmed was very important. In his opinion, it was wise to use the antitoxin at once, in cases where there was the least suspicion of diphtheria.

Dr. J. G. Adami asked whether a note of the day of the disease on which the culture had been taken, in cases of mixed infection, had been made. This he thought would greatly influence the statistics, for there would be a great difference in the relative number of streptococci present. In those cases of streptococcus diphtheria, he thought that the patients should be isolated as well as in true diphtheria.

Dr. J. B. McConnell asked if the Klebs-Loeffler bacilli, which were found in the throat a number of days after the attack, were as virulent as those present when the diphtheritic attack was in active progress, and if so, how could they remain in the throat without developing the disease. Ruffer considered that antitoxin had a bactericidal action on diphtheria bacilli, and Dr. McConnell thought there must be some such action as this which prevented growth and re-infection, in addition to its toxine destroying powers.

The President, referring to Dr. Johnston's suggestion of using an organic acid for the destruction of bacilli, said that Dr. F. Gordon Morrill, of Boston, at the last meeting of the American Pediatric Society, reported good results from the use of strained lemon

juice sprayed into the nose and throat six times a day. He said that cases in which the bacilli persisted, notwithstanding the use of hydrogen peroxide, yielded promptly to this treatment.

Dr. Johnston, in reply, stated that the cases were primary and the cultures were the first taken in each case, but there was no uniformity about the date. In subsequent cultures he had found a steady decrease in the number of the bacilli and an increase of the micrococci. Bacilli from the throats of convalescents are often extremely virulent. Dr. Park, of New York, had obtained the most virulent bacilli he had ever met with, from a mild convalescent case. The antitoxin did not seem to affect the virulence of the bacilli.

SOME INTERESTING CEREBRAL CONDITIONS.

Dr. C. F. Martin showed two specimens of diseased brains.

I. Porencephalus. He said the first specimen here shown represents a lesion not infrequently found in the brains of infants. There is a large cavity in the cortex of the right cerebral hemisphere immediately beneath the pia mater which completely closes off the cavity above. The specimen was removed from the skull of a female infant thirty days old, who had been admitted some months ago to the Foundling Hospital, under the care of Dr. Kenneth Cameron. The birth had been an easy one, and during the first ten days of her life the child had presented no evidence of disease. Then for the next five days diarrhoea supervened with slight elevation of temperature, up to a maximum $101\frac{1}{2}$ deg., and she seemed quite well for the ensuing week. On the twenty-second day the temperature suddenly rose and assumed an irregularly intermittent febrile character, ranging between 97 deg. and 107 deg., while diarrhoea supervened from time to time. The cold bath treatment was adopted and the usual internal medication, but without avail, the child dying seven days after the onset of the fever.

No hemiplegia had been observed, nor was the condition accounted for apart from the intestinal symptoms present.

The autopsy revealed mainly two conditions, one a very moderate catarrhal colitis, the other, the cerebral cyst here shown.

The right hemisphere, as is seen, contains a large cavity situated immediately beneath the pia and measuring in greatest diameter $6\frac{1}{2}$ cm. It has not extended as far as the lateral ventricle, but involves the main portion of the motor area on the right side. It contained at the autopsy a very little fluid, and the overlying pia was partly collapsed into folds upon it. Its walls were of a pale greyish-white color, with no sign of rusty pigmentation, and it was lined by very shreddy material, presenting fine irregular filaments throughout.

The skull itself was mesocephalic and rather thinner than normal.

The condition is of clinical interest inasmuch as death has been preceded by some days of pyrexia and other evidence of constitutional disturbance, so that it would suggest that the cerebral condition was the exciting cause of the symptoms. Granting this to be true, it would give evidence of a most rapid destruction of cerebral substance, and it is, I believe, generally recognized that in infants the brain tissue may be lost in an astonishingly rapid manner, while in adults the process is much more slow. It would here, however, be impossible to state that the condition had only commenced since birth.

The etiology of the condition is obscure and it has been attributed to a variety of processes, such as various obstructive and destructive lesions in vessels, to attested development, general encephalitis, etc., but it would seem that any of these different conditions may each alone induce the formation of a porencephalus.

It is a common cause of infantile hemiplegia, and Osler has gathered together 24 cases out of records on 90 autopsies performed upon infants with paralysis.

II. Pyocephalus. The second specimen was that of a pyocephalus, i. e., the presence of pus in the greatly distended ventricles of the brain.

It is interesting chiefly because of the extent of suppuration and the fact that no originating cause could be detected.

The brain was removed at the autopsy on a male infant, thirty-three days old. No special history accompanied the case, but the charts give evidence of very irregular pyrexia—averaging perhaps 101 deg.—the maximum (105 deg.) being attained three days before death. The stools were constantly loose and of a green or greenish yellow color, and vomiting came on from time to time. It is further said that a kind of opisthotonos was present during the last three or four days of the infant's illness, while the lower extremities were especially noted to be stiff. At the autopsy, in addition to some redness of the gastro-intestinal tract, there was found no sign of disease in the abdominal or thoracic viscera. The brain, as seen in the specimen, was extremely soft, much enlarged in size, and on horizontal section (according to the French method of examining the brain) the ventricles were found very much distended with pale greenish pus which had a sweet odor. The walls of the ventricles were ragged and showed considerable destruction of adjacent cerebral substance, though there was no evidence anywhere of communication with external structures.

An examination of the body elsewhere, the joints, the nasopharynx, auditory canal, for caries, trauma, etc., failed to reveal any evidence of disease, while there was no sign in the lungs of gangrene, nor in other parts of the body of foci or suppuration.

The cause must remain here undiscovered, as are not a few of such cases.

Cover slip preparations of the pus revealed a diplococcus of no special characters, and cultures taken from the pus were unsatisfactory in view of the method by which the brain was opened.

HYDATIDIFORM MOLE.

Dr. C. F. Martin presented for Dr. A. E. Vipond, a specimen of hydatidiform mole which had been obtained in the latter's practice. The patient had been in the fifth month of pregnancy, when serious and even alarming flooding supervened. Examination showed a dilated os upon which lay a soft friable mass, which bled easily. Pieces which were easily removed showed the condition to be a hydatidiform mole, and by firm pressure it was nearly all removed.

Ergot and hot douches had arrested the haemorrhage, while during the next twenty-four hours the remaining portion came away of itself and the patient made a good recovery.

CANCER OF THE RECTUM.

Dr. Wyatt Johnston exhibited for Dr. Armstrong a specimen of cancer of the rectum of the adenoid cancer type. The disease had involved the whole circumference of the gut for between two and three inches above the anus.

He also showed for Dr. Armstrong an adenoid cancer of the sigmoid flexure, which showed great constriction at the point of disease and great dilatation above.

Dr. G. E. Armstrong read the history of the first case by Dr. Kinghorn, as follows:

Wm. M., aged 58, was admitted on February 25, 1896, to the Montreal General Hospital, complaining of passing blood per rectum. The trouble was first noticed ten months previous to admission, and up to that time he had had no trouble of any kind about the anus.

The onset was gradual and the first symptom noticed was irregularity of the bowels. Previous to this time the bowels had been very regular, but it gradually came about that they moved only every third day. The stools were fairly formed, but rather contracted and of a pale color. Some months later he noticed the bed-clothes soiled in the morning with a blood-colored fluid, having a peculiar, rather sweetish, offensive odor. This fluid came to be passed both day and night, and increased in amount. Pain was first noticed about four months after the onset of symptoms, and was felt at the bottom of the spine and at the anus.

Five months after the onset he had great frequency of micturition during the night, but had to wait sometimes fifteen minutes before the stream would come away. This condition lasted until six weeks previous to admission.

About six months after the onset he had an attack of diarrhoea, which lasted one week, but otherwise the bowels gradually became more constipated, and finally would not move without a purgative.

While the above symptoms were developing he lost about ten pounds in weight, and though his appetite continued good he became pale and lost strength.

He was born in England, and when younger was ten years in the British army, in an infantry regiment. Of late he has worked at dry goods packing. His occupations have always kept him on his feet. His health has always been good and there is no history of disease either in childhood or adult life. He has always been a heavy smoker, and up to the present year has used alcohol very freely. Other than a bubo thirty years ago he has had no venereal diseases. There was no history of haemorrhoids or other trouble about the rectum.

The family history as regards malignant disease was quite negative.

On admission his appearance was that of a well-nourished man of 58 years. The face had a pale and rather cachectic look. When in bed he had to lie on either side, not in the dorsal position, as this position caused him pain in the rectum and over the coccyx.

Examination showed a few external haemorrhoidal tags. The entrance of the finger into the rectum caused a profuse haemorrhage, accompanied with a blood-tinged serous liquid. There were felt masses of tissue which were soft, friable and bled readily, and entirely surrounded the lumen of the bowel, and at the side of the prostate the lumen of the bowel was almost occluded. The finger could just reach above the growth.

The respiratory, vascular, digestive and urinary systems were normal.

On March 5th he was given ether and an inguinal colotomy performed after Maydl's method. The rectum was daily irrigated with boracic acid solution, and the bowel opened by a cautery on the third day. Three weeks later the bowel was divided completely across with the thermo cautery.

Pathological Report by Dr. Wyatt Johnston.—The bowel presents very large ragged ulcerations with raised edges and infiltrated base involving the entire circumference of the gut for the extent of about three inches. Microscopic examination shows the growth to be adenoid carcinoma, with secondary involvement of glands, some of which are situated on the limits of the incision.

Dr. Armstrong added that he had removed the growth by Heinecke's method—The patient was first placed in the lithotomy position and a curved incision made in front of the anus, and while an assistant held a sound in the urethra the rectum was carefully separated from the urethra, prostate, and vesiculae seminales. The patient then being turned on his side, the soft parts and sacrum and coccyx were divided longitudinally up to the lower border of the third sacral foramen. The sacrum was then chiselled across and the osteo-plastic flaps turned out. The rectum was then brought well down, the peritoneal cavity deliberately opened, and the bowel and meso-rectum divided well above the limits of the disease, the peritoneal cavity being closed by suturing the peritoneum to the anterior wall of the rectum. The osteo-plastic flaps were then replaced and the end of the bowel brought out for drainage. This method gives good access, permits of the perfect control of haemorrhage, and interferes very little with blood or nerve supply. The patient is making a very satisfactory recovery.

AORTIC ANEURISM.

Dr. A. E. Orr exhibited the specimen and read a report of the case.

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Editorial.

COLLEGE OF PHYSICIANS AND SURGEONS PROVINCE OF QUEBEC.

The next semi-annual meeting of the governors of the College will be held in the Laval University building on the 2nd of July next. The Provincial Medical Board, composed of forty governors, elected by the physicians of the province, numbering about 1,900, is the representative body of the medical profession and medical teaching organizations, and has imposed upon it the duties of legislating for and regulating all matters pertaining to the welfare of these constituencies. Its actions, methods and decisions are, therefore, of the greatest interest to medical men in the province, and worthy of constant and the closest scrutiny.

The board is composed of mainly French-speaking members, there being now only some half dozen English-speaking members, so that practically our French-speaking confreres have these matters almost entirely in their own hands; but we can testify as to the fair and courteous consideration given to the minority on all occasions, and we can note with satisfaction the disposition to elevate the tone of the profession, and maintain a high standard in regard to medical education, both in respect to the matriculation and the college curriculum. At the present meeting several important matters will be considered, such as inter-provincial registration, a subject which will be fully discussed at the next meeting of the Canadian Medical Association, which meets here on the 26th of August next, and where the aim is to procure for

the Dominion a uniform standard of matriculation, a uniform standard of medical education, and a uniform method of examination.

The subject of the relation of the profession to lodge practice, which was referred to a committee at the last meeting, will be considered, and an attempt will be made to remedy the abuses of this kind of practice, and, if the custom cannot be entirely abolished, to mitigate some of the features which are derogatory to the interests and honor of the profession. Considerable agitation of this subject is at the present time being reported as occurring in England, where the abuse of club practice is very general; many belong to clubs who are quite able to pay a proper fee to a practitioner. It is quite proper that only those with small incomes should receive the benefits of the low rates paid by clubs and benefit societies, and it is preferable that they should thus nominally pay for medical attendance rather than be recipients of hospital relief, which is intended only for the absolutely poor, and not for attendance upon those able to pay adequately for the treatment. The injustice to the general practitioner, and especially the younger members, of the want of discrimination as to the class of patients who should benefit by hospital attendance is a subject that requires as much attention, from a medical standpoint, as that of benefit societies.

The manner of voting has caused some dissatisfaction among the members of the Board, and others. The fact that any member can vote by proxy has made it possible for one or more members, by taking the trouble to do so, to secure sufficient proxies to control personally the election of the board and officers, and the decision on any matter that may come up. The subject is worthy of consideration, as such a possibility should be guarded against. "L'Union Medicale" has taken this matter up very energetically, regarding it as a crying evil. They recently sent the following circular to the nine hundred subscribers of the journal, requesting signatures to it, which we understand has been largely signed:

"I believe that the actual mode of voting for the election of the members of the Provincial Medical Board is defective, because it allows people who have an interest in doing so to control the voting. I am persuaded that a system of voting by secret procurement, at the same time that it would allow the profession to vote without any undue influence, would pre-

vent any possibility of controlling the voting, a thing that is indispensable when we want an election to be the result of the will of the electors.

"I endorse entirely Drs. Rottot and Fafard in the efforts they are making in the Provincial Medical Board to obtain a measure that seems to me just and reasonable.

"Signed. _____."

The Montreal Medico-Chirurgical Society have been requested also to express their views on this matter.

CANADIAN MEDICAL ASSOCIATION.

We learn from the general secretary, Dr. Starr, of Toronto, that the meeting here in June, under the presidency of Dr. James Thorburn, will probably be the largest yet held, judging from the number who have already expressed their intention of being present.

Among those who have promised to contribute to the programme are: Prof. Adami, address in bacteriology; Dr. Geo. Wilkins, address in medicine; Dr. John Stewart, Halifax, address in surgery; and Dr. J. F. W. Ross, Toronto, address in midwifery. In addition to these there are: Drs. Osler, Johns Hopkins, A. McPhedran, J. E. Graham, A. Primrose, J. Price-Brown, Toronto; Drs. J. B. McConnell, A. Laphorn Smith, H. S. Birkett, Montreal.

We will in the July number be able to give a detailed programme. We trust there will be a rally in Montreal from all parts of the Dominion on August 26th, when old college friends may meet and rehearse incidents of yore, and bind still more closely the links of former friendships, at the same time intellect is stimulated by the exchange of thought and discussion which the reading of so many interesting papers must arouse. To those who have not seen the present complete condition of the magnificent hospitals of Montreal, a visit to them will not be the least interesting and profitable of the attractions offered in the way of entertaining the visitors to the Montreal meeting.

THE WILLIAM F. JENKS MEMORIAL PRIZE

This triennial prize of \$400.00 is now offered for the fourth time, and is open for competition to the world. The subject to be written upon is "The etiology and pathology of diseases of the endometrium, including the septic inflam-

mations of the puerperium." It must be sent to the College of Physicians of Philadelphia before January 1st, 1898, addressed to Barton Cooke Hirst, M.D., typewritten, and distinguished by a motto, with the name of the writer, in a sealed envelope.

The "Virginia Medical Monthly" has, since April, 1896, become a semi-monthly, and has accordingly changed its name to "The Virginia Medical Semi-Monthly."

Miscellaneous.

HYPNOTIC CRIME.

The possibilities of post hypnotic suggestion would seem at first glance to open a wide field for criminal suggestion, but the evidence does not, I think, justify much apprehension on that score.

When the patient's consciousness is much disordinated by the suggestion, he is usually unable to co-ordinate himself to his environment, and is, of course, not fitted to do anything requiring alert mental powers, much less a crime. When the suggested idea expels inconsistent states, the case is almost as bad. Prof. Liegeois dissolved a white powder in water, and told Mme. C—, one of his patients, that it was arsenic. "I said to her: 'See M. D—, he is thirsty; he is always wanting something to drink; you will offer him this.' 'Yes, monsieur.' But D— asked a question which I had not foreseen; he asked what was in the glass proffered him. With a candor which set aside all thought of simulation, Mme. C— replied, 'It is arsenic.'" Clearly it would not do to intrust to Mme. C— the execution of a suggested crime.

Again, when the emergence of the posthypnotic suggestion does not affect the upper consciousness at all, but coalesces with it, it is apt, as I have already pointed out, to meet with resistance from the patient's habitual principles of conduct. Dr. De Jong reports that a little Jewish girl of ten, whom he found very suggestible, repeatedly obeyed his posthypnotic suggestion that she should steal a piece of money left lying upon the table, but one Saturday she disobeyed. When asked why, she said: "It is the Sabbath day; I cannot touch money." Another of his patients performed all manner of make-believe crimes at his suggestion, but, when he suggested something the performance of which would have shocked her modesty, she refused, and she refused also to betray a trivial secret which he had got his cook to confide to her.—From *Posthypnotic and Criminal Suggestion*, by Prof. W. R. Newbold, in "Appleton's Popular Science Monthly" for June.

PUBLISHERS DEPARTMENT.

Frank Stockton's new story, "Mrs. Cliff's Yacht," which begins in the April "Cosmopolitan," promises to be one of the most interesting ever written by that fascinating story-teller. Readers of "The Adventures of Captain Horn," will find in "Mrs. Cliff's Yacht" something that they have been waiting for.

That New York City consumes nine hundred and sixty million eggs in one year; nearly three hundred thousand pounds of butter every day; and as many gallons of milk; that it eats three hundred and five million pounds of beef in a year seems astounding. And yet these figures are; in reality, very moderate calculations which Mr. John Gilmer Speed has reached upon exhaustive investigation, and embodied in an article on "Feeding a City Like New York," which he has written for "The Ladies' Home Journal."

Suggestion in Therapeutics, or the influence of mind in the cure of disease, will form the subject of an article by Prof. W. R. Newbold in "Appletons' Popular Science Monthly" for July. The cures produced by suggestion in hypnotic patients, the influence of a confident manner without hypnotism, and the "charming" of warts and sores, are among the forms in which Prof. Newbold credits this agency with useful results.

The June "Atlantic" begins with another installment of the letters of Dante Gabriel Rossetti edited by George Birkbeck Hill. This installment contains the letters for 1855. Striking features in this issue are an article upon The Politician and the Public School by Mr. G. L. Jones, Superintendent of Schools, Cleveland, Ohio, and Restriction of Immigration by President Francis A. Walker.

Other readable articles which gives this number a varied interest are The Oublette, one of Mrs. Catherwood's sketches of French Provincial Life; The Bird of the Musical Wing, by Mrs. Olive Thorne Miller; Orestes Brownson, the Catholic American, a striking biographical study, by George Parsons Lathrop; The Opera before the Court of Reason, by W. F. Biddle; Lord Howe's Commission to Pacify the Colonies, an important historical contribution, by Paul Leicester Ford; embodying a hitherto unpublished manuscript.

Fiction is represented by a further installment of Henry James' absorbing serial, The Old Things; a short story of Alabama life, The Price of a Cow, by Mrs. Elizabeth W. Bellamy, and The Whirligig of Fortune, an incident of the French Commune, by T. Russell Sullivan.

The book reviews include a review of John T. Morse's Life and Letters of Oliver Wendell Holmes and reviews of recent publications on history and art. Poems and the usual departments complete the issue. Houghton, Mifflin & Co., Boston.

EUROPEAN ENDORSEMENTS.

The "London Lancet," of March 28th, 1896, says editorially:—"Antikamnia is well spoken of as an analgesic and antipyretic in the treatment of neuralgia, rheumatism, etc., etc. It is not disagreeable to take, and may be had either in powder or tablet form, the latter being made in five-grain size. It is described as not a preventive of,

but rather as affording relief to, existent pain. By the presence in it of the amine group it appears to exert a stimulating rather than a depressing action on the nerve centres and the system generally. If this be so, it possesses advantages over other coal-tar products."

The concise endorsement of the "Edinburg Medical Journal," which appeared in the January issue, is equally interesting.—"This is one of the many coal-tar products which have lately been introduced into medicine in Scotland. In doses of three to ten grains, antikamnia appears to act as a speedy and effective antipyretic and analgesic."

The "Arena," edited by B. A. Flower, and published by the Arena Publishing Co., of Boston, at \$3.00 per annum, is one of the best representatives of the advanced thought of these modern times. They thus refer to the June number:

"Our June number speaks for itself. The paper by Rev. Samuel J. Barrows, D.D., editor of the "Christian Register," Boston, and a man acknowledged to be one of the most earnest religious thinkers of our time, will be of special interest to a large number of our readers. The paper by William P. St. John, President of the Mercantile National Bank of New York, will also be of special interest. Eltweed Pomeroy is at present the recognized leader of the working forces who are engaged in an endeavor to bring about direct legislation in the United States; hence his paper will be of uncommon interest. Justice Clark closes his powerful and convincing series of papers on Mexico and her phenomenal prosperity in this issue. The remarkably able paper by A. J. Utley on Bimetallism will be read by our readers with more than usual interest. Prof. Parsons is literally undermining the foundations of one of the most dangerous monopolies of America to-day in his powerful and exhaustive papers on the telegraph monopoly. His data and arguments are to-day being used as a reservoir for facts by statesmen, economists and students who believe in a republic and who are waking up to the fact that the people have 'slept over long.' But at the present time we merely desire to call attention to the strength and vital force and ability which mark the opening issue of volume sixteen of the "Arena." It is our determination to make this volume eclipse all previous volumes in ability and vigor, no less than in the conscience element, which one correspondent observes "makes the 'Arena' unique among the great and original reviews and magazines in a wilderness of literature characterized by no special progressive idea, conviction, courage, or virility."

For more than a half-century "Littell's Living Age" has been republishing the best and most important papers, biographies, reviews, stories, verses and sketches of travel, to be found in the foreign (especially the British) magazines, quarterlies and literary weeklies. During this long period it has been prized and commended for the judgment and taste exhibited in its selections. Hardly one of the eminent British authors of the past fifty years can be named who has not been represented in these pages.

Its latest issues contain many articles of present interest and permanent value. The following are worthy of special mention:—"Czar and Emperor," by Karl Blind; "Slatin Pasha and the Sudan," by Capt. F. D. Lugard; "Matthew Arnold," by Frederic Harrison; "Nature in the Earlier Roman Poets," by Evelyn Martinengo Cesaresco; "Jean Baptiste and his Language," by Howard Angus Kennedy; "Stray Thoughts on South Africa," by Olive Schreiner; "A Heroine of the Renaissance," by Helen Zimmern; "A Winter's Day in Mid-Forest," by Fred. Whishaw; and "The Story of an Amateur Revolution," by a Johannesburg Resident. In fiction, a short story, by Mary E. Mann, is particularly readable with its mixture of pathos, humor and superstition. Published weekly, at \$6.00 a year, by Littell & Co., Boston.

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Original Communications.

WHY SCARLATINA IS ENDEMIC IN MONTREAL.

ROBERT WILSON, M.D.,

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The last three months having been marked by more than the average number of cases of scarlatina, which, fortunately, this year has not been of the virulent type, to which this dread unknown disease is so liable—at least in certain sections of our city—and living in the constant fear that any one new case might run the dreadful course occasionally seen, and die while the attendant stands helpless and impotent to combat the intense intoxication of the malignant form; while watching by the bedside of a little one stricken to death, and find all trusted remedies alike fail; when waiting, as many a man before me has waited and watched, fighting the battle inch by inch through the dreary night, each moment showing more clearly that we are losing ground, and only to turn away at the ebb of the tide, at break of day, heavy at heart and weary, with a vague, ill-defined sense that, somehow, it might not have been, and a growing conviction that it *would* not have been had things been arranged differently, the jotting down of more lives sacrificed to the demon of neglect, and then the blotting out of remembrance for the time being in the merciful (and merciless) vortex and whirl of everyday life—these are things which make one think, and wonder why scarlatina should be so perpetually cropping up in our midst, with a well-organized Health Department, a fairly good executive staff and a system of reports and investigations which appear on the face to be all that is needed, and yet the disease flourishes! It ought not to.

True, until we determine the specific cause of the disease, we are not in a position to say with exactness, that isolation, in its truest term, will eradicate the disease, or to stamp out with a specific, scarlatina, as diphtheria is being stamped out, and as small-pox has been stamped out. But it is at present our best, our only remedy for the spread of a disease whose mortality is heavy enough, in all conscience, and whose sequelae are appalling in their seriousness; and so we unconsciously find ourselves wondering whether there be not some fault with the isolation, or with the method of isolation, or with the completeness of isolation, or with the efficacy of disinfection *after* isolation, and with the pertinacity with which an idea will recur at unwonted moments, it gains weight, and you sit down, gentle reader, and reason the thing between puffs, and come to the conclusion that isolation *is* at fault, both in itself and in its method, in its completeness; and that disinfection, as practised to-day, is the most expensive, screaming farce which has ever disgraced a civilized community, numbering progressive physicians among its citizens, or ever levied a death toll on our babies as the price of its existence. Let us, dear reader, if I do not bore you, just glance for a moment at isolation as it is generally attempted to be carried out; as I have, and you have, too, often seen it carried out. The mother refuses to let the child go to the hospital, and is directed to carry out the usual precautions, and the next visit is paid in a little hope that your orders have been carried out (N. B.—This is based on a small remnant of faith in human nature, which, for some unaccountable reason, occasionally lingers in the breast of the medical attendant), but with a substratum of conviction, based on stern experience, that what has been done is this: Nothing in the bedroom has been touched—chest of drawers, trunks, boxes, all containing more or less clothing of the household; wardrobes or clothes-closets hung around with dresses, hats, bonnets, etc.; carpet still reposing peacefully in its original calmness and dust; children not yet down, running about, and maybe dressed, washed and fed by the mother, who thinks, or pretends to, that in crossing the threshold of the sick room, all infection drops from her, only to be resumed on her next entry; dishes, glasses, cups, spoons, remains of milk, coffee or tea carried out into the kitchen and left to the tender mercies of the other youngsters, or

perhaps another grown-up member, or friend. Look for the boys of the family, and you will find them in the midst of an admiring group of other boys, detailing for their edification what the doctor said, or how Johnnie looked, or what a bully time he was having, now mother was most of the time with Johnnie, and so on, while the younger girls, with that affection so distinctive of their sex, are exchanging confidences in whispers, with arms entwined round each other's necks. The mother! Oh, she has been up all night, and has not had time to take her clothes off, but will, as soon as your back is turned, promptly hurry off to the butcher's or grocer's, while the father, thanks to the carelessness of his employer (if he be not a Grand Trunk employee), will serenely keep on at work, infection or no infection. At length—say after three or four weeks (and if you are busy you are quite liable to forget which, yielding to a hurried inspection and the entreaties of the friends and mother)—disinfection is ordered; the officer asks the family how many rooms require to be disinfected, close off the rest with newspapers pasted over the cracks, and start a couple of pounds of sulphur on their malodorous and mischievous career. At the end of six hours, windows and doors are thrown open, house aired, and family returns with a childlike faith that all is well and scarlatina stamped out—in *that* house, at any rate: If the price we pay for this sort of thing were not measured out in the life blood of our children, and sometimes the children's mothers, would it not be funny enough to embody in a comic opera? Yes, I grant you, I have perhaps combined one or two, or even three families into the one which has been cited as an example, and perhaps taken the worst three of the list, but have you not yourself seen some such precautions to transmit the disease as I have mentioned taken? During a little over three and a half years' practice in Montreal, with an average number of cases of scarlatina and diphtheria in my note-book, I have only been able to have isolation carried out perfectly *once*. What if, in some cases, children are sent to the infectious diseases hospital, and all precautions taken to prevent the spread of the disease, still, a chain is only as strong as its weakest link, and where, as is the case, so many are neglected, what inducement is there to do one's duty, beyond the desire that at least at your door there shall not lie any criminal negligence marked with a small mound of earth. Although the statement may

seem harsh, it is as well to face the truth squarely, if the physicians and Board of Health wished, in this city, in five years hence, scarlatina would be as rare and as much dreaded as small-pox now is. Other places have succeeded with isolation; why not Montreal? During a residence of six months, in the summer of 1893, in the White Mountains of New Hampshire, it was my good fortune to see one case of scarlatina, and it did one's heart good to see how thorough were the means employed to effectually isolate the case, and keep a popular summer resort, where annually some fifteen or twenty thousand people assembled, free of the disease. Isolation, properly carried out, resolves itself into two forms: (1) Isolation at home, and (2) isolation in a public institution especially prepared to deal with infectious cases. The former is necessarily the more difficult, and can only be effectually carried out by means of eternal vigilance on the part of the attendant, and an intelligent co-operation of those isolated, with a necessary submission to some of the discomforts which is the price those pay who wish to partake of the advantages and benefits of living in a large community in health. And first, of the medical attendant. There are in Montreal, as in all large cities, men who will deliberately hide a case of scarlatina, and so long as one of this class remains, just so long will he be a standing menace and danger to the public health. Many a pilot has had his ticket suspended for guiding the ship entrusted to him carelessly, and more than one lawyer has had his name crossed off the rolls for shady practice in a court of justice. An injury done to a ship may be mended, and an injustice done in a court may be rectified, but a life lost through criminal negligence may never be called back, and the punishment of an infringement of the law, requiring infectious cases to be reported within twenty-four hours, should be equally rigorous, if not more so. I would suspend his license to practice in the Province for six months for the first offence, and revoke it altogether for a second. Next as to the patient: this is more difficult. The patient may employ a medical man, and fail to carry out his instructions; here much may be done by the municipal or provincial board of health. I remember, about two or three years ago, some excellent little pamphlets being distributed by the Montreal Board of Health giving some common sense advice, and a rough sketch of the infectious diseases, and the means of disinfection, etc., recom-

mended to be employed. This was excellent, but it did not happen again. Why? Probably no money to waste (?) on printed pamphlets. They should be distributed every year. None so forgetful as the public. A good business man advertises every day of the year, and if the Board of Health really wish to educate the public, it must keep at it year after year; better have too much of such literature in a house than too little; better exaggerate the danger than underestimate it. Again, the patient or parents may not employ a medical man, but with some experience of former cases, may diagnose the illness, and if fairly mild, say nothing. In these cases the fullest opportunity should be given for the report of neighbors, etc. The people should be taught that it is not telling tales or spying; it is a duty they owe to themselves and their families; and the Government should allow the same privileges to letters addressed to the municipal or provincial health officer as is granted to letters addressed to the Postmaster-General—they should be free of postage. Next, as to the hospitals: We have to congratulate ourselves on the existence in our midst of an institution which has done more to help destroy scarlatina and impress the public than would have appeared possible even five years ago. Surely an institution which has found its way into the confidence of the people of this city, as the Montreal Civic Hospital has, is deserving of the highest praise, and speaks volumes for the unremitting care alike of medical attendants and nurses; but even hospitals have their limit of usefulness; they need an auxiliary, a convalescing home, where, in the regular routine, children should be sent. I recall three cases of scarlatina traced to a convalescent from the Civic Hospital after confinement for the regulation six weeks, when apparently all possibility of infection had disappeared.

As to the method of isolation, when carried out at home, in this most infectious of all contagious diseases, it must be most thorough. In the event of other children being in the house, school must be strictly forbidden, as well as playing in the streets with other children, and school authorities notified. If a self-contained house, then the patient's room will be upstairs, and the rest of the family downstairs. All carpets will have been removed and floors gone over with a damp cloth, to remove all dust—not washed. Light, and lots of it, with fresh air in plenty, and every trace of furniture,

except what is absolutely necessary, removed. Of the various antiseptics, such as Condy's, etc., I have little experience and less faith, and prefer to depend on one or two sheets kept moist with a strong carbolic solution, say 1 in 40, and suspended inside the door, and reaching to the floor. Cups, plates, spoons, etc., should either be dropped into boiling water at once after use, or else allowed to stand some time in a carbolic solution. Bed linen, night dresses, towels, etc., should steep forty-eight hours in a 1-80 carbolic solution prior to boiling. Where it is possible and necessary for the nurse (perhaps mother) to go out to purchase commodities, another dress should be donned, leaving the old one in the sick room. These precautions, with a fair amount of common sense, will usually be sufficient. With reference to the isolation of the dwelling, the placards should be placed where they will be seen, i.e., outside the usual door of entrance of the house, and each disease should have its color—say red, with white letters, for scarlet fever; white, with red letters, for diphtheria; and yellow, with black letters, for small-pox. As things are now, one has to look for the sign in a dark stairway, the object apparently being to comply with the letter, and evade the spirit, of the law. No one but the medical attendant should be permitted to go inside the door except as noted above. The public are fairly easily led; one false alarm of fire has killed more people than many a good-sized conflagration, and when the public see that the authorities dread the disease so much, it will not be long in having a wholesome fear of it also.

But when the Health Department comes to the most important part of the duty entrusted to its care, what shall we say of it?—for proper disinfection is undoubtedly the most important item in the prevention of the spread of the disease. It is true, sulphurous acid gas is a very efficient disinfectant, but —! There is only one perfect system of absolute certainty in disinfection, and that is by superheated steam under pressure. This, obviously, is impossible in a room. In my opinion, chlorine gas comes next, and to efficiently carry this out, the room or rooms should be sprayed by a small portable steam jet spray, to provide the proper moisture, and then chlorine liberated by the action of sulphuric acid on common rock salt. Everything portable, and absolutely every article of clothing, should be removed in special vans, subjected to the action of superheated steam

in proper sterilizers, and returned in other vans. It will not injure the most delicate fabric, and is absolutely certain; and in this connection Dr. Hocheegee's ink for a test stamp is valuable as showing that the temperature has exceeded 212 degrees Fahrenheit. It is alum acetate, 150 parts; *alizarine paste (25 per cent.), 5 parts; water, 150 parts. A temperature of 212 degrees Fahrenheit or over will turn this ink from a brownish red to a bright red, and a piece of fabric enclosed with the object to be sterilized will give absolute proof of having been subjected to not less than the proper temperature, and finally, a visit by the health officer two weeks after disinfection to see if there be any case of sickness in the family.

Of course, the precautions named look excessive; but are they? Properly carried out, would they be any more irksome than the present ones? Is the game worth the candle? I think so. If we can afford to keep a sharp lookout at our borders for diseases, and to do so think it no false economy to maintain an efficient quarantine staff, where is the inconsistency of applying the principle to a disease (or two diseases), which annually carries off a terrible number of victims.

Here are the figures for 1894 for the city of Montreal, given in order of largest number of deaths:

Diarrhoeal diseases, 1,069; French, 906; English speaking, 151; strangers, 12.

Pulmonary tuberculosis, 589; French, 383; English speaking, 203; strangers, 3.

SCARLET FEVER, 503; French, 295; English speaking, 203; strangers, 5.

Diphtheria, 212; French, 153; English speaking, 57; strangers, 2.

In the County of Hochelaga, excluding St. Henry, St. Cunegonde and the city of Montreal, the deaths were:

SCARLET FEVER, 77; French, 65; English, 12.

Pulmonary tuberculosis, 72; French, 56; English, 16.

Diphtheria, 31; French, 27; English, 3; strangers, 1.

For the county this brings the figures to:

Pulmonary tuberculosis, 661.

Scarlet fever, 580.

Diphtheria, 243.

* Alizarine-yellow C., a derivative of pyrogallol, a pale yellow powder soluble in alcohol and glycerine, almost insoluble in water, used in Dermatology as a substitute for pyrogallol.

In 1893 an outbreak of small-pox in the Province rightly called forth all the energies of the Board, and the disease was stamped out at a cost of 151 cases and 32 deaths. How much money it cost, the report says not; but here is a disease, the third largest on the list in 1894, and not far off for 1895 and 1896, annually taking away almost as many as consumption, over twice as many as diphtheria, and a little over eighteen times as many as the small-pox in 1893, calmly going on. If I have spoken somewhat plainly, do not the facts warrant it? I do not speak disparagingly of the Provincial Board, for they are doing good work, and doing some of it well; but is it not possible that some of it has suffered a little oversight? If isolation and vaccination stamped out small-pox, then, in my humble opinion, isolation and proper disinfection will stamp out scarlatina.

CAUSES PREDISPOSING TO INFECTION.

By A. J. RICHER, M.D.

Lecturer on Physiology, University of Bishop's College.

Roux has said, in his usual plainness of language, "We become infected only through our carelessness or ignorance." This sounds perhaps too much like laboratory talk, but its truth stands out prominently nevertheless, even in ordinary life. "The door is left open to infection," has said Bouchard, "if we neglect to treat our minor ailments, as these are signs of reduced or impaired vitality, meaning the impossibility of resisting the effects of micro-organisms."

In considering the predisposing causes of infection, one must deal separately with the following factors: First, Heredity—As the physical characters of the parents are usually transmitted to the child, it is reasonable to believe that to certain anatomical elements, analogous, constitutional and biological elements are also implanted; this fact has been well brought out by experiments made with pregnant animals, infected, notably, with anthrax, the toxic secretions of which leave their impression upon their offspring (Brauell, Arloing, Malvoz, Chamberland, Strauss).

Second, Diathesis—As a predisposing cause to infection is now generally admitted, and perhaps the most potent fact is the frequency with which diabetic patients give way to infection; gout and scrofula must not be lost sight of in this connection.

Capitan claims that diathesis influences the organism in two ways—firstly, by interfering with cellular nutrition, while also altering the constitution of the cell itself, and this is especially marked in gout; secondly, by these altered cells giving birth to abnormal products, either in nature or quantity, which act as substances favoring the development of micro-organisms.

Third, General Hygiene—The hygiene of the newly-born infant will always determine its powers of reaction with regard to infection, whatever these hygienic conditions may be. Food, aeration, cleanliness, antiseptics of skin, digestive tract, etc., are important factors to consider under this heading, and are worthy of proper interpretation at the hands of the attending physician, as any of these not properly conducted may explain such or such another infectious disease of the future, to all of which the child is above all exposed. We can to-day, with our knowledge of bacteriology, more strenuously insist upon good hygiene, and more clearly define the rules for the better carrying out of the proper hygienic measures. The effects of pure air and mitigated insolation upon micro-organisms are well known; the exaltation of virulence of certain normal inhabitants of the digestive tract through errors of feeding are not by most practitioners ignored, consequently enlightened by these peculiarities of development of microbes, we are better prepared to meet the wants of the organism in order to assist its defence against infection.

Fourth, Age—We know with what frequency certain infectious diseases develop in preference at certain periods of life. In young children, enteritis and tuberculosis are very common; later we meet with eruptive fevers and osteomyelitis, and still later, when bordering upon adult life, typhoid is not uncommon. In adults, infections of the stomach, liver and kidneys predominate, while in the decline of life cancer and lung infections, particularly tuberculosis (which may have been latent for years), are among the most common infections.

Fifth, Sex—Is a factor not to be ignored. Women, on account of the menstrual function, pregnancy and lactation, are exposed to tuberculosis in its various forms, septicaemia, pyemia, erysipelas, nephritis, etc., while men, by their different habits of life, and their tendency to the excessive use of alcohol, are particularly exposed to hepatic, renal and cerebral infections.

Sixth, Meteorological Influences—These are many; thermometric and barometric variations, electric and hygrometric states, altitudes, climates, etc. The augmentation of electrical tension; the marked hygrometric state; the lowering of the barometric pressure are all known to have a marked influence upon phthisical patients, often producing the final crisis, and we can easily understand how these influences, acting energetically upon the nervous system, can react upon the vaso-motor centres and so modify affected, weak or even healthy organisms, lessening phagocytosis, thus facilitating the penetration and future development of pathogenic micro-organisms. One often observes how nursing children will be affected by storms, under the influence of which they often develop symptoms of gastric fermentation, probably due to the too rapid coagulation of the milk. Cold and heat each have their specific actions upon micro-organisms as well as upon living tissue. Cold contracting the peripheral blood vessels forces the dilatation of the internal vascular system, and, added to this, some experiments of Bouchard's have proved that the globules of the blood are altered, cellular reaction interfered with, phagocytosis lessened, leaving the organism a prey to any infectious agent which may have penetrated the respiratory and digestive tracts, to speak only of these. Wurtz has, by bringing down the temperature in animals, been able to determine the passage of micro-organisms through the intestinal walls. Pasteur's classical experiment of cooling a hen (otherwise refractory) to 37 degrees C., after infecting it with anthrax, has always reproduced the disease by this lowering of temperature; Gibier, by elevating the temperature of frogs to 37 degrees C., has always been able to obtain the infection with anthrax, to which they resist at their normal temperature. Heat seems to act more energetically than cold upon epithelial surfaces; its influence upon the central nervous system is sufficient evidence to prove how its influence would modify secondarily the secretions and functions of the different organs.

Seventh, Fatigue—Plays one of the most important parts as a cause predisposing to infection.

Herzen, Arloing, Nocard and Roux have clearly demonstrated the favoring action which lactic acid exerts upon the development of microbes within the organism, and the fact that the muscles during activity secrete notable quantities

of this acid would explain to a very great extent the mechanism by which infection is favored.

Eighth, Traumatism—Experimental medicine has proved the important part it plays in the determination of infection. Hosts of micro-organisms, when inoculated in healthy animals, will not determine any particular infection until a traumatic lesion is made at any one point, as, for instance, over the cardiac region, causing in most cases endo-cardiac infections.—(Hermann, Bouchard, Schuller.)

Ninth, Intoxications—These are often accompanied by impaired nutrition. Alcohol, lead, copper, CO₂ and numberless noxious or irritating gases met with in certain industries, exposing the workers; these hetero-intoxications also prepare the way for auto-intoxicants as well as to expose to direct infection by lessening the powers of defence. Bouchard, Charrin and Roger have demonstrated experimentally that gastric and intestinal auto-intoxications greatly favored the development of the staphylococcus pyogenes in any part of the organism; so we can understand that though the influence is secondary, perhaps to some of the already enumerated causes, yet we must constantly keep these auto-intoxications in mind when trying to unearth the primary cause of an infection, but they must be distinguished from direct auto-infections.

Conclusion—When one considers that the air breathed in a city contains almost innumerable quantities of different micro-organisms per cubic foot; that these, both pathogenic and non-pathogenic, lie constantly in wait for the proper time of admission into the organism, sleeping, so to speak, yet developing in common with saprophytes in our buccal, nasal, laryngeal and pharyngeal spaces, being introduced daily into our digestive tract along with food, must put us on constant guard to prevent infection. We can thus understand how urgent systematic and vigorous antisepsis of these parts are necessary—the skin, the ears, the eyes, the sexual organs are also not to be neglected. Antisepsis of the skin, mouth, nose and digestive tract is worthy of our serious consideration, especially when dealing with weak or debilitated subjects.

Selected Articles.

PROGRESS IN ORGANOTHERAPY.¹

BY AUGUSTUS A. ESHNER, M.D.

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The basis of a great therapeutic advance was established when it was demonstrated by Eiselsberg in 1890 that the clinical syndrome resulting from total extirpation of the thyroid gland—and comprehended in the designation cachexia strumipriva—could be prevented by transplantation of the removed organ in a new situation. Schiff, who in 1856 had observed that extirpation of the thyroid gland was followed invariably in dogs by death, and who was able in 1884 to confirm his earlier observations, found that death could be prevented under these circumstances by grafting a portion of the gland beneath the skin, or within the peritoneal cavity. In 1877 Ord pointed out changes in the thyroid gland in cases of myxedema, and in 1882 J. L. Reverdin called attention to similar changes in the sequence of surgical removal of that gland. In 1883 Semon suggested a causal relationship between the loss of thyroid function and the resulting symptoms; and the validity of this proposition was shortly afterward established by an investigation conducted by a special committee of the Clinical Society of London. In 1890, independently of the observation of Eiselsberg, Horsley suggested grafting of sheep's thyroid in the treatment of myxedema, and a little later this suggestion was successfully acted upon by Bettencourt and Serrano. In the same year Vassale prevented the development in dogs of the phenomena following thyroidectomy by intravenous injection of an extract prepared from the removed gland, and in the following year Murray treated successfully a case of myxedema by hypodermic injection of an extract of thyroid gland. It was soon found that the same good results could be secured by the administration by the mouth of the gland itself or of an extract prepared from it, and the long record of successes that has marked the therapeutic employment of thyroid gland in one form or other elicits the warmest admiration for the scientific acumen and the professional zeal that guided the successive steps by which the underlying principles of organotherapy have been established upon a firm basis.

Within the comparatively short period covered by the discoveries narrated, a vast literature upon the subject has grown up, and the matter has attained an importance the magnitude of which we are even yet scarcely able to realize. Not only has the use of thyroid preparations been extended to the treatment of diseases other than those in which its utility was first demonstrated, but the principle on which this practice is based has been applied to a far wider range of therapeutic purposes; and almost every day brings some new development in this promising field. Already physiologists have succeeded in isolating from the thyroid gland a body designated thyroïodin, which is capable of much of the therapeutic usefulness of the gland itself. The benefits of the new therapy have accrued not only to the physician, but to the surgeon as well; for the latter has learned in the removal of organs physiologically concerned in some way in the bodily metabolism—and few, if any,

¹ Read before the Philadelphia County Medical Society, June 24, 1896.

organs are not so concerned—to leave behind if possible a portion of the glandular structure.

Of the results obtained in the treatment of myxedema and cretinism with thyroid preparations it is scarcely necessary to speak, so uniformly successful have these results been. To insure their permanence, however, the treatment must be persisted in, though occasional intermissions are attended with good effects rather than otherwise. By organotherapy there is supplied to the body a substance or substances essential to metabolic equilibrium, but wanting through glandular deficiency. The effect ceases with the withdrawal of the agent with whose aid that equilibrium is artificially re-established. It must at the same time not be forgotten that the glandular preparations thus used are capable of harm when employed in excess, and appropriate precautions should in all instances be observed to prevent deleterious effects.

In view of the pronounced effects of thyroid therapy upon the cutaneous and subcutaneous and allied structures, as observed in the treatment of myxedema and cretinism, it was an easy step to the employment of the same measure in the treatment of other diseases in which the skin is affected. The results secured in the treatment of obesity with thyroid preparations have been scarcely less successful than those in myxedema and cretinism and do not require extended consideration.

In 1893 Bramwell reported before the British Medical Association cases of psoriasis treated with thyroid extract, with results "at once surprising and gratifying." Others have had a similar experience. A successful result has also been reported in a case of syphilitic psoriasis in which other measures had already been employed without relief.

Believing that the special susceptibility to tuberculosis manifested by cases of myxedema might be due to the absence of thyroid function, Bramwell was led to employ thyroid extract in the treatment of lupus, and the results were so favorable as to suggest the applicability of the same method in the treatment of other forms of tuberculosis. Thyroid extract has further been used in the treatment of eczema, dermatitis exfoliativa, rosacea, universal alopecia, pityriasis rubra, ichthyosis, scleroderma and xeroderma, with varying, though in general not disappointing, results. It has also been suggested that the remedy might prove successful in the treatment of leprosy, erysipelas and carcinoma. In the case of a young woman presenting an hypertrophied scar of the face White observed reduction in the size of the disfiguring cicatrix in the sequence of thyroid therapy in conjunction with topical applications of collodion, after other measures had failed.

Bramwell has reported excellent results from the employment of thyroid extract in the treatment of tetany, and from the association of this disorder in infants with rickets and laryngismus stridulus he has suggested the possible efficacy of similar treatment also in these latter conditions. Perhaps, too, the same procedure might be effective in other spasmodic and convulsive disorders. Cases of tetany successfully treated with thyroid extract have also been reported by other observers.

The improvement in the mental state noted in cases of myxedema and cretinism subjected to thyroid therapy naturally led to the employment of thyroid preparations in the treatment of insanity. According to Bruce the remedy is especially useful in cases of insanity at the adolescent, climacteric and puerperal periods; when recovery is slow; and in cases of long standing with a tendency to dementia. It is counterindicated in cases of mania attended with acute excitement, rapid loss of weight and danger of exhaustion from malassimilation of food.

Reports of the results secured in the treatment of exophthalmic goitre with preparations of thyroid gland have been varied and con-

flicting—improvement being noted in some cases, aggravation in others. In the few cases in which I have adopted this plan the resulting improvement was not greater than I have observed following the administration of strophanthus or the salicylates. Successful results have also been reported from similar treatment in cases of simple goitre, especially of the parenchymatous variety. Relief likewise was afforded in a case of exophthalmic goitre in which thymus gland was administered by mistake for thyroid. In a case of exophthalmic goitre complicated by scleroderma the symptoms of both morbid conditions were relieved by treatment with thyroid gland.

Thyroid extract has also been used in the treatment of cases of rachitis, associated with anemia, with resulting general improvement and gain in weight, but without appreciable changes in the bones.

Having observed in two cases the development of osteo-arthritis in the sequence of removal of the uterine appendages, Macalister learned upon inquiry in a number of other cases that some disorder of uterine or ovarian function had preceded the articular disease. As a result of these and other observations he formulated the hypothesis that the glandular structures of the body elaborate substances that exert a controlling influence over the growth of individual tissues, and that an excess or deficiency of any tissue-element is attributable to the absence or perversion of the secretion that physiologically controls the growth of that particular constituent. In accordance with these views he employed thymus gland in the treatment of a case of pseudo-muscular hypertrophy, upon the assumption that the symptoms of this disease are dependent upon the removal of an influence inhibiting the growth of the fibrous parts of the muscles, in consequence of premature atrophy of that gland; and in a case of lymphadenoma in an old man he administered a mixture of red and yellow bone-marrow in equal parts. Lepine has reported two cases of muscular dystrophy in which dynamic improvement, without other change, followed thyroid treatment.

Looking upon the red marrow of bone as the chief agent in promoting the development of red blood-corpuscles, Mann was led in 1894 to use a glycerin extract of marrow obtained from the long bones of calves in the treatment of anemia, and in a series of cases of varying kind and origin encouraging results were secured. A little later Fraser reported a case of pernicious anemia in which remarkably satisfactory results followed the employment of bone-marrow, in conjunction with arsenic, iron and salol. Since this time a considerable number of cases of grave anemia of varied type have been reported in which bone-marrow was used, and the results, while in some degree conflicting, are on the whole encouraging, and justify the further employment of the remedy. From the evidence that has accumulated there can be no doubt that bone-marrow taken by the mouth is capable of favorably influencing the state of the blood, and as anemia arises from a multiplicity of causes it should not occasion surprise that any remedy will fail in some cases.

In 1894, Bigger reported a case of leukemia, in which recovery followed the therapeutic administration of bone-marrow, after arsenic and iron had been employed without success. Lawrie has also reported a case of leukemia successfully treated with bone-marrow. Bone-marrow, in conjunction with splenic tissue, has also been successfully employed in the treatment of malarial cachexia.

Having observed spontaneous disappearance of the symptoms of exophthalmic goitre in a case complicated by the development of splenitis—probably of traumatic origin—and the formation of a splenic abscess, subsequently evacuated, Wood (4) was led to employ hypodermically a glycerin extract of beef-spleen in the treatment of a later case of exophthalmic goitre, with results that were in every way gratifying.

For a long time physiologists have realized the fatality of total

extirpation of the pancreas, and pathologists had early observed changes in the pancreas in fatal cases of diabetes examined after death. It is, however, only within recent years that experimental removal of the pancreas has succeeded without immediate death; and under these circumstances glycosuria, polyuria and wasting invariably developed. Here again it was found that if a portion of the gland were permitted to remain or were grafted in a new situation the symptoms failed to appear. Pancreatic preparations have been employed in the treatment of a number of cases of diabetes in the hands of different investigators, with resulting improvement in some cases.

It is the consensus of opinion that the symptoms of Addison's disease are dependent upon changes in the suprarenal bodies; and in conformity with this view a number of clinicians have employed suprarenal extracts in the treatment of that disease. Oliver who, in conjunction with Schafer, has made a study of the physiologic action of suprarenal extract, recommends its use also in cases attended with loss of vaso-motor tone, in exophthalmic goitre, in cyclic albuminuria, in diabetes insipidus and diabetes mellitus and in cases of capillary hemorrhage. In cases of anemia thus treated, he has observed a rapid rise in the percentage of hemoglobin. In a case under my observation presenting Addisonian symptoms, no appreciable benefit followed the use of such an extract. Postmortem examination, however, failed to disclose distinctive changes in the suprarenal glands.

It has been shown experimentally that the symptoms resulting from removal of the pituitary body—lowering of temperature, anorexia, lassitude, convulsive movements and dyspnoea—can be prevented by injections of pituitary extract. In some cases of akromegaly relief has followed employment of a similar extract. In the discussion following the report of a case of akromegaly that it was my privilege to make to this Society in 1895. I took occasion to refer to the possible utility of a preparation of the pituitary body in the treatment of that disorder. In accordance with this thought Messrs. Armour & Co., of Chicago, at my request kindly prepared for me such an extract, of which one part of the desiccated product represented seven parts of crude pituitary body. Of this I began the administration of one grain thrice daily, but the patient did not remain long enough under observation, and no therapeutic effect was noted. At about the same period or a little later, Marinisco reported to the Societe Medicale des Hopitaux three cases of akromegaly treated with pituitary extract in which symptomatic improvement resulted. Bramwell and Murray have employed thyroid extract in the treatment of akromegaly, but without pronounced effect.

Actuated by the results secured in the treatment of goiter with thyroid extract, Reinert was led to employ the prostate gland of steers in the treatment of four cases of prostatic hypertrophy, in two of which reduction in the size of the enlarged gland was noted. If the observations be correct the validity of the fact cannot be negatived by *a priori* considerations, although one would naturally look for therapeutic effects from prostatic administration in the presence of symptoms attributable to loss of function of the prostate in consequence of surgical removal or of disease. A parallel statement may be made concerning the employment of testicular extracts. At the same time it is not necessary to deny that from their nature all organic extracts may possess stimulating properties.

The most recent development in the domain of organotherapy consists in the employment of preparations of the ovaries of animals in the treatment of the symptoms resulting from removal of the functional influence of the ovaries in women either at the natural menopause or at that induced artificially by surgical intervention or by disease processes. Observations upon these lines seem to have been made almost simultaneously and independently by Mainzer

and by Chrobak in conjunction with Knauer. To the former belongs the credit of priority of announcement, who reports a case in which relief of symptoms followed use of an ovarian extract. Chrobak had independently conceived the idea that the distressing symptoms so often observed after ovariectomy could be prevented by permitting to remain a portion of ovarian tissue, and that they could be relieved when present either by ovarian grafting or by internal administration of some preparation of the ovary. Acting upon this thought he has of late years in operations upon uterus and ovaries made a practice, whenever possible, of leaving behind a portion of ovarian tissue. He has besides during the past year employed an ovarian extract in a number of cases in which the ovaries had previously been removed, and in one with normal genitalia in which profound climacteric symptoms were present. The results so far as they could be analyzed were satisfactory and encouraging. The experiments of Knauer, undertaken at the suggestion of Chrobak, show not only that the ovaries are susceptible of successful transplantation, but that they are also capable of functional activity in their new situation.

In the foregoing account I have not attempted to enter upon an exhaustive consideration of the whole subject of organotherapy, but have endeavored merely to illuminate some of its more practical aspects. There is much yet to learn, perhaps not a little also to unlearn, but a good deal of what has been accomplished will permanently endure, while the outlook for the future is hopeful and encouraging—*The Philadelphia Polyclinic*, July 4, 1896.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

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TURCK'S GYROMELE IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE STOMACH.

This subject is discussed in the *Therapeutic Gazette* for July, by Edgar A. Planck, M.D., Union, Michigan. He first points out the unsatisfactory results obtained by the ordinary methods of exploration by succession, palpation, inspection and transillumination. "The gyromele consists of a flexible cable, to the end of which is attached a spiral spring covered by a sterilized sponge, which is removable and can be changed. The cable passes through a rubber tube, and is attached to a revolving apparatus for the purpose of producing revolution of the sponge." To determine the location of the greater curvature, the revolving sponge can be palpated as it is passed along this curvature. The determination of the degree of distensibility of the stomach is done by using cables of different degrees of flexibility. To procure material for microscopical examination the revolving

sponges secure, besides the loose material, adherent mucus. It readily procures stomach contents for chemical examination for Hcl., and for ascertaining the activity of the rennet ferment.

For the treatment of gastric diseases it is particularly useful in removing mucus from the walls of the stomach, especially if a solution is used containing one drachm of green soap and one of lysol in a pint of water and done before breakfast or just before the evening meal. In chronic gastritis when this treatment is carried out, Turck's needle-douche is used to get rid of the debris, a fine shower of fluid is thrown forcibly against the walls of the stomach and then removed by a syphon or aspirator. It is effectual also in stimulating the muscular tissue of the stomach by the vibratory movements, leading to increased power and tone; the gyromele may also be used as an electrode. By removing mucus, hyper-acidity is overcome. It has proved beneficial in constipation due to congestion of the visceral vessels and atony of the muscular tissue of the intestines, it increases the circulation in the mesenteric vessels. Dr. Planck cites a specimen case treated solely with the gyromele, and is of the opinion that it supercedes the old method of treatment by drugs.

THE CLINICAL VALUE OF ELSNER'S METHOD OF DIFFERENTIATING THE TYPHOID BACILLUS.

In a recent article Chantemesse calls attention to the value of the Elsner method of differentiating the typhoid from the colon-bacillus, and of isolating the typhoid bacillus from the stools.

He states that out of sixteen cases he was able to obtain the typhoid bacillus by this proceeding in thirteen, and notes that in two of the three unsuccessful attempts the failure was probably due to imperfect technique.

Of the thirteen cases three merit special attention, as the bacteriological examination was of great value in clearing up the diagnosis. In the first of these cases a young girl was admitted to the hospital, and after some days of fever a probable diagnosis of typhoid was made; the temperature, however, dropped suddenly, and the clinical diagnosis was doubtful, but was cleared up by finding the bacilli in the stools. A second patient was admitted in an alcoholic condition, complaining only of weakness. He had no fever, and at first was supposed to be a paretic with alcoholism, but an examination of the stools revealing the presence of typhoid bacilli, a history of a recent attack of typhoid was elicited.

A third patient was admitted to the hospital, afebrile, with photophobia; contraction of the fields of vision, and hemianaesthesia. The case was thought to be one of hysteria,

but typhoid bacilli being found in the stools, a history of the patient having had fever, diarrhoea, and vomiting fifteen days before admission, was elicited.

Chantemesse points out the fact that by means of this medium an early diagnosis can be made, and obscure cases can be cleared up.—Comptes Rendus de la Societe de Biologie, March 5, 1896, in *American Journal of Medical Science*.

Lazarus (*Berliner Klin. Woch.*, 1895, No. 45, p. 1068, *Medicine*, July, 1896) has made a clinical test of Elsner's method of diagnosing typhoid bacilli. He adds one per cent. of potassium iodide to Holz's acidulated potato-gelatin. Upon this medium the bacterium coli develops rapidly, forming at the end of forty-eight hours coarsely granular brown colonies. The typhoid bacillus, on the other hand, grows more slowly, the colonies at the end of forty-eight hours appearing like small, glistening drops of water with very minute granulations.

The stools of five patients with typhoid gave positive results during the first, second and third weeks of the disease. After the subsidence of fever, bacilli were occasionally found, in one case as late as forty-one days after defervescence. Repeated examinations are necessary, as negative results were shown at times to be false by positive findings at a second examination. In one case of typhoid, where remittent fever persisted, the bacilli were found in the stools even up to the ninth week. Negative results were always obtained in patients suffering from non-typhoidal disease of the intestines.

LAWRIE'S VIEWS OF THE MALARIAL PARASITE.

In an editorial in the *British Medical Journal* for May 16, 1896, the writer further reiterates a previously expressed opinion that the view of Surgeon-Lieutenant-Colonel E. Lawrie, of Hyderabad, regarding the conception that Laveran's bodies are not in the nature of parasites, is entirely wrong. Dr. Lawrie is credited with a statement to this effect, upon the truth of which he still insists; and, considering the present position of sanitary affairs in India, and the possibility that public opinion may be influenced by either of the opposing views on this subject, the editorial in question deemed it advisable to repudiate once more Dr. Lawrie's views. It seems that Dr. Lawrie has stoutly asserted that Laveran's bodies are not parasites, and that the figures and descriptions of those bodies given by distinguished writers are misleading; and that the bodies in question are neither

more nor less than white blood-corpuscles in various stages of development, variously altered by a true cause of malarial disease, which he considers is still unknown. The editorial referred to considers that Dr. Lawrie's views are founded on an absolutely novel doctrine regarding the origin of white blood-corpuscles,—viz., that at its earliest stage the red corpuscle is nucleated, the white corpuscle being derived from the nucleus of the young red corpuscle,—in fact, that it is the nucleus of the latter which has escaped and become free in the blood plasma. According to Dr. Lawrie, the evolution of white corpuscle takes place principally in the spleen. When this organ becomes diseased by malarious influences, the escape of the nucleus of the red corpuscle does not take place, evolution is arrested, and the still nucleated red blood-cell passes into the general circulation. It is this nucleus which Lawrie holds to be Laveran's body, which is, he says, an immature white corpuscle. Thus the whole of Lawrie's theory in this matter hangs on a question of physiology,—the origin of the white blood-corpuscle. Views on this point have hitherto, it is true, been somewhat indefinite, but no one has ventured to assert that the white corpuscle originated from the red corpuscle, though a possibility of the reverse has in some instances been suggested. The slender evidence advanced by Lawrie on a theory so diametrically opposed to the accepted views of leading physiologists would cause one to hesitate in accepting it. If Lawrie's views as to this origin of the white blood-corpuscles are wrong, it necessarily follows that that which hangs on these views—his theory of the nature of Laveran's bodies—is also wrong. The writer believes that the descriptions and drawings of Laveran, Marchiafava, Golgi, Mannaberg, and many others are substantially correct, and that Laveran's bodies are genuine parasites; moreover, that they are the cause of malaria,—not, as Lawrie would have us believe, one of its effects. The suggestion is made that the bodies found by Lawrie in the spleens of frogs may be the sporulating forms of drepanidium, or of dactylosoma, or of some other and similar intracorpuscular parasite, and that he may have been misled in this way.—*International Medical Journal*, June, 1896.

ON THE LIFE HISTORY OF THE MALARIAL GERM OUTSIDE THE HUMAN BODY.

By PATRICK MANSON, M. D.

(*British Medical Journal*, March 14, 21, 28, 1896.)

The plasmodium enters the human body for one of three reasons: First, a residence there is in some way necessary for its evolution and existence as a species; second, it may enter

accidentally, and find a suitable medium in which to maintain itself, but not to propagate its species; third, it may find not only an asylum, but also a suitable place in which to propagate its species, although it possesses other hosts or media elsewhere in nature, that is to say, man may be an alternative host and the malarial infection of man an example of optional parasitism. As malaria abounds in the tropical wildernesses, the first cannot be true, nor can the entrance be purely accidental, since exposure is almost certain to result in infection; it must, therefore, be a case of optional parasitism. The earliest extracorporeal form is the flagellate body. This appears upon the slide about fifteen to twenty minutes after the blood is drawn. It contains particles of melanin in active motion, and at times a flagellum breaks away and swims about in the plasma with a spirillum-like movement. The flagellate body arises in this wise: at certain times in ordinary tertians, large pigmented intracorporeal forms are seen, and some large spherical bodies not enclosed in red blood-cells; occasionally an enclosed form may be seen to escape and become a free body. After a time the pigment in the free body becomes violently agitated, the body itself is contorted and jerked about, and then suddenly long flagella are projected from its circumference and begin waving about. In certain chronic malignant forms, crescents are also found,—that is, crescent-shaped intracorporeal bodies with a mass of pigment in the centre. After the blood is drawn these gradually assume a spherical form, the pigment commences to be agitated, and finally the flagellate body is formed as from the spherules. Now this transformation must be either a degenerative change or a vital evolutionary one. That it is the latter is indicated by its definitiveness of form, by its movement, and by its adaptation to a certain definite purpose in the life-history of the organism. The movement of the pigment is not of the nature of the Brownian movement. Under favorable conditions, one of which is a temperature below that of the human body, nearly all the crescents and spherules develop into this form, and it can be found in nearly every case if carefully sought. The flagellum probably represents the spore of the rosette form, and the crescent bodies and the spherules of the tertians and the quartans are the extracorporeal homologues of the intracorporeal sporulating bodies. It is not impossible that the flagellate bodies arise from conjugation forms, the result of multiple infection of a blood-corpuscle. The exit of the plasmodium from the human body must take place either by its own active efforts, or as the result of hemorrhage, or as the result of some outside influence, such as a suctorial parasite, and the close analogy between the plasmodium and the filaria, as well as the asso-

ciation of malaria and mosquitoes in various regions, renders the last explanation not unlikely. In the human blood, the corpuscle acts as a protection to the organism, for when the spores burst out, the phagocytes actively attack and envelop them; and the same is true of the extra-corporeal flagellate forms upon the slide. At the suggestion of Dr. Manson, Surgeon-Major Ross, of India, undertook to make a careful study of the relation of the mosquito to the malarial parasite, selecting those cases in which the crescents were common. It is obvious that one of only three results must occur in the body of the insect; first, the plasmodium would be killed; second, it would behave exactly as upon the glass slide; third, there would be a rapid development into the flagellate form. From the examination of blood from mosquitoes that had been fed upon a patient suffering from malarial cachexia, Ross concluded that: 1, almost all the crescents are converted into spheres shortly after they enter the mosquito's body; 2, the spheres are always found, at first with the pigment massed in the centre, next with the pigment particles in a state of violent agitation, whilst the whole cell acquires a jerking movement; 3, the flagellate organism may be found from seven to thirty-five minutes after the blood is drawn, the whole manifestation ceasing in a very few minutes; 4, spent spheres or pigment masses—that is, the discarded bodies of the flagellate forms—are seen at first in small numbers, later they increase; 5, phagocytes containing spheres and pigment begin to be seen later than the free spent pigment; 6, about thirty per cent. or forty per cent. of the spheres fail to throw out flagella. Quinine appeared to have a paralyzing effect upon the plasmodium, and its evolution was delayed. Water in which some of the fed mosquitoes had died was given to a healthy native, and eleven days later he had headache and a rise of temperature, and plasmodia were found in his blood; in other instances this experiment did not succeed. There remains yet the careful tracing of the flagella to their resting place in the cells of the mosquito and then a study of their further existence. Certain objects must be considered: 1, mosquitoes exist where there is no malaria, but it is easy to imagine that other conditions are necessary to the existence of the parasite; 2, malaria is said to exist where there are no mosquitoes, but this Manson, after careful enquiry, doubts; 3, certain students believe that the flagellate form is a degenerate stage. Manson considers that the most serious objection is the fact that the cycle has not yet been completely made out.—*International Medical Journal*, June, 1896.

PRACTICAL AIDS IN THE DIAGNOSIS OF
PERICARDIAL EFFUSIONS IN CONNECTION
WITH THE QUESTION AS TO SURGICAL
TREATMENT.

By WILLIAM EWART, M.D.

The author enumerates the following characteristic signs of pericardial effusion: 1. Considerable extension of the lateral boundaries of the total area of dullness. 2. Great extension of the absolute dullness, the sternum absolutely dull. The latter is due to separation of the lungs, and is not pathognomonic, as it may be caused by a dilated heart. 3. Depression of the liver. In obesity the liver is apt to rise, although the area of pericardial dullness is increased. 4. Rotch's sign, —dullness in the right fifth intracartilaginous space; this may also be caused by enormous distention of the right auricle. 5. The lower angle of pericardial dullness projects towards the right; this can never occur as a result of cardiac enlargement. 6. The apex-beat is somewhat within and above the area of dullness of the left side in pericardial effusion, at the extreme limit of the dullness in the case of pericardial enlargement. In pericardial effusion the apex is never raised, occasionally, indeed, as a result of the depression of the diaphragm, it is lowered, but an impulse from the base may sometimes be felt in the third interspace. Among the thoracic signs may also be mentioned the great resonance of the upper part of the chest, the activity of the costal breathing, the bulging of the left half of the thorax, and the altered relation between the clavicle and the first rib. 7. The first rib sign: the upper edge of the first rib may be felt as far as the sternal attachment, but the rib continues to move with respiration, and is not fixed as in emphysema. 8. The posterior patch of pericardial dullness is found at the left inner base, and extends laterally usually not quite as far as the angle of the scapula, and vertically to the ninth or tenth rib with an abrupt horizontal boundary, the patch being shaped something like a square. It is an area of partial dullness only and is pathognomonic. 9. Tubular breathing below the left mamma. 10. The posterior pericardial patch of tubular breathing and ægophony. 11. Secondary pleural effusion. 12. Large and slapping pulse. Of course, all these signs may be greatly modified by the presence of pericardial adhesions.—*British Medical Journal*, March 21, 1896.)

CONCERNING LOCALIZATION IN THE OCULOMOTOR CENTRES.

By STEFAN BERNHEIMER, M.D.

Dr. Bernheimer extirpated certain ocular muscles innervated by the third nerve, and investigated the changes in the nuclei by the method of Nissl. He noticed :—

1. Changes in the nuclei twelve to fifteen days after the operation. The period required was longer than that stated by Nissl as necessary for such alterations in the nucleus of the seventh nerve after a similar experiment.

2. These changes occurred only when the muscle was entirely extirpated and not merely cut through.

3. They were similar to those stated in the description given by Nissl for the seventh nucleus. The chromophilic elements and the cell-nuclei were involved. The cells became round, the processes were less distinct or absent. Fourteen days after the operation little was to be seen of the structure, and the cell-body appeared almost homogeneous. The degenerative process was not equally advanced in all diseased cells.

4. When all four external muscles innervated by the third nerve were destroyed in a rabbit and the nuclei examined fourteen days later in a series of forty-five sections, counting from behind forward, a great number of altered cells were noticed on both sides of the median line in the first thirty sections, and these were more numerous on the side opposite the lesion. In the proximal end of the centre the degenerated cells were less numerous, and in the last eight or ten sections only normally-formed cells were found.

It appears that in rabbits the four external ocular muscles innervated by the third nerve have their centres in the distal and middle portions of the oculomotor nucleus, and especially in the contralateral side, whereas the cells for the internal ocular muscles are located in the most proximal portion.—*Wiener klinische Wochenschrift*, January 30, 1896, No. 5; *International Medical Magazine*, June, 1896.

PHARMACOLOGY AND THERAPEUTICS.

UNDER CHARGE OF

ROBERT WILSON, M.D..

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ACTION OF SALOPHENE IN CHOREA.

Pierre Marie reports the results of using salophene in various diseases, especially chorea, and reports the case of a girl of 16 presenting all the symptoms of an attack of genuine Sydenham's chorea. On the ninth day of the disease he prescribed 4 grms. (60 grs.) of salophene in 6 doses.

This was followed by improvement and complete recovery in ten days. The author, while not venturing to claim that this rapid recovery was due to salophene alone, points out that the attack was undoubtedly genuine Sydenham's chorea, and not hysterical, and that therefore suggestion played no part in the recovery.

(Salophene is a salicylate of amidophenol, a derivative of salol, and used as a succedaneum for that drug, as it does not, like the latter, split up into salicylic and phenic acids in the intestines, but into salicylic acid and acetyl-p-amidopenol. It has been lately recommended for neuralgia, rheumatism, and especially for influenza complicated with nervous disturbances. Usual dose, 6 to 8 grams every two or three hours.)

TRIONAL AND PHENACETINE.

Next case of bad headache you get, with insomnia and restlessness, try ten grains of phenacetine, pulverized in a mortar, with five grains of trional, and repeat, if necessary, in an hour. The mixture gives splendid results.

VERATRUM VIRIDE.

I must admit that I have always had a soft spot in my heart for veratrum viride, and am more than half convinced that in this case at least "The Diel's no sae black as he's painted." I have yet to be convinced that, given a case of sthenic lobar pneumonia, and *ceteris paribus*, bleeding is going to work harm, and it is equally hard to understand why bleeding out of the body, and removal, for some time at least, of 8 to 10 oz. of blood should be better than bleeding into the vessels, with lessened heart force. In deference to our almost universal prejudices, I have only used the drug twice in the condition named, nor have I regretted so doing, and shall certainly use it again when opportunity offers.

With reference to its administration: Although in the United States the fluid extract (in doses of 1 to 3 drops) is preferred, and extensively used, I have used the tincture in 2 to 10 drop doses, commencing with the two drops and increasing until the pulse fell to 70 or 75, administering the remedy every hour, with a precautionary dose of tincture of opium, 10 to 15 M., given half an hour before commencing. Dropping of the pulse-rate, profuse sweating, or the onset of nausea, are signals for the withdrawal of the drug. Certainly in both cases I have seen the patients, from a hot, semi-delirious condition, with rapid, high tension pulse, bounding along at 140 or 150 a minute, breathing labored and cough severe, pass, in three hours, into comparative quiet,

with moist skin, eased respiration, softened pulse, and calmed and quietened cerebral circulation.

Of course, like every other article of the pharmacopœa, it has its uses, and may have its abuses, and although comparatively safe, is not to be trifled with. The best test I know of as indicating its exhibition is to ask one's self, "Would bleeding do this patient good?" If you answer the question affirmatively, then veratrium will do the bleeding, and more, and still keep the patient with his 10 or 12 ounces of blood in his circulation.

Now, is heart disease a contra-indication—that is, in certain forms? Its action on the spinal nerves in lessening reflex irritability, and causing vaso-motor dilatation, with eased heart action, point to its use in a condition where digitalis is contra-indicated, i.e., valve lesions with hypertrophy. In all asthenic types of fever, it is not only contra-indicated, but will work positive and perhaps irreparable harm. In speaking of the tincture, it is well to remember that a saturated tincture, known as "Norwood's Tincture," is also prepared, the dose of which is considerably less than the ordinary tincture, (one-half to two or three drops). In general practice the ordinary tincture will be found very efficacious, prescribed either pure, and measured with a medicine-dropper, or put up into a 4-oz. mixture, with syrup of orange, and teaspoonful doses of two minims each, directing the nurse to double the dose for three or four consecutive hours, watching the pulse carefully meanwhile, and always commencing by a preliminary dose of morphine (1-4) or tincture of opium (10 to 15 π).

AMAUROSIS PRODUCED BY MALE FERN.

* Dr. Grosz (*Ann. d'Ocul.*, 1895) report a case in a man of 25 (who took about 8 grams.—2 drams) of combined ethereal extract of male fern and extract of pomegranate preceded by syncope and severe diarrhoea.

Prof. Masius (*Med. Weekly*, 1895) undertook some experiments to determine the cause of the amaurosis, and determined the primary lesion was vascular, consisting of a proliferation of capillaries with cell-infiltration of the perivascular space, determining at an early date strangulation of the optic nerve in the foramen opticum.

Poulson, of Strasburg, has shown that of the extractives of male fern, crystalline filicic acid is neither a poison nor a vermifuge, while the amorphous filicic acid possessed both in a high degree.

Van Aubel (of Liege), attributes the amaurosis to the filicic acid which stimulates the spinal cord, and might by extending to the sympathetic system, cause dilatation of the

* Pediatrics, June, 1896.

pupils, stimulation of the vaso-motor nerves and constriction of the central arteries of the retina; on this hypothesis strychnine and nitrite of amyl be useful remedies.

FORMALIN IN GONORRHŒA.

Rarely has a drug made such rapid progress in general favor as has the 40 per cent. solution of formic aldehyde, known as "formalin." Formic aldehyde, an oxidized methyl alcohol, is a powerful antiseptic and germicide, perfectly innocuous to tissues, and efficacious in from 1-2 to 2 per cent. solutions, the latter powerful enough for all purposes.

Recognizing the microbic origin of gonorrhoea, several observers have tried this remedy in this disease, and, while the cases reported are neither numerous enough nor diverse enough to base any conclusions upon, they are sufficiently satisfactory to warrant a perseverance and further trial.

The strength of injections or irrigations used have varied, but usually from 1-4 to 1-2 per cent. will be found quite strong enough, and as strong as the patient will bear at the first two sittings.

In acute cases, no dilatation will be necessary, and no complications of the testes need be feared, but in old standing cases, dilatation up to 22 or 24 French is absolutely essential, with subsequent flushing out by a reflow catheter, with a quart or two of 1-2 per cent. hot formalin solution. A final instillation of 2 to 5 gr. to the oz. of nitrate of silver solution by means of a (Guizon) instillator may be necessary.

OPHTHALMOLOGY.

IN CHARGE OF

J. W. STIRLING, M.B. Edin.

Professor of Ophthalmology and Otolaryngology, University of Bishop's College, Ophthalmologist,
Montreal Dispensary.

ELECTRICAL TREATMENT IN EYE DISEASES.

REUSS.—*Wiener Klinische Wochenschrift*, May 14, 1896.

Reuss says the current acts by the to and fro current of the blood, hereby removing morbid products and improving nutrition.

In Episcleritis and Scleritis, R. uses the galvanic current, the indifferent electrode being placed on the forehead or cheek; the other electrode, after cocainizing the eye, being placed on the sclerotic area.

The latter pole, whether anode or kathode, depends on the sensitiveness of the patient, and also whether a weaker or stronger current is desired.

The strength used is generally 1 to 15 M.A., rarely 2 M.A., the duration being one to one and a half minutes.

The result is immediate marked increase of injection, and sometimes a bleb of mucus at the spot of application; there is also sometimes slight pain, which disappears in a few hours.

Ten or twelve sittings in all, one every second day, generally suffice. In the great majority of cases Reuss got a good result.

The faradic current Reuss found to be of much service in relieving pain in iritis and cyclitis, although it had no direct effect on the inflammation.

The same relief is experienced in the pain of acute inflammatory glaucoma.

AMBLYOPIA DURING NURSING.

HEINZEL.—*Beitrage zu Augenheilkund*, xxi., 1895.

Heinzel reports three interesting cases of optic neuritis occurring in mothers nursing their infants.

In all of them optic neuritis was well marked, and resulted only in partial recovery, some atrophy ensuing.

Heinzel thinks the cause was auto-intoxication, due to lactation.

Knies, in his classical work, holds that lactation merely acts as a debilitating factor.

REFLEX OCULAR EFFECTS DUE TO EAR DISEASE.

URBANTSCHITSCH.—*Wiener Klinischer Wochenschrift*, January 2, 1896.

A short resume of this very instructive article will not be uninteresting.

1. Nystagmus, generally oscillating, rarely rotary, can arise from irritation of the outer, middle or inner ear, and also of the nerves or centres.

Syringing the ear, especially with cold water, can set it up, also the presence of cerumen, foreign body, insect, polypi suppuration, and finally morbid states of the occipital lobes or thrombi of the sinuses.

The eyes have a tendency to turn toward the side in which the exciter is.

2. Strabismus is a rare aural reflex.

The author mentions a case of convergent strabismus of two years' duration, which almost completely recovered on the cure of the ear disease.

BACTERIOLOGICAL ETIOLOGY OF THE DIFFERENT FORMS OF ACUTE CONJUNCTIVITIS.

MORAN AND BEACH.—*Archives of Ophthalmology*, January, 1896.

This exhaustive article is of interest as giving a fair indication of our present knowledge of the subject.

Taking the various forms of conjunctivitis seriatim, they start as follows:

1. Acute contagious conjunctivitis of the catarrhal type—A small specific bacillus has been found, which was discovered by Koch in Egypt and Weeks of America.

This disease is quite distinct from the simple catarrhal non-infectious conjunctivitis.

2. Gonorrhoeic form—The presence of the gonococcus is the characteristic.

3. Diphtheritic form—True diphtheria bacillus present, and its presence is main diagnostic point to distinguish it from the pseudo membranous form of conjunctivitis. Again it is only in the true form that the anti-diphtheritic serum acts.

3. Paralysis of the superior oblique, following aural supuration, has been reported by Moos.

4. Gelle reports unilateral pupillary disturbance from irritation in the outer and middle ear. Mydriasis (temporary), following operation on ear, aural inflammation, and also from rarefaction or condensation of air in an ear with intact membrana tympani.

FORMALIN IN EYE DISEASES.

GUAITA. *Annali di Ottalmologia di Suaghiud*, August, 1895

DAVIDSON MACKENZIE, *British Medical Journal*, Jan. 18 1896.

Both these authors, and especially MacKenzie Davidson, of Aberdeen, laud the action of this drug as a non-irritant antiseptic for eye surgery.

The hourly instillation of 1-3000 solutions of Schering's Formalin are what Davidson advises.

Guaita urges stronger solutions, 1-1000, and in such strength as a good preservative for the various alkaloids, which it does not precipitate.

In Davidson's cases the action in purulent ulcers, hypopyon, etc., was certainly remarkable.

3. Pseudo membranous conjunctivitis of streptococcic origin occurs mainly in children during decrudescence of measles, scarlet fever, sometimes is associated with impetigo of the face, may give rise to very serious corneal lesions. The secretion contains mainly the streptococcus.

4. Conjunctivitis accompanying inflammatory states of the lachrymal sac, it is very infectious and may be associated with hypopyon; streptococci are ordinarily found here.

5. Conjunctivitis of pneumococcic origin, generally benign type of childhood accompanied with coryza and watery eyes.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, April 17th, 1896.

F. G. FINLEY, M.D., First Vice-President, in the Chair.

ICHTHYOSIS HYSTRIX.

Dr. G. Gordon Campbell showed a photograph of a remarkable case of this disease. The patient, a boy aged seven years, was born in Vermont, and, except for the discomfort caused by the cutaneous lesion, had always had good health. The family history was negative; one sister, three years of age, showed no tendency to xeroderma. The eruption was first noticed, three weeks after birth, as a thickening of the skin of the palms and soles; and since then, although there had been marked improvement at times, the boy had never been entirely free from it. The distribution was accurately symmetrical and the intermediate skin perfectly healthy. The palmar surfaces of the hands from the wrist to the tips of the fingers were covered with dark-green horny masses, half an inch in height, and so thickly set together that it was impossible to close the hand. Less prominent warty growths extended on to the backs of the hands, forming a bracelet around the wrist and covering the knuckles and backs of the fingers. The whole of the feet from the ankles down were covered with similar horny growths, thickest upon the soles, and rendering any movement of the instep or toes impossible, except after softening with some oily application. There were also small patches, about two inches in length and half an inch in width, running vertically at the anterior axillary lines and the groins; broad patches on the extensor surfaces of the knees and elbows; and one surrounding the anus and following the fold between the buttocks. The horny growths in these latter localities were not nearly so prominent. Owing to the apparent increase in the size of the extremities, due to the heaping up of epidermis, the condition had been mistaken for elephantiasis.

FOAMING LIVER.

Dr. J. G. Adami showed specimens of a case.

Dr. C. F. Martin recalled two instances of a condition somewhat similar to that described by Dr. Adami. In one, at a post-mortem which he had seen performed in Vienna, the mucous membrane of the urinary bladder had been almost entirely lifted by the emphysema. The *B. coli communis* was suspected, though no bacteriological examination had been made. In the other, a case of septicaemia from streptococcus infection, occurring in this city, a large portion of the ileum presented the same emphysematous appearance. He thought that these two conditions, although not recognized at the time, were probably due to the same cause.

ADHESIONS AND MALPOSITIONS OF THE OMENTUM.

Dr. J. G. Adami read a paper on this subject.

Dr. H. A. Lafleur asked how Dr. Adami could harmonize with his theory the fact that in typhoid fever, in which perhaps more fre-

quently than in any other abdominal disease death threatened from perforation of the bowel, omental adhesions were so seldom found. He had yet to see a case of typhoid fever with perforation in which such adhesions had formed. In appendicitis omental adhesions were common, and in dysentery adhesions between the coils of the bowel were not infrequent.

Dr. N. D. Gunn asked if when fat was laid down in the omentum there was a corresponding increase in the capillaries; if not, then Dr. Adami's statement concerning the vascularity of adipose tissue was disproved. Also, that the presence of much fat in the omentum would greatly interfere with the elasticity which, according to Dr. Adami, was necessary to the protective function which he suggested.

Dr. F. A. L. Lockhart thought that the paper was of as great interest to the abdominal surgeon as to the pathologist, from the important part played in surgery by the omentum in preventing adhesion of the intestines to the abdominal wall. He referred to a case in which the intestines had become adherent in two places to the line of incision, and through the loop thus formed a coil of intestine had passed, and caused obstruction. This would not have occurred if the omentum had been drawn down at the previous operation. The extreme variations in the size of the omentum referred to by Dr. Adami he had frequently observed. That a long and adherent omentum might complicate diagnosis and operation in abdominal work, the following two cases clearly show. He operated, two years ago, on a patient who had double pus tubes, and, on opening the abdomen, had found that the intestines were covered in by a long omentum, which was adherent to the anterior part of the pelvic brim, and which had to be ligatured and divided in order to get at the diseased tubes. The second case was a dermoid of the right ovary, which was held in the vesico-uterine pouch by the right tube and broad ligament on the one side, and by the omentum, which was adherent to the left side of the tumor and extended to the left pelvic brim, where it was also attached. He had frequently remarked the fact that there was less haemorrhage from an abdominal wound in a fat person than in one who had thin parietes.

Dr. Wesley Mills had long held, and often expressed, the view that the study of physiology should not be confined to those who were physiologists by profession, but that everyone connected with the medical profession should endeavor to do something to throw light upon the function of parts in health as well as in disease. He referred to the scant notice taken of the omentum in text-books and discussed some of the probable uses of the organ. He also pointed out the importance of both the circular and longitudinal muscle supply in arteries as elastic structures that often served a good purpose when the elastic tissue proper had been impaired by disease.

CEREBELLAR ATAXIA.

Dr. N. D. Gunn reported the following case of a boy, aged 12 years, of normal somatic development, sluggish cerebration and psychic perversions.

Family history was good, and no hereditary or familial diseases could be traced. The doctor was consulted because of inability to control movements of the legs, spasmodic incontinence of urine, and great pain in the head. Besides these there was violence of temper and sexual excitement.

The incoordination began two months after an injury to the head, which perhaps was only incidental. Besides at this time there were diplopia, vertigo, headache and cerebral vomiting, the latter lasting two months.

Examination revealed static ataxia, with inclination of the body to the right side. Speech deliberate and monotonous. Inability to stand without support. Incoordination of arms. Muscular power

good. Muscular irritability increased. Deep reflexes increased. (Patellar greatly exaggerated, and very slight clonus.)

There was no nystagmus, but there was a choroiditis.

The doctor, on the authority of Brissand, considered the presence of exaggerated reflexes enough to exclude spinal ataxia.

The presence of ankle clonus and the disturbances of the higher centres, shown by diplopia, cerebral vomiting, stasis ataxia and zig-zag incoordination, and the absence of nystagmus, made this case conform pretty closely with Marie's group known as "hereditary cerebellar ataxia," though the element of heredity was here absent.

Dr. James Stewart referred to a very similar case, with, however, a history of ataxia preceding the injury. He thought that it was very difficult to separate cerebellar ataxia from Friedreich's ataxia.

Stated Meeting, May 1st, 1896.

A. D. BLACKADER, M.D., President, in the Chair.

EXCISION OF THE MAXILLA WITH THE USE OF AN ARTIFICIAL
PLATE.

Dr. G. E. Armstrong reported this case as follows: Mr. W., aet. 48, was admitted to the Montreal General Hospital on the 5th March, suffering from a rapidly growing sarcoma, situated chiefly in the anterior of the left superior maxilla. There was nothing unusual about the operation of removal of the upper jaw, which was done by the median incision, but I have brought him here this evening to show the plate which Dr. J. S. Ibbotson, the dentist to the Montreal General Hospital, has made for him. You will see, by examining him, that it consists of an upright plate, which restores the form of the cheek, and a horizontal part, which takes the place of the absent hard palate on the affected side. He seems to wear it with comfort, and when it is in place he can eat, drink, and speak very well. It seems to be a decided success.

THE TROPOMETER.

Dr. Buller showed the instrument and demonstrated its use.

PRIMARY CANCER OF THE URINARY BLADDER ASSOCIATED WITH
STONE.

Dr. W. H. Jamieson reported the case, which will appear later.

Dr. J. G. Adami pointed out the very extensive study and attention that Dr. Jamieson had given to this case. It was worth so much study, inasmuch as primary cancer of the bladder was so very rare, more especially when associated with stone. He recalled a case that he had brought before the Society in 1893, in which also he was dealing with cancer of the bladder; but in this case the cancer was primary in the prostate. In that also there was great difficulty in following out the cancerous manifestation, from the fact that the growth in the bladder-wall became so cellular as to be scarcely distinguishable from a round-celled sarcoma.

CYANIDE OF POTASSIUM POISONING.

Dr. Wyatt Johnston showed the organs from a case, and described the methods used in detecting the toxic agent.

Dr. Adami remarked that Dr. Johnston's case, with his demonstration of the so easily recognizable odor of potassium cyanide so

many days after death of the individual, recalled vividly to his mind his experiments upon dogs, undertaken in connection with the Hooper case, in which he found that the cyanide could readily be detected eleven days after death. At the same time he pointed out how peculiarly volatile is this poison, for within a few seconds, in fact, almost immediately after Dr. Wyatt Johnston had opened the bottles containing his specimens, he and those around him had no difficulty in recognizing the well-known odor. But he fully felt the force of what Dr. Johnston had said, namely, that those unaccustomed to the autopsy smell might easily, at a postmortem examination, be overwhelmed by that smell, and fail to recognize or analyse the conjoined odor of potassium cyanide.

Dr. C. G. L. Wolf said that the tests for the detection of hydrocyanic acid at the postmortem table were highly sensitive and at the same time easy of performance. There were two, the potassium sulphocyanide test, and the obtaining of Prussian blue. In the first test one allowed the gas escaping from the stomach on opening to impinge against a paper moistened with yellow ammonium sulphide. On driving off the excess of sulphide by gentle heat over a flame, and touching the spot with a dilute solution of ferric chloride, the splendid blood-red color of ferric sulphocyanide appeared.

In the second a filter paper moistened with potassium hydrate solution was exposed to the gas, and then moistened with a solution of ferrous sulphate, by which one obtained potassium ferrocyanide. It was then treated with dilute hydrochloric acid and a solution of ferric chloride, when, if hydrocyanic acid was present, Prussian blue was formed.

It was interesting to note that in the sample of powder which had been examined, and which was probably part of the potassium cyanide used, no trace of hydrocyanic acid was found, as by the action of the air it had been changed to potassium carbonate.

The sample used in this case had been an ordinary impure cyanide, containing originally a large quantity of sodium cyanide.

FRACTURE OF THE SKULL.

Dr. Wyatt Johnston showed a skull sent to him by Dr. Austin, of Sherbrooke, in which a fracture had been caused by a blow of the fist on the side of the head. Death occurred about twenty-four hours later from meningeal haemorrhage. The case will be reported in full.

Dr. A. L. deMartigny referred to a similar case which had come under his notice. A beer drinker had been struck on the head with a bottle and fell down, but a few minutes later walked home, saying he was all right. Four hours afterwards he went to sleep and never woke again, dying within twenty-four hours after the injury. The autopsy showed the same sort of fracture of the skull as seen in Dr. Austin's case.

THE BRAIN AND SKULL OF A CRIMINAL.

Dr. Wyatt Johnston showed the skull and brain of a criminal from Longue Pointe Asylum, and Dr. George Villeneuve gave the clinical history of the case, a report of which will be published later.

TUBAL PREGNANCY.

Dr. A. Laphorn Smith read the following report:

The following notes of the case are taken from the records of the Samaritan Hospital for women, as reported by Dr. Fiske, the Registrar. Mrs. R., age 38, was admitted on the 3rd of March, 1896, complaining of pain over the abdomen and in the back and of metrorrhagia, both of which had lasted five weeks.

Previous history, never been very strong; has been married nine years; had no children, but has had five abortions at about seven weeks of pregnancy, the last one in January, 1895, from which she made a good recovery. Nearly nine years ago, Dr. William Gardner removed a polypus from her womb. Three years ago she was cured by Dr. Lapthorn Smith who wished to perform abdominal section for disease of the ovaries and tubes and retroversion with fixation. This latter she declined and was treated locally for a year, at the end of which time the condition of the pelvic organs had considerably improved, the uterus becoming fairly movable and the ovaries ceasing to cause much pain. She was then treated for a year with pessaries which kept her comfortable.

History of present illness—Had her period in last week of December, after which she saw nothing until the last week of January, when she began to flow and has continued doing so on and off for five weeks. About a week before admission she was taken with inflammation of the bowels and Dr. Aylen was called in. As she was losing a good deal and suffering a great deal of pain and was moreover seriously ill with pelvic peritonitis, he advised her to enter the hospital for prompt operative treatment.

Present condition—Patient very emaciated, anxious expression, abdomen tender and extended; nausea and vomiting; pulse, 130; tongue clean, appetite poor. Heart, lungs, liver and spleen normal. A vaginal examination shows the uterus to be retroverted and fixed, with a tumor the size of an orange in the left ovarian region. Right tube enlarged to the size of a sausage and tender.

A diagnosis of tubal pregnancy was made, being based upon the following symptoms: First, she believed herself pregnant since her December period, because she had morning sickness, pain in the breasts and fulness of the abdomen. Second, I was aware from my previous knowledge of her case that she had diseased tubes and that it would be difficult for the ovum to reach the uterus. Third, that a mass could be felt in the vaginal lateral cul-de-sac, which was causing pelvic peritonitis, and which could hardly be anything else than a pus tube or a ruptured tubal pregnancy. Fourth, the continuous haemorrhage, coupled with the previous symptoms.

Abdominal section was performed on March 10. On entering the peritoneal cavity, the pelvis was found pretty full of black clotted blood, of which about a cupful was removed, after which the left tube and ovary forming a mass the size of an orange was detached with some difficulty from its adhesions. While bringing it out of the incision the sac ruptured and a perfectly formed foetus, about three inches long, escaped with the gush of fluid and hung by the cord. After removing this tube the other tube and ovary were detached with some difficulty, and removed. The latter tube was found to be closed at both ends and full of clear fluid. About twenty minutes were spent in cleaning out the clots which were firmly attached to the omentum and intestines, and after sewing the uterus to the abdominal wall, the latter was closed with silk worm gut. The patient made a smooth recovery and left the Samaritan at the end of four weeks.

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Editorial.

THE REPORT OF THE AMERICAN PEDIATRIC SOCIETY'S COLLECTIVE INVESTIGATION INTO THE USE OF ANTITOXIN IN THE TREATMENT OF DIPHTHERIA IN PRIVATE PRACTICE.

This report appears as a supplement in *Pediatrics* for July, and was read at the annual meeting of the Society held in Montreal in May last. In order to ascertain the results of the use of this new remedy in private practice, a circular letter was issued in April, and distributed widely among members of the profession in the United States and Canada.

“The circular letter asked for information upon the following points: Age; previous condition; duration of disease when the first injection was made; the number of injections; the extent of the membrane—tonsils, nose, pharynx and larynx; whether or not the diagnosis was confirmed by culture; complications or sequelæ, viz., pneumonia, nephritis, sepsis, paralysis; the result; and remarks, including other treatment employed, the preparation of antitoxin used, and general impression drawn from the cases.

“Reports were returned from 615 different physicians, with 3,628 cases. Of these, 244 cases have been excluded from the statistical tables. These were cases in which the disease was said to have been confined to the tonsils and the diagnosis not confirmed by culture, and therefore open to question. A few cases were reported in such doubtful terms as to leave the diagnosis uncertain. The figures herewith given are therefore made up from cases in which the diagnosis was con-

firmed by culture (embracing about two-thirds of the whole number) and others giving pretty clear evidence of diphtheria, either in the fact that they had been contracted from other undoubted cases, or where the membrane had invaded other parts besides the tonsils, such as the palate, pharynx, nose, or larynx. It is possible that among the latter we have admitted some streptococcus cases, but the number of such is certainly very small.

"There are left then of these cases, 3,384 for analysis. These have been observed in the practice of 613 physicians from 114 cities and towns, in fifteen different States, the District of Columbia and the Dominion of Canada.

"In the general opinion of the reporters, the type of diphtheria during the past year has not differed materially from that seen in previous years, so that it has been average diphtheria which has been treated. If there is any difference in the severity of the cases included in these reports from those of average diphtheria, it is that they embrace a rather larger proportion of very bad cases than are usually brought together in statistics. The cases, according to the extent of the membrane, are grouped as follows: In 593 the tonsils alone were involved. In 1,397 the tonsils and pharynx, the tonsils and nose, the pharynx and nose, or all three were affected. In 1,256 cases the larynx was affected either alone or with the tonsils, pharynx and nose, one or all. In many instances the statement is made by the reporters that the serum was resorted to only when the condition of the patient had become alarmingly worse under ordinary methods of treatment. This is shown by the unusually large number of cases in which injections were made late in the disease. Again, many physicians, being as yet in some dread of the unfavorable effects of the serum, have hesitated to use it in mild cases, and have given it only in those which from the onset gave evidence of being of a severe type. The expense of the serum has unquestionably deterred many from employing it in mild cases. These facts, it is believed, will more than outweigh the bias of any antitoxin enthusiasts by including many mild cases which would have recovered under any treatment. It will, however, be remembered that tonsillar cases not confirmed by culture have not been included."

In addition, 942 reported cases were, through the courtesy of Dr. H. M. Biggs of New York, placed at the disposal of the Committee, most of them injected by the corps of inspectors of the New York Health Board, in the tenement houses of New York; 50 per cent. of these cases were of a more than ordinary severe type. Through Dr. Biggs also 1,468 cases treated at their homes in Chicago were reported.

The grand total gives 5,794 cases with 713 death, or a mortality of 12.3 per cent., including every case returned ; but the reports show that 218 cases were moribund at the time of injection, or died within twenty-four hours of the first injection. Should these be excluded there would remain 5,576 cases (in which the serum may be said to have had a chance), with a mortality of 8.8 per cent.

Of the 4,120 cases injected during the first three days there were 303 deaths—a mortality of 7.3 per cent., including every case returned. If from these we deduct the cases which were moribund at the time of injection, or which died within twenty-four hours, we have 4,013 cases, with a mortality of 4.8 per cent. Behring's original claim, that if cases were injected on the first or second day the mortality would not be 5 per cent., is more than substantiated by these figures. The good results obtained in third-day injections were a great surprise to your committee. But after three days have passed the mortality rises rapidly, and does not differ materially from ordinary diphtheria statistics. Our figures emphasize the statement so often made, that relatively little benefit is seen from antitoxin after three days ; however, it must be said that striking improvement has in some cases been seen even when the serum has been injected as late as the fifth or sixth day. The duration of the disease, therefore, is no contra-indication to its use.

A careful analysis of the 450 fatal cases is given ; among the many causes of death given, the chief are seen to be sepsis, cardiac paralysis, broncho-pneumonia and laryngeal diphtheria without operation. The following summary presents the chief points of interest in the report, and none is so striking and convincing as to the beneficial effects of antitoxin than the unparalleled success in laryngeal diphtheria.

SUMMARY.

(1) The report includes returns from 615 physicians. Of this number more than 600 have pronounced themselves as strongly in favor of the serum treatment, the great majority being enthusiastic in its advocacy.

(2) The cases included have been drawn for localities widely separated from each other, so that any peculiarity of local conditions to which might be ascribed the favorable reports must be excluded.

(3) The report includes the record of every case returned except those in which the evidence of diphtheria was clearly questionable. It will be noted that doubtful cases which recovered have been excluded, while doubtful cases which were fatal have been included.

(4) No new cases of sudden death immediately after injection have been returned.

(5) The number of cases injected reasonably early in which the serum appeared not to influence the progress of the disease was but nineteen, these being made up of nine cases of somewhat doubtful diagnosis ; for cases of diphtheria complicating muscles, and three malignant cases in which the progress was so rapid that the cases had passed beyond any reasonable prospect of recovery before the serum was used. In two of these the serum was of uncertain strength and of doubtful value.

(6) The number of cases in which the patients appeared to have been made worse by serum were three, and among these there is only one new case in which the result may fairly be attributed to the injection.

(7) The general mortality in the 5,794 cases reported was 12.3 per cent. ; excluding the cases moribund at the time of injection or dying within twenty-four hours, it was 8.8 per cent.

(8) The most striking improvement was seen in the cases injected during the first three days. Of 4,120 such cases the mortality was 7.3 per cent., excluding cases moribund at the time of injection or dying within twenty-four hours, it was 4.8 per cent.

(9) The mortality of 1,448 cases injected on or after the fourth day was 27 per cent.

(10) The most convincing argument, and, to the minds of the Committee, an absolutely unanswerable one, in favor of serum therapy is found in the results obtained in the 1,256 laryngeal cases (membranous croup). In one-half of these recovery took place without operation, in a large proportion of which the symptoms of stenosis were severe. Of the 533 cases in which intubation was performed, the mortality was 25.9 per cent., or less than half as great as has ever been reported by any other method of treatment.

(11) The proportion of cases of broncho-pneumonia—5.9 per cent.—is very small and in striking contrast to results published from hospital sources.

(12) As against the two or three instances in which the serum is believed to have acted unfavorably upon the heart might be cited a large number in which there was a distinct improvement in the heart's action after the serum was injected.

(13) There is very little, if any, evidence to show that nephritis was caused in any case by the injection of serum. The number of cases of genuine nephritis is remarkably small, the deaths from that source numbering but fifteen.

(14) The effect of the serum on the nervous system is less marked than upon any other part of the body ; paralytic

sequelæ being recorded in 9.7 per cent. of the cases, the reports going to show that the protection afforded by the serum is not great unless injections are made very early.

THE ACTION OF THE SOCIETY UPON THE REPORT.

At the close of its presentation, the Society voted to accept the report of the Committee, and after a full discussion it was decided to embody its conclusions in the following resolutions :

(1) *Dosage.* For a child over two years old, the dosage of antitoxin should be in all laryngeal cases with stenosis, and in all other severe cases, 1,500 to 2,000 units for the first injection, to be repeated in from eighteen to twenty-four hours if there is no improvement; a third dose after a similar interval if necessary. For severe cases in children under two years, and for mild cases over that age, the initial dose should be 1,000 units, to be repeated as above if necessary; a second dose is not usually required. The dosage should always be estimated in antitoxin units and not of the amount of serum.

(2) *Quality of Antitoxin.* The most concentrated strength of an absolutely reliable preparation.

(3) *Time of Administration.* Antitoxin should be administered as early as possible on a clinical diagnosis, not waiting for a bacteriological culture. However late the first observation is made, an injection should be given unless the progress of the case is favorable and satisfactory.

The Committee was appointed to continue its work for another year, and was requested to issue another circular asking for the further co-operation of the profession, the circular to be sent out as soon as possible in order that physicians may record their cases as they occur through the coming year.

NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

The fifteenth Annual Announcement of the New York Post-Graduate Medical School and Hospital has just been issued. Five hundred and forty-two physicians from all over this Continent have attended the course at the Institution during the past year. More than one thousand operations were performed in the Hospital, which is one of the largest in the City, containing special wards for babies and children, while nearly twenty thousand patients were treated in the out-door department. Recent discoveries have revolutionized medical and surgical methods, and a man whose medical

education ended fifteen years ago is not a physician or surgeon within the present meaning of the term. Post-graduate medical instruction is for the purpose of furnishing to these graduates in medicine a means of refreshing their knowledge. It supplies them with the opportunity of coming in direct contact with disease by means of special courses in all the departments of medicine.

AMERICAN DERMATOLOGICAL ASSOCIATION.

The meeting will be held at the Hot Springs of Virginia, September, 8th, 9th and 10th, 1896.

We learn from the Secretary, Dr. Chas. W. Allen, 126 Sixteenth street, New York, that everything is being done to make the meeting a success, and that a number of papers on interesting subjects have been already promised.

Dr. White will open a general discussion on the subject, "What effects do diet and alcohol have upon the causation and course of the Eczematous Affections and Psoriasis."

BY-LAW TO AMEND BY-LAW NO. 105 CONCERNING HEALTH.

Passed 18th May, 1896.

At the adjourned monthly meeting of the Council of the City of Montreal, held in the City Hall, this eighteenth day of May, one thousand eight hundred and ninety-six, after the observance of the formalities prescribed in and by the act of incorporation of the said City; at which meeting not less than two-thirds of the members of the said Council are present, viz.: His Worship the acting Mayor, Alderman Grothé, Aldermen Préfontaine, Lefebvre, Stevenson, Costigan, Marsolais, Prévost, Penny, Prénoveau, Ouimet, Brunet, Savignac, McBride, Reneault, Turner, Dupré, Connaughton, Dupuis, Kinsella, Charpentier, Wilson.

It is ordained and enacted by the said Council as follows:

Sec. 1.—The By-Law No. 105 is amended by replacing sections 12, 13, 14, 15 of said By-Law by the following:—

"Sec. 12.—No person shall dig or open any grave or cause any grave to be dug or opened in any burying ground, cemetery, church or church yard, or in any other part or place

in the said city; or shall inter or deposit, or cause or procure to be interred or deposited in any such grave, or in any vault or tomb, any dead body, within the said city; provided, however, that nothing herein contained shall prevent the interment in Roman Catholic churches in the said city, of the bodies of the priests and nuns of the Roman Catholic Church.

“ Sec. 13.—The Superintendent of every cemetery in the adjoining municipalities shall make and deliver to the said Board of Health, regular weekly returns of all persons buried in such cemetery; and the said returns shall be according to the following form: name and surname, date of death, sex, social condition, age, place of death, residence (street, number, ward), occupation, nationality, cause of death, name of the certifying physician.

“ Sec. 14.—Within twenty-four hours after the death of any person within the limits of the City of Montreal, a certificate of death according to the following form, signed by a licensed physician, shall be deposited in the Health Department :—

1	Date of Death.....	Theday of the month of.... 189
2	Name.....	}
3	Age.....	(3)..... ; (4)
4	Sex.....	} years months days Sex
5	Civil condition.....	(5)..... ; (6) *
6	Occupation *.....	} Married, widowed or single Occupation
7	How long resident in City.....	7)..... ; (8)
8	Birth-place.....	} Number of years Country Parish
9	Residence.....	No..... Street
10	Place of Death.....	No..... Street
11	Father's Name and Birthplace..	}
12	Mother's Name and Birthplace.	}

13 I, the undersigned, do hereby certify that, to the best of my knowledge and belief, the information given above is true; that I attended the deceased from..... to..... and that the cause of death was as follows :

{ CAUSE of DEATH }	Immediate (or direct).....
 duration..... years..... months..... days
	Primary (or remote).....
 duration..... years..... months..... days

14 Signature of the Medical Attendant..... M.D.
Montreal..... 189

“(1).—In the absence of a medical certificate as aforesaid, when the case is not one properly coming under the jurisdiction of the Coroner, the Medical Health Officer or his duly authorized deputy shall make such enquiry or inquest as may be necessary to establish, so far as possible, the cause of death.

“(2).—It shall be unlawful for any Superintendent or keeper of a cemetery, or for the persons enjoying the privilege mentioned in section 12, to inter or permit to be interred or to deposit in a vault the body of any deceased person without a certificate signed by the Medical Health Officer declaring that the required death certificate has been deposited in the Health Department.

“(3).—No dead human body shall be brought into the city without a permit from the Health Department.

“(4).—It shall be unlawful to remove a dead human body from the place of death to any other part of the city of Montreal or out of the said city, without a special permit from the Medical Health Officer, unless in the case of an inquest authorized by the Coroner.

“Sec. 15.—The Board of Health is hereby empowered to provide such other means of obtaining correct and reliable statements or information in reference to the mortality and its causes in the said city as it may from time to time deem necessary.”

Sec. 2.—Any person violating or contravening any of the provisions of the present by-law, for which a penalty is not already hereinbefore provided, shall be liable to fine, and in default of immediate payment of the said fine and costs, to an imprisonment to be fixed by the Recorder's Court, at its discretion; and any person who shall violate the present by-law shall be liable to the penalty mentioned in this section for each and every day that such violation or contravention shall last, which shall be held to be a distinct and separate offence, for each and every day as aforesaid; but such fine shall not exceed forty dollars for each and every offence as aforesaid, and the imprisonment shall not be for a longer period than two calendar months also for each and every offence as aforesaid; the said imprisonment, however, to cease at any time before the expiration of the term fixed by the said Recorder's Court, upon payment of the said fine and costs.

RELATIONS OF MEDICAL EXAMINING BOARDS TO THE STATE, TO THE SCHOOLS AND TO EACH OTHER.

DR. WILLIAM WARREN POTTER, of Buffalo, president of the National Confederation of State Medical Examining and

Licensing Boards, chose this title as the subject of his annual address at the sixth conference of this body held at Atlanta, May 4, 1896.

He said there were three conditions in medical educational reform on which all progressive physicians could agree, namely: first, there must be a better standard of preliminaries for entrance to the study of medicine; second, that four years is little time enough for medical collegiate training; and, third, that separate examination by a State board of examiners, none of whom is a teacher in a medical college, is a prerequisite for license to practise medicine. It is understood that such examination can be accorded only to a candidate presenting a diploma from a legally registered school.

He further stated that a high school course ought to represent a minimum of academic acquirements, and that an entrance examination should be provided by the State for those not presenting a high school diploma or its equivalent.

He did not favor a National Examining Board as has been proposed, but instead thought all the States should be encouraged to establish a common minimum level of requirements, below which a physician should not be permitted to practise; then a State license would possess equal value in all the States.

In regard to reciprocity of licensure, Dr. Potter thought it pertinent for those States having equal standards in all respects to agree to this exchange of inter-State courtesy of official indorsement of licenses, but that other questions were of greater moment just now than reciprocity. Until all standards were equalized and the lowest carried up to the level of the highest, reciprocity would be manifestly unfair.

He urged that the States employ in their medical public offices none but licensed physicians. This, he affirmed, would tend to stimulate a pride in the State license, and strengthen the hands of the boards.

He denied that there was antagonism between the schools and the boards, as had been asserted. He said that both were working on parallel lines to accomplish the same purpose, that there could not possibly be any conflict between them, and that they were not enemies but friends.

The medical journals of standing from one end of the

country to the other, he affirmed, were rendering great aid to the cause of reform in medical education, and the times were propitious.

He concluded by urging united effort by the friends of medical education, saying that "the reproach cast upon us through a refusal to recognize our diplomas in Europe cannot be overcome until we rise in our might and wage a relentless war against ignorance, that shall not cease until an American State license is recognized as a passport to good professional standing in every civilized country in the world."

RUSH MEDICAL COLLEGE, CHICAGO.

Prof. Edwin Klebs has been elected to the chair of Pathology in Rush Medical College.

This college has recently been recognized by the Examining Board of the Royal College of Physicians and the Royal College of Surgeons of London, England. This recognition entitles its alumni to all the privileges accorded to the graduates of other institutions recognized by that board.

THE JENNER CENTENNIAL.

The Jenner centenary number of the *British Medical Journal* is a very creditable effort on behalf of high class medical literature. Nearly the whole number is devoted to the life and work and writings of Edward Jenner, the discoverer of vaccination, it being one hundred years on the 14th May, 1896, since Jenner performed his first vaccination. His early history is given, and incidents of his association with John Hunter, and his family life at Berkeley; the honors and diplomas conferred on him, and grants from the House of Commons. Excellent cuts of a number of celebrated portraits are given, and one of the old vicarage at Berkeley, where, on the 17th of May, 1749, he was born.

A history of smallpox before Jenner's time is given and of smallpox inoculation, and then that of a century of vaccination. The relation of cowpox and smallpox is discussed. The most striking feature of the number is the reproduction in colors of Kirkland's colored drawings, showing, true to nature in every detail, the progress of vaccination and variolation day by day from the second to the sixteenth day; these

chromographs are worth more than one annual subscription to the journal, and reflect credit on the skill which has produced such superb reproductions and the enterprise of the editorial directorate.

Several interesting papers follow on such subjects as the Bacteriology of variola and vaccinia, animal vaccination, etc. This number of the *British Medical Journal* is a fitting tribute, dedicated to the memory of one who is the recognized herald of a method of combating disease, which in various modifications is now only after a century has passed receiving proper appreciation; and clear outlines of hopeful methods are looming out from the dim uncertainty of a century of groping.

The following circular has been distributed among the practitioners of the Province by the Board of Health of the Province of Quebec:—

Montreal, May 6th, 1896.

Sir,—I have the honor to communicate to you the following extract from the minutes of our meeting of the 29th April last.

“Being informed that a great number of cases of croup escape the control of sanitary authorities, and that it is mostly due to the public being generally under the impression that croup is not a contagious disease, the Board of Health of the Province of Quebec authorizes the publication of the following definitions:

“Croup is nothing else than diphtheria attacking more especially the respiratory tract (larynx). The expression laryngeal diphtheria designates better than the term croup the nature of the disease and should be preferably employed.

“Distinction should always be made between croup or laryngeal diphtheria, which is contagious, and false croup or laryngismus stridulus which is not contagious. There are no membranes in laryngismus stridulus or false-croup. The cough of croupal form which characterizes this disease is due only to a nervous element.

We hope, Sir, that each time you will have occasion to do so, you will see that the measures prescribed against diphtheria be equally applied against croup, both being one and the same disease.

I have the honor to be

Your obedient servant,

ELZEAR PELLETIER,

Secretary.

THE CANADIAN MEDICAL ASSOCIATION.

This Association will hold its next meeting in St. George's Sunday-school room, No. 15 Stanley street, Montreal, on August 26th, 27th and 28th next.

The local committee are putting forth every effort to make the meeting a success. There will be "Clinics" at 12.30 each day at the various hospitals, General, Hotel Dieu, and Royal Victoria. The "Clinics" will be followed by the reading of papers in the theatre of the hospitals, and in order that time may be saved, light lunches will be served. On two afternoons, Wednesday and Thursday, there will be short excursions, and on Thursday, Aug. 27th, at 7.45 p.m., the Association dinner will be held.

Special arrangements have been made with the Street Car Company, so that no time will be lost in going to the hospitals from the place of meeting.

This promises to be the largest meeting of the Association ever held.

The Inter-Provincial Registration Committee, about which so much interest centres, is booked to meet on August 26th at 10 a.m.

The regular sessions of the Association commence at 12.30 p.m. at the General Hospital.

PAPERS FOR THE CANADIAN MEDICAL ASSOCIATION.

President's Address. Jas. Thorburn, Toronto.
 Address in Bacteriology. J. G. Adami, Montreal.
 Address in Medicine. Geo. Wilkins, Montreal.
 Address in Surgery. John Stewart, Halifax.
 Address in Midwifery. J. F. W. Ross, Toronto.
 * * * * * J. D. Thorburn, Toronto.
 Hemorrhagic Pancreatitis. A. McPhedran, Toronto.
 * * * * * Wm. Osler, Baltimore.
 100 cases of Retroversion of the Uterus, treated
 by Ventro-fixation and Alexander's opera-
 tion, with results. A. Laphorn Smith, Montreal.
 The influence of Mitral Lesions on Pulmonary
 Tuberculosis. J. E. Graham, Toronto.
 A note on Amputation at the hip joint in Tu-
 bercular Disease. A. Primrose, Toronto.
 Tetany following Scarlatina. J. B. McConnell, Montreal.
 The Foot, its Architecture and Clothing. B. E. McKenzie, Toronto.
 * * * * * H. S. Birkett, Montreal.
 Ophthalmia Neonatorum. R. Ferguson, London.
 Observations on the Relation between Leu-
 chaemia and Pseudo-leuchaemia. C. F. Martin and G. H.
 Matthewson, Montreal.
 Etiology and Treatment of Acne Vulgaris. A. R. Robinson,
 New York.
 Thyroidectomy. D. Marciel, St. Eustache, Que.
 Some Observations on the Heredity of Carci-
 noma. T. T. S. Harrison, Selkirk.
 Some Applications of Entomology in Legal
 Medicine. Wyatt Johnston and Geo. Villeneuve, Montreal.

Physiological Demonstrations of Interest to Medical Men.	Wesley Mills, Montreal.
The Theory of the Eliminative Treatment of Typhoid Fever.	W. B. Thistle, Toronto.
Oral Surgery.	G. Lenox Curtis, New York.
*****	H. N. Vineberg, New York.
Clergyman's Sore Throat (?).	J. Price Brown, Toronto.

Fare and a third rates have been secured by rail and by R. & O. boats.

For further particulars see provisional programme, or address F. N. G. Starr, 471 College street, Toronto.

PROGRAMME OF PROCEEDINGS.

Wednesday, August 26th.

10 a.m.—Inter-provincial Registration Committee meeting in St. George's Church school-rooms, 15 Stanley street.

12.30 p.m.—Montreal General Hospital, Clinical Work, followed by the general work of the Association in the operating theatre of the hospital.

4 p.m.—Short excursion.

8.30 p.m.—President's Address in St. George's school-rooms, 15 Stanley street, followed by continuation of papers adjourned from the afternoon meeting.

Thursday, August 27th.

10 a.m.—Meeting in St. George's school-rooms, Reading of Papers.

12.30 p.m.—Hotel Dieu Hospital, Clinical Work, followed by continuation of papers in the operating theatre of the hospital, adjourned from morning session.

4 p.m.—Short excursion.

7.45 p.m., sharp.—Dinner of the Association.

Friday, August 28th.

10 a.m.—Meeting in St. George's school-rooms, Reading of Papers.

12.30 a.m.—Royal Victoria Hospital, Clinical Work, followed by continuation of papers in the lecture room of the hospital, adjourned from the morning.

Light lunches will be provided for the members at the hospitals, and special electric cars will be furnished to and from the hospitals.

A SYMPOSIUM ON OBSTETRIC.

Our contemporary, *La Clinique*, has issued, in its June number, a "special" on obstetrics, a symposium by the gentlemen who, ambitious for the chair of Obstetrics in Laval University, submitted their theses for adjudication. Dr. DeCotret was successful, his paper being a clear, vigorous,

and, withal, tactful essay on "The Treatment of Puerperal Eclampsia." Bearing in mind the edict of the Holy See, that it is unlawful to save the mother at the expense of the child, or, what amounts to the same thing, that it is unlawful to destroy the foetus in utero, that the mother may live, where there is a possibility of both being saved, it is easy to understand Dr. DeCotret when he says, in reference to evacuating the uterus for the convulsions: "Why, for a benefit, which is at most problematical, should we be guilty of foeticide, and expose the mother to the danger of death by inducing an abortion, a thing always dangerous of itself? Are we justified in exposing her to a real danger to save her from a theoretical one?"

With reference to his treatment, he gives reports of cases where (1) bleeding had been resorted to with good results, but in some cases protracted convalescence, due to the anaemia; (2) where the internal bleeders so-called, veratrum viridi and pilocarpine, had been used. Of veratrum viridi, he speaks favorably, quoting Jewett, and Percy, and Reamy (of Cincinnati); of pilocarpine, he exonerates it from the charge that it evacuates the uterus, saying that it only regulates and emphasizes uterine contraction when once commenced; (3) the anti-spasmodics, chloral and chloroform; (4) inhalations of oxygen; (5) compression of the carotids (to replace bleeding); (6) subcutaneous injections of normal saline solutions in cases where the urine was scanty and high-colored; (7) narcotics, opium and morphine. In his conclusions, he advocates bleeding (8 to 10 oz.) first, if patient can stand it; if not, the remedies in the order mentioned above.

On the whole Dr. DeCotret's paper is very readable, and presented in an agreeable manner. We may not agree with all his conclusions, neither may we find anything startling or new; but it certainly presents his subject in a well-condensed form, and Laval did well to choose him.

Of the other papers, much as we should like to quote extracts, it is sufficient to say that they all give evidence of careful reading and painstaking preparation.

Dr. Montpetit, in "Puerperal Septicaemia," regrets that he has no cases to report on the use of the anti-streptococcal serum (Marmorek) in this condition. Had the Doctor's paper been delayed a month, he might have had the advantage of a case in the Women's Hospital (in connection with Bishop's College here) successfully treated with 10 c.c. injections of Marmorek's original serum, and which we hope to have reported by Drs. Reddy and Richer at an early date. In speaking of the clinical features of septicaemia, the Doctor says: "—The lochia dark and foetid" It is to be regretted that he did not also add a note anent those cases where there was total absence of any odor, but of none the less virulent type. Dr. Ouimet gives a readable paper on the treatment of haemorrhage in placenta praevia, where

the foetus is dead, advocating rupture of the membranes and tamponading, but adding little or nothing that is new on the subject; and the same may be said of Dr. Larin's paper on the treatment of the parturient during and after delivery at term.

In speaking of the separation of the placenta, we must certainly take objection to the statement italicized (the italics are ours): "To the outsider the camp is divided—one party temporizing; the other active. Dubois used to say, 'When you have waited 10 to 15 minutes, make traction on the cord.'" On the other hand, Pajot * * * who would not admit that nature was thus bound down arbitrarily to a question of minutes, said: "Do not employ traction until the placenta is detached;" and Tarnier added: "Detached and lying on the interior segment of the uterus."—*Such, in a word, is the practice even up to the present.*

Crede's method is recommended only in cases of velamentous insertion of the cord, and traction of the cord is only given up because "L'Union fait la force," and a velamentous insertion of the cord is more likely to tear the membrane and edge of placenta, and so favor either bleeding, or the leaving behind of a piece of placenta.

On the whole, the papers are worth reading, but it will hardly repay the busy practitioner in search of anything new. Dr. DeCotret's paper is worthy of note, as much for its style and clearness as its subject matter, and M. Le Redacteur de la *Clinique* is to be congratulated on such a creditable turnout and the fewness of typographical errors:

Book Reviews.

Nouvelles Formules D'Oculistique (1889-1895), par le Dr. de Bourgon, Lauréat de la Faculté de Médecine de Paris, etc. Paris, Société d'Éditions Scientifiques, Place de l'École de Médecine.

This little work of Dr. de Bourgon's, we must speak of in the highest terms.

It deals with the various drugs used in eye diseases, their preparation, combinations and indications.

The information is drawn from every source and very well classified, there being both a therapeutical and pharmacological index.

The work must necessarily be of most value to the specialist, but nevertheless it will be useful as well, to the general practitioner.

The Newer Remedies—Coblentz: second edition, revised and enlarged, 1896. D. O. Haynes & Co., New York; price 50 cents.

To attempt to keep track of even the more important of the newer remedies, which the synthetic chemist, from the secrecy and seclusion of his laboratory seems to delight in springing on a long-suffering and unsuspecting generation

of busy practitioners, were a herculean task; nor in most cases would the lapse of memory work injury, rather otherwise. Yet there are many synthetical remedies which have proved their worth by their staying qualities—they wear well. Again, when reading of some new compound which an enthusiastic experimentalist has created and given birth, duly christened with a sixteen-syllabled name and dubbed with a conveniently short nick-name, for which some equally enthusiastic godfather has stood sponsor, clothed it with an imposing mantle of statistics (all favorable), and launched it on a career of vicissitudes ending too often in premature death, it is a certain amount of satisfaction to trace its lineage and descent, to find its exact standing in the pharmaceutical “De-bret,” and promptly forget it; and Coblentz has gathered together the odds and ends, the “scattered remnant,” the rag-tag and bob-tail of these preparations; the waifs of which all that is known is that “they are of a proprietary nature,” and their composition “given upon the authority of various published analyses,” as well as the aristocrats of the series, the drugs which mix in good society, and appear on the prescription pads of the “specialist”—and the faddist. When one remembers that Coblentz has classified considerably over a thousand of these remedies, it will be seen that the work has not been a light one, and a reference to the little book will show that it has been well and conscientiously done, thoroughly up to date, most complete, with name, synonym, method of preparation, chemical formula, tests, hints on handling, and very briefly, its chief therapeutic uses, and doses (maximum and minimum adult), in grms. and approximate apothecaries’ measures. It is a little work which does not pretend to deal extensively with the physiological action, but as a handy reference work, arranged alphabetically, it will be found invaluable, and will save many an hour’s fruitless search through files of old periodicals.

A Manual of Anatomy, by Irving S. Haynes, Ph.B., M.D., Adjunct Professor and Demonstrator of Anatomy in the Medical Department of the New York University. Visiting Surgeon to the Harlem Hospital, etc., etc. Published by W. B. Saunders, Philadelphia.

This manual contains 134 half-tone illustrations from photographs of the cadaver, showing various dissections, and 34 diagrams. Some of the photographs show up the dissection sufficiently well to be of material advantage to the dissector, but many do not show the fine points clearly enough to recommend this method of illustration. Dr. Haynes has employed the camera to aid in illustrating his work much more freely than former writers, and deserves credit for his effort. Photography is more accurate than sketching, but sketching gives a clearer, plainer portrait of the average dis-

section taken from a number of specimens, and is easier for the student to comprehend. The diagrams and text are good. The descriptions are clear and to the point, but not so complete in detail as most recent works. It is a very useful work for the graduate to review any forgotten point.

PUBLISHERS DEPARTMENT.

THERAPEUTISCHE MONATSHEFTE.

Berlin, June, 1896.

A NEW APERIENT WATER.

BY GEHEIMRAIH PROFESSOR OSCAR LIEBREICH, M.D.

(Regius Professor of Chemistry, University of Berlin.)

It has oftentimes been pointed out, and that, too, with reference to mineral waters, that the first condition of therapeutic efficacy is the constancy of the remedy employed. In the case of natural mineral waters this point is of the greatest importance. The aperient waters offer the one sole exception in regard to this constancy among our natural mineral springs. These are formed by impregnation of the natural basins which supply the mineral constituents. From this, as observation teaches us, there arises an extraordinary inconstancy of the chemical constituents. The aperient waters, therefore, form an exception to the mineral springs proper. For medical purposes it is absolutely necessary, in prescribing this water, to know the dose. It has happened not infrequently that a wine-glassful of aperient water has been shown to contain the same amount of mineral constituents as the practitioner would, from the analysis, expect to be present in a tumblerful. It is obvious, therefore, that neither the practitioner nor the patient can form a correct opinion in this manner; and under these circumstances it may even happen that an unexpectedly great degree of concentration may do harm by useless irritation of the intestines. There is a further disadvantage arising from changes in mineral constituents, so that, instead of the sulphates which the water should contain, chlorides are present in an injurious amount. The opinion has very often been expressed that the bottling of such waters should be under scientific control, so that their proper constitution should be ensured exactly in the same way as that of other medicines is regulated by the Pharmacopoeia. It is therefore a matter for high satisfaction that the aperient water, "Apenta," from the Uj Hunyadi springs in Ofen, has been placed under State control. The Royal Hungarian Chemical State Institute (Ministry of Agriculture) has undertaken this charge, and therefore it is now possible to obtain a water which is free from injurious extraneous waters infected with organic substances. The analysis has been published by Professor Liebermann, Director of the said Institute. The proportion of sulphate of soda to sulphate of magnesia is 15.432 to 24.4968 in the litre, so that this water is to be classed with the best aperient waters, and may be pronounced one of the strongest. Owing to the constancy of the Apenta water ensured by the State guarantee, that confidence in aperient waters which had been lost will be revived through this important therapeutic agent. The constancy of the Apenta water makes the use of it indicated not only as an occasional purgative, but in systematic courses of treatment. It is particularly recommended for the regulation of tissue change in the most diverse diseases, in obesity, chronic constipation, portal obstruction, haemorrh-

hoids. Whether the lithia contained in this water is of any therapeutic importance is at present doubtful, but its presence is a distinctive feature in the analyses.

Like a cool, refreshing breeze from the ocean, which acts as a physical stimulus and tonic during the summer heats, the August "Arena," breezy, strong, vigorous, refreshing, comes to us as a mental tonic. This number has an unusually attractive and varied table of contents, any item of which will well repay reading. The portrait of George Canning Hill, the Massachusetts member of the National Bimetallic Union, forms the frontispiece. Mr. Hill contributes a strong and admirably written paper in favor of free silver, entitled "The Morning of a New Day." Hon. C. S. Thomas, in his "Reply to 'A Financial Seer,'" utterly puts to rout his critic, "A Financial Seer," and, with the aid of a startling array of facts and figures, culled from the most authoritative sources, refutes in the clearest and most convincing manner the many fallacies advanced by the upholders of the single gold standard. Notes by the Editor contain some very startling revelations and should be read by all who wish to be informed in regard to the tactics resorted to by the gold monometallists in their frantic endeavors to uphold the gold standard. Prof. Frank Parsons' series on "The Telegraph Monopoly" still continues, and Part VIII is one of the most striking and powerful papers yet written on the subject. It still further exposes the essential tyranny and lawlessness of this giant monopoly. Under the title of "Whittier—The Man," the editor of the "Arena," Mr. B. O. Fowler, furnishes another of his delightful and instructive papers on our Quaker poet. The serials,—"The Valley Path" and "Between Two Worlds" become more and more interesting with each succeeding chapter, and a glance at the titles of the remaining articles, with the names of the authors, given below, will convey some idea of the rich store of mental food provided in the August issue of that always live and original magazine, the "Arena:" "Bibliography of Literature dealing with the Land Question," by Thos. E. Will, A.M.; "Is the West Discontented?" by John E. Bennett; "Club Life versus Home Life," by G. S. Crawford; "A Social Settlement," by Annie L. Muzzey; "Mahayana Buddhism in Japan," by Annie E. Cheney; "The Convict Question," by J. Kellogg; "Ethics the Only Basis of Religion," by R. B. Marsh, M.A.; "Associated Effort and Its Influence on Human Progress," by M. L. Holbrook, M.D.; "Philosophers Afloat," by Helen H. Gardener.

"THE ART OF MIND-BUILDING."

In the "Metaphysical Magazine" for July, Professor Elmer Gates, formerly of the Smithsonian Institute, explains for the first time the results of his extended experimental researches in the domain of Psychology. These experiments have been conducted in a thoroughly scientific manner, and the demonstrations are of the very highest importance to every branch of learning. Order early.

The contents of this number also include: "Karma in the Bhagavad Gita," by Charles Johnston, M.R.A.S.; "The Subtile Body," by E. G. Day, M.D.; "The Serpent and its Symbol," by Lieut. C. A. Foster, U.S.N.; "Spirit in Man and Nature," by C. Staniland Wake; "Conception and Realization of Truth," by Frank H. Sprague; "A Prophetess of the New Life," by Lilian Whiting; and other articles on occult, philosophic, and scientific lines. At all news-stands. Price, 25 cents; yearly subscription, \$2.50. In foreign countries, 14s. The Metaphysical Publishing Company, 503 Fifth avenue, New York.

APPLETONS' POPULAR SCIENCE MONTHLY FOR JULY,
1896.

One is always sure of finding in "Appletons' Popular Science Monthly" much that is helpful in making the most of the life we are now living, both in private and social affairs. The July number opens with a useful lesson on Taxation, contained in the experiences of India, which are set forth by Hon. David A. Wells. The strength and weakness of Our Banking System are shown by Logan G. McPherson. Prof. W. R. Newbold has an article on Suggestion in Therapeutics, or the influence of the mind in aiding the cure of disease. On a related subject is Dr. Douglas Graham's account of Massage in Sprains, Bruises, and Dislocations. A novel System of Polar Exploration is proposed by Robert Stein, the essential feature of which is a permanent station at a place in the arctic regions reached yearly by whalers. The processes of Photographing Electrical Discharges, whether from the clouds or electrical machines, are described by Walter E. Woodbury, with a number of striking pictures. Prof. J. Mark Baldwin discourses on The Genius and his Environment. There is a bright illustrated sketch on the food and feeding habits of birds, by Harriet E. Richards. Prof. Warren Upham discusses the Causes, Stages, and Time of the Ice Age. Two brief but suggestive articles are County Parks, by Prof. Thomas H. Macbride, and Sociology in Ethical Education, by Byron C. Matthews. The possibility of a new industry on our Pacific coast is shown by Charles S. Pratt in his article on Pearls and Mother-of-Pearl, and there is a Sketch with Portrait of the distinguished Dutch physiologist Jacob Moleschott. New York, D. Appleton & Company. Fifty cents a number, \$5 a year.

HARRIET BEECHER STOWE'S LAST LETTER.

The last thing written by Mrs. Harriet Beecher Stowe, only a few days before her death, was a loving acknowledgment to the public for fond remembrances and tokens and expressions of affectionate esteem, on her 85th birthday, which she sent to "The Ladies' Home Journal." In the next issue of this magazine it will be published in fac simile. It reflects the beautiful nature of the gifted authoress, and by her death has become her last message to the American public.

WHO?

Who does more good in the world than they who relieve suffering humanity? I have used Sanmetto in many cases where it was indicated, such as enlarged prostate of old men, and in cystitis and gonorrhœa. I truly believe that I have carefully tested every remedy in the Pharmacopœia for these distressing and painful affections of humanity, and none give relief like Sanmetto. In one case where solid casts from the urethra were voided (resembling chicken guts), where micturition was so frequent as every ten or fifteen minutes night and day, and where the catheter would not pass into the bladder, Sanmetto brought relief. I consider it the great reliver of these affections.

Webster, W. Va.

C. N. BROWN, M.D.

SCIENTIFIC AMERICAN.

We have received a copy of the Fiftieth Anniversary number of the "Scientific American," covering 72 pages, and comprising a review of the progress of the Industrial Arts and Sciences during the past fifty years. No expense or pains have been spared to make this a publication of rare merit and value. Among the subjects treated of are the following: The Transatlantic Steamship, Railroads and Bridges, Physics and Chemistry, Progress of Printing, Iron and Steel, Phonograph, Telephone, the Bicycle, Naval and Coast Defence, the Sewing Machine, Electric Engineering, the Locomotive, Photography, Telegraph, Telescopes, also the Prize Essay on "The Progress of Inventions during the Past Fifty Years." Price 10 cents per copy.

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Original Communications.

SCARLATINAL DROPSY.

A Clinical Lecture delivered at the Montreal General Hospital by Francis W. Campbell, M.A., M.D., L.R.C.P. London, D.C.L., Professor of the Theory and Practice of Medicine, Faculty of Medicine, University of Bishop's College.

The child now before you is aged 5 years, and has had scarlet fever, of that there is no doubt. The mother tells us that about two weeks ago, after an afternoon of what she terms "indisposition," it went to bed decidedly "out of sorts." During the night it awoke crying, and almost immediately was seized with violent vomiting, which lasted some time, that is to say, it vomited repeatedly during an hour or two. The following morning it was feverish, and complained of sore throat and had some difficulty in swallowing. During the following night the child was hot and very restless, and when daylight came she noticed that it was covered with a bright red rash. Medical advice was called in, and the doctor pronounced it scarlet fever. The case, however, does not seem to have been very severe, for the throat symptoms—the gauge of the severity of the disease—soon improved, and a week ago the doctor ceased attendance after giving advice—good, I have no doubt—as to the future general treatment of the case. It is not clear when desquamation set in, but as it is in full activity at this moment, I should say it began about five days ago, which is just the date when this child was allowed out of bed. This was a grave error, and in direct disobedience, it is admitted, of the doctor's orders. The mother says "the child was so well and she begged so hard I could not refuse her." It would have been well had she done so.

The weather was cold, and the child got exposed to a current of cold air. Next morning the child was allowed up again, though, it was not so lively as it had been the day before. Towards evening its face was noticed to be fuller than usual, and yesterday the feet began to swell. To-day it presents the following physical symptoms: Face swollen and pallid, there is general anasarca over the rest of the body, the degree of the distension of the skin being very well marked over the legs. The amount of urine passed is much diminished, and the specimen we have obtained is decidedly smoky in appearance, and by the old test of heat and nitric acid, albumen is shown to be present in considerable quantity. The diagnosis is made without difficulty, it is a case of scarlatinal dropsy, or acute desquamative nephritis. This is a common affection and most important. It generally occurs about the second or third week of scarlet fever, when desquamation is at its height. As a rule it is more frequently met with following mild than severe scarlatina. The reason for this is obvious. In severe cases the patient is compelled to keep to bed till the period of danger has passed. In mild cases the patient, as in the case now before us, is allowed to leave bed at the period of greatest susceptibility. I cannot impress you too strongly with the fact that scarlet fever is the mother of acute nephritis, and that great care is necessary in treating the mother disease, with a view of preventing this greatly dreaded sequelae. The most common form of effusion is anasarca, but it may be followed by oedema of the lung, hydrothorax, hydropericardium or ascites.

The exciting cause is cold. The disease is rarely known to occur if the patient is confined to bed till after the 21st day. I have seen it occur on the 14th day by allowing the patient out of bed and giving him the run of the house, being thus exposed to draughts from open windows and doors. It occasionally comes on suddenly, but as a general rule its onset is slow. The urine in most cases has a smoky appearance for several days before the other symptoms supervene. The constitutional symptoms are marked. The patient droops, is languid and irritable, the temperature varies from 100 deg. F. to 102 deg. F., the pulse is quickened and is hard and sometimes jerking, appetite is either lost or is much impaired, more or less thirst, bowels generally constipated, urine diminished, sometimes headache, nausea and vomiting. Occasionally there is hardly anything noticeable beyond what

is expressed by the words "the child has not, for a few days, seemed as well and bright as usual." Yet even in cases which present such trivial symptoms, close examination often shows a very serious condition, so rapid indeed is the effusion into some of the cavities as to produce a fatal termination with frightful rapidity. Do not, therefore, allow the absence of grave symptoms to prevent your close examination of the case. The face is generally the first place where swelling is noticed, most marked about the eyelids, which look puffed. From the face it extends to the hands and feet, commencing about the ankles and extending gradually upwards. The skin is hard, firm and elastic to the touch. It generally does not pit on pressure, certainly not in the early stage, and is of a dull white color. If the disease be not checked or removed it may extend to the internal organs, such as the lungs, producing oedema, to the pleural sac or to the pericardium. The amount of urine secreted is generally less than normal, occasionally it is increased in quantity, and micturition is more frequent. This is doubtless due to the irritating character of the secretion which causes the bladder to expel it, even when the amount collected is small. The urine may be almost entirely suppressed, or even entirely so. I have known entire suppression to continue for thirty-six hours. In mild cases the urine is of a deeper color than normal, but retains its transparency for a short time after being voided. On cooling it is apt to become turbid and to deposit a considerable quantity of urates. It has generally a normal reaction. In proportion to the amount voided the sp. gr. varies, urea and the chlorides are diminished. Albumen is present, and the microscope shows epithelial or hyaline casts of the renal tubules and blood globules. In more severe cases the urine is greatly diminished and looks smoky, a very dark red or brownish. Its sp. gr. is high, the quantity of albumen is large, and the microscope shows large numbers of blood globules. The duration of this stage of diminution of the urine varies. It is succeeded by an increased secretion much beyond normal with low sp. gr. and the return of the urates and chlorides to normal. The albumen persists as does the smoky color, and the precipitate still contains blood globules, renal epithelium and granular casts. In favorable cases, and fortunately they are the majority, the smokiness and the albumen gradually disappear. Unfortunately in some they persist, and eventually these cases gradually assume all the characteristics of

chronic Bright's Disease. Diarrhoea is not unfrequently present, sometimes constituting a serious complication. Generally, however, it is due to some simple functional derangement of the bowels and readily yields to treatment.

Treatment.—I need hardly say that if the child is up when the disease is discovered, it should at once be put to bed, and kept there for at least two weeks after all dropsy has disappeared, and the urine has become perfectly normal. This is absolutely necessary, as in my experience a relapse is not uncommon if the patient is allowed up too soon. The diet should be restricted to fluids, only milk and the animal broths or farinaceous fluids being allowed. The patient should be encouraged to drink freely, plain water, lemonade or orange water. In the early stage a hot bath at least once a day, or, if the child is strong and can bear it, twice a day. The bath should be of a temperature of 96 deg. to 100 deg. F. Its duration must depend upon the effect, the child being fully immersed at least seven to ten minutes. When removed it should be wrapped in a soft cotton sheet, which has been heated before an open fire, and over this a light blanket. In this covering it should remain half an hour to one hour. The child should then be quickly dried before a fire, and then have its night dress put on and placed in bed between blankets. If there is not any diarrhoea keep the bowels open by syrup of rhubarb, senna, figs or Rochelle salts. If the urine is scanty the following prescription will be found useful : R Potas bitart ʒi, spts juniper co. ʒii, spts ether nit. ʒi, syr simp ʒss, aquae ad ʒii. Of this mixture give a teaspoonful every two hours. In more severe cases where the temperature is high, with scanty and dark colored urine, containing a large amount of albumen, dry cup the loins. This should be followed by hot linseed poultices over the same part. I have found it a good plan to mix a quantity of partially pulverized digitalis leaves in the poultices, which should be changed every four hours. Give internally the following mixture : R Potass acet ʒi, tinct digitalis ʒss, syr simp ʒss, aquae ad ʒii ; give a teaspoonful every three or four hours to a child two or three years old. If the child is over ten years I would give the above mixture, leaving out the tincture of digitalis, and have the mixture consist of the acetate of potash and infusion of digitalis, giving from half to one teaspoonful three or four times a day. Infusion of digitalis is an excellent diuretic when the fever has gone and a normal range of temperature

reached. I am fond of a mixture containing two to five drops, according to age, of tincture of the chloride of iron, fifteen drops to half a drachm of liquor ammonia acetatis combined with glycerine and water. If the stomach will not bear iron in the form of the tincture, I substitute the wine of iron, peptonate of iron, or the ferrated elixir of calisaya bark. The food must be gradually added to, as the stomach regains its power of digestion. At times the stomach remains very irritable, and then all preparations of iron will have to be avoided, at all events till that organ is brought into line. This can generally be accomplished by mild, repeated counter irritation of the gastric region, and the administration of some of the following remedies: One drop of vinum ipecac every half hour in a teaspoonful of water; half a drop of carbolic acid, the same quantity of tincture of iodine B.P. in a teaspoonful of water every two or three hours. An excellent combination is one containing spirits of chloroform, hydrocyanic acid and elixir of bismuth, in doses appropriate to the age of the patient. A very fatal complication, which however I have never seen, is dropsy in the areolar tissue, about the larynx, inducing oedema of the glottis. The child is very apt to remain weak and anaemic for a considerable time after convalescence has become established. In such cases I find syrup of the iodide of iron an excellent remedy. To prevent relapse, which I have repeatedly seen, the body must be kept warmly clothed, especially the chest and loins. In female children wearing short clothes, special attention must be had to having the limbs thoroughly protected from cold. It is an absolute necessity that the possibility of this disease occurring be impressed on the parents' minds, for it is a common sequelae of scarlet fever, and is often more dangerous than the primary disease itself. The occurrence of this disease is uncommon in adults, for the simple reason that, as a rule, scarlet fever is a disease of childhood. It is, however, occasionally met with. I have seen two or three such cases. When met with, the treatment will be that which I have mentioned. More active purgation will, however, be required, and one of the best hydragogue cathartics which can be given is the compound powder of jalap. When death occurs in the acute stage the kidneys are found enlarged, their surface smooth and injected, on being cut they drip with blood. The malpighian bodies are congested, and look like red dots, the vessels of the cortex and cones are gorged with blood, the tubules are distended with granular epithelium or fibrinous plugs.

THE VAGINAL ROUTE FOR OPERATIONS ON THE UTERUS AND APPENDAGES.

By A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. England,

Fellow American Gynaecological Society;

Professor Clinical Gynaecology Bishop's University, Montreal; Gynaecologist to the Samaritan and Western Hospitals and to the Montreal Dispensary.

Removal of diseased uteri or appendages by an opening in the vaginal roof has been practised very generally in Europe since three or four years, but at first received very little favorable consideration from American operators. Last year, however, Jacobs, of Brussels, reported four hundred major operations by this route at the meeting of the American Gynaecological Association at Baltimore, and his report was not only well received, but several American operators testified that they had employed this method of operation with very satisfactory results. In Canada our feeling was one of general abhorrence of removal of the uterus in every case in which the appendages were diseased. At the last meeting of the American Gynaecological Society, in New York, this year, Dr. Paul Segond, of Paris, gave a great impetus to vaginal hysterectomy for diseases of the appendages, by not only reporting six hundred cases with a mortality of four per cent., but by performing nine operations in the presence of many of the leading gynaecologists of this continent. The discussion which followed the reading of Segond's paper, which was very well received, showed that during the last two years the vaginal route had gained very much in favor. Although I was shocked three years ago at the idea of removing the uterus whenever the tubes and ovaries are taken away, I must admit that in at least three cases in which I have removed pus tubes and ovaries, and left the uterus, I have had reason to regret my conservatism, for these patients still have a large, heavy and infected uterus, which has continued to pour forth an acrid and profuse discharge, which excoriates the thighs. In their cases I would have no hesitation in removing the pus uterus as well as the pus tubes. After witnessing Segond's skillful procedure, I became satisfied that in certain cases at least the vaginal method has many advantages over the abdominal route, but I still believe that in certain other cases the abdominal route is still far preferable.

The procedure carried out by Segond was as follows: A vertical incision was made on each side of the cervix

up to the vaginal lateral fornix; then these two lateral incisions were joined by a transverse one front and back, so as to make an anterior and posterior flap. These flaps were pushed up by the finger, the bladder detached and the peritoneum opened, front and back. A pair of powerful clamps were placed on the uterine arteries on each side, and the lower half of the uterus amputated. The rest of the uterus was split up the middle line, each half dragged down, bringing the pus tube and ovary with it, and the broad ligament on each side secured with two more powerful clamps, and the pus tubes and ovaries, each with half of the fundus attached, were cut off. Any other bleeding points were clamped, and the space between the three or four clamps on each side was packed with iodoform gauze, care being taken not to introduce more than a small quantity of the latter, for fear of the iodoform being absorbed. If more was required, sterilized gauze was used. One of the cases reserved for Segond was supposed to be a fibroid, which had been treated by electricity, but it turned out to be a pus tube, to the disappointment of many who were anxious to see Segond perform *morcellement*. The three cases which I saw Segond operate on were well suited for the method, because the vagina was capacious, and there were no adhesions; but I have been informed by those who have seen him operate much in Paris, that he frequently meets with cases in which, owing to the adhesions, he is unable to remove the pus tubes, in which case he merely opens them and drains them through the vagina, after having removed the uterus. From what I saw of the operation in Segond's hands, and also in the hands of Polk last year, I would still prefer the abdominal route for bad cases of pus tubes, for, with the patient in the Trendelenburg position, and a free abdominal incision, we can remove every vestige of the diseased appendages, put ligatures on bleeding points, and leave the peritoneum clean and dry and closed. By the vaginal route one must work in the dark, and by touch to a great extent, and the opening into the peritoneal cavity is left open. The one great advantage of the vaginal route is that there is no abdominal cicatrix, and no danger of hernia. Hernia, it is true, is becoming more and more rare, but it is an unfortunate result when it does occur, and in Europe these two considerations carry so much weight that even Martin, of Berlin, who was steadily opposed to

the vaginal route, has been compelled by his patients to adopt it. Although I have not yet been able to justify myself in submitting every woman with diseased tubes and ovaries to a vaginal hysterectomy, I have become so far converted to the vaginal route as to employ it in cases where for any reason the appendages must be removed, while the uterus may be left. On my return from New York, I found a patient awaiting me at the Western Hospital, who, though only thirty-two years of age, had been an almost constant sufferer for several years. She had already had several operations, curetting, lacerated cervix, and again curetting on different occasions for dysmenorrhoea, menorrhagia, endometritis, and she was still suffering as much as ever with dyspareunia and painful locomotion, although she had been under almost constant local treatment for several months. On examination, the ovaries were felt in Douglas' cul-de-sac enlarged and very tender, and they could not be dislodged from their abnormal position. This poor woman demanded relief from her suffering, and it seemed a suitable case for the vaginal route. She was quite willing to have her ovaries removed, and was particularly pleased when I told her that I would endeavor to avoid the abdominal wound which all the other patients in that ward presented.

On the 1st of June, therefore, the patient was prepared as for a lacerated cervix or any other vaginal operation, the field being made thoroughly aseptic and the posterior fornix incised with scissors about an inch above the os. Two snips of the scissors brought me into the peritoneal cavity, the incision was enlarged a little on each side, and the fingers introduced, when they immediately came upon the swollen ovaries and tubes. They were firmly bound down by several layers of adhesions of different degrees of organization, but these were easily broken through, and the ovaries and tubes were dragged down into the vagina. A ligature was passed through the broad ligament, and they were tied and cut off just the same as in an abdominal operation of the same kind. The uterus was replaced in normal position, the cul-de-sac was washed out and dried, and the inch and a half wide opening in the vagina was sewed up with catgut, which at the same time quite controlled the bleeding from the little arteries of the vagina. The latter was packed with boracic tampons, and the patient was off the table in twenty minutes from the first incision. The remarkable part of the history was that she had little or no pain. Passed water and

moved her bowels naturally, and could have left the bed in less than a week, she felt so well. But it was deemed prudent to enforce rest in bed for two weeks, at the end of which time she was allowed up. Apart from a slight attack of cystitis, which kept her in bed for a few days, she made a good recovery, and is now entirely free from the pain which she had suffered from for years. In her case at least the operation was quite as easy and her recovery quite as good as though she had been operated by the abdomen, and she enjoys the immense advantage of having no abdominal incision either to pain her or to cause her the risk of a ventral hernia. Although one case is not enough to base an opinion upon, and although my opinion is not based upon that one alone, I feel satisfied from the progress that this method has steadily been making, in the face of keen opposition, that in certain cases, such as the one I have related, and in still easier cases, where the ovaries are removed in order to bring on the menopause, this operation will be employed more and more. For bad pus cases and large fibroids, I still believe that the abdominal route has many advantages. For instance, where the adhesions are so bad, as we often find them, that the bowel is torn in liberating them, it is certainly much easier to repair the bowel as it lays on the abdomen than to sew it through the opening in the vagina. And even Segond admitted that he had had a considerable percentage of faecal fistulae following bad pus cases removed by vagina. The question as to whether the uterus should come out in every case in which both appendages are removed is still *sub judice*. Segond admits that the abdominal route should be employed when only one ovary and tube has to be removed; he only advocates the vaginal route in conjunction with hysterectomy, for without removing the uterus he considers vaginal removal of appendages too difficult. Some maintain that even a diseased uterus is better than no uterus at all; and others claim that even a diseased uterus can be cured by repeated curetting and drainage. Howard Kelly has gone so far as to employ the vaginal route for tubal pregnancy, but his and the experience of others was disastrous; in such cases the tying of the ovarian artery, from which comes the hemorrhage, is ever so much easier by an abdominal incision. In the course of a few years the indications will be more thoroughly established, and in the meantime what work that is done in this direction must necessarily be more or less of a tentative nature.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

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TONSILLITIS AS A FACTOR IN RHEUMATIC FEVER.

An article under this caption appears in *Gaillard's Medical Journal* for August, by Sir Willoughby Wade F.R.C.P. The theory now receiving attention is that tonsillitis is a primary infective disease of the lacunae, rheumatic fever a secondary disease arising from the absorption of microbes or their products into the system. He refers to the fact noted that tonsillitis usually precedes this rheumatic fever, sometimes, but rarely, the latter precedes the tonsillitis, which may depend on absorption of the poison occurring at other points, as seen in such infectious diseases as gonorrhoea, typhoid and scarlatina, when rheumatic symptoms manifest.

Tonsillitis is regarded as an infectious disease on the grounds that,

1. The clinical phenomena correspond in every particular with those of an infective disease.

2. Cases have been noted in which the disease had undoubtedly been transmitted from one person to another.

3. Various species of coccus and bacillus are to be found within the lacunae, within the closed follicles, and even within the epithelial cells of tonsils removed during the acute stage. Leucocytes in large numbers are found associated with the microbes.

In an inflamed tonsil there are numerous microbes, and the abundant lymphatic tissue renders absorption of poisonous products easy, but when the normal destructive function of this tissue is lessened the body may suffer.

The case as regards rheumatism stands thus: Inasmuch as it so frequently follows an infective disease, and that all its features can be explained by the assumption of a microbic infection, there is a high degree of probability that it also is an infective or microbic disease. If we take into account other features of rheumatic fever besides those already alluded to, this probability will be heightened. Among the prodromata of the full attack we may observe (1) anaemia, (2) undue fatigue, (3) chill, (4) wandering pains.

Anaemic persons are more liable to infectious diseases. Erythema nodosum, which has affinities with rheumatism, is more common in the anaemic. Chill is a factor in many microbic diseases. The tendency to relapse and metastasis suggests fresh doses of 'poison, and the various modifications of the disease and association with other diseases as chorea suggests mixed poisons from several varieties of bacilli acting separately or in combination. That chorea is of microbic origin may be inferred from its partial resemblance to tetanus and hydrophobia, when a microbic cause is in one case proved and very probably present in the other. All the facts of rheumatic fever are best explained by the theory of microbic origin, but all the facts of the connection between rheumatic fever and tonsillitis would be best explained by the existence of two varieties of microbes. The association of blood poisoning with slight throat troubles has yet to be worked out, and much has to be done clinically to convert the probability of the microbic origin of rheumatic fever into a certainty. A closer attention to the conditions of the throat is indicated from this point of view when we have rheumatic symptoms.

MORVAN'S DISEASE AND ITS RELATION TO SYRNGOMYELIA AND LEPROSY.

PRUS (*Archiv für Psychiatrie*, Bd. xxvii., Heft 3, *American Journal of the Medical Sciences*, July, 1896) reports the following:—A Galician Jewess, forty-six years old, began to feel pain in the right arm and weakness in the right shoulder. Then perforating ulcers formed in the region of the left internal and right external malleolus, followed by painless whitlows on the fingers. Later, anæsthesia of the finger-tips, paræsthesia and pain in the neck and arms, anæsthesia of the tongue, loss of teeth, and difficulty in speaking appeared. Atrophy of the phalanges, ankylosis of the phalangeal joints of the toes, of the carpus and elbow came next; the fingers were greatly deformed; walking became difficult. Among the other symptoms present at the time of the report, eight years after the onset, were white spots on the skin of the hand, atrophy of the nails and various muscles, with reaction of degeneration, disturbance of sensation, vasomotor anomalies, and diminution of the skin and tendon-reflexes. By a very complete process of exclusion, described in full in the original, a diagnosis of Morvan's disease was made.

Examination of the blood disclosed, in addition to anæmia and leucocytosis, bacilli which had all the characteristics of lepra bacilli, and, as miliary tuberculosis was evidently not present, a diagnosis of leprosy was made.

Prus, therefore, takes sides with those who deny the exist-

tence of Morvan's disease as a distinct process and see in it merely a form of anæsthetic and mutilating leprosy. According to the author, too, many cases of syringomyelia belong to the same category. His explanation of the process is as follows: After the lepra bacilli have penetrated the skin deeply, they develop in the sheaths of the cutaneous nerves and cause degeneration of the fibres. From this, various trophic disorders and alterations of sensation may occur. Later the bacilli affect the larger nerve-trunks, so causing paresis and muscular atrophy. If the spinal cord is reached, the bacilli develop in the neuroglia, especially in the gray matter, causing growths of the glia with subsequent retraction, whereby cavities are formed. It is possible that other things besides leprosy can cause such processes in the cord, but on'y the bacteriological examination can decide in any given case.

THE CAUSE AND TREATMENT OF FLATULLENCE.

Stephen McKenzie, in the *Practitioner* for July, 1895, gives a practical discussion of this subject. He states that a certain amount of air is swallowed in the process of mastication and deglutition, but this has never produced any of the phenomena associated with flatulence. This condition is also attributed to fermentation occurring in the stomach, but he does not believe the gas of flatulence is the result of food-fermentation, for fermentation processes are too slow for the rapid development of the flatulence observed in dyspepsia.

Sir William Roberts has shown that a certain amount of flatulence may occur in acid dyspepsia through the action of an acid mucus upon the alkaline saliva swallowed with the food; but this is certainly a rare and minor cause in the production of gas. The regurgitation of carbonic acid gas from the duodenum may sometimes occur, and cause a flatulent distension of the stomach, but this is also a rare phenomenon, and only occurs when the gastric juice is hyperacid.

The writer, after discussing other theories, concludes that flatulent dyspepsia is due to a lack of gastric tonicity. In other words, the wall of the stomach, being weak, flabby and lacking in tone, suddenly dilates, and a volume of gas which was before somewhat compressed expands and fills out the enlarged viscus. The gas does not increase in quantity in the stomach, but only in volume. Associated with this gastric atony and perhaps dilatation, there is often a slight catarrhal condition of the stomach which lessens the power of normal gastric digestion and helps also to weaken the walls of the stomach.

The most important thing in the treatment of flatulent dyspepsia is to use remedies which will increase the nervous

vigor; hence tonics, and especially nerve tonics, are of the greatest importance. *Nux vomica* and strychnine should be placed at the head of the list. When there is gastritis associated with flatulent dyspepsia, with a coated tongue, the author gives bicarbonate of soda, strychnine and spirit of chloroform, dissolved in a bitter infusion of calumbo or gentian; 2 ounces three times a day, between meals. If pain is associated with the flatulence, bismuth is added to the mixture, or a pill containing carbolic acid, valerianate of zinc and alum is given. The compound assafetida pill and the extract of belladonna are sometimes useful. In cases where pain is located lower in the bowels, Indian hemp in doses of one-third of a grain often answers better than any other remedy. For the violent spasmodic attacks which these sufferers often have, associated with distension of the stomach and intestines, a mixture is given composed of equal parts of spirit of cajuput, aromatic spirit of ammonia, and spirit of chloroform; a teaspoonful in a wineglass of water every half or quarter of an hour.

The writer does not believe in the use of charcoal in flatulence, nor does he place great stress on the value of bismuth. The purpose of his paper is, he says, to urge the importance of tonics and antispasmodics as the rational and effective treatment of flatulence by improving the muscular tone of the stomach.—*Monthly Retrospect*, Aug., 1896.

AUTO-TOXEMIA IN CHILDHOOD.

In childhood the condition of the alimentary canal is a matter of, not an occasional illness, but rather of daily consideration. The digestive system has to ascertain, by a wide experimentation, the limits of its possibilities. Hence, the child repeats, in miniature, the history of the human race; it begins by putting into its stomach anything it can swallow, and learns by painful experiences to discriminate between the wholesome and the unwholesome. The most flagrant gastronomic sins are followed by local effects, such as colic, vomiting and diarrhoea; but by far the greater number of such errors give rise to general effects, by auto-toxemia; the absorption of toxins from the alimentary canal. The headaches, fevers, languor, anorexia, broken sleep, night terrors, as well as the affections of the gastro-intestinal tract itself, are very often attributable to this source. Indeed, it is now claimed, by very high authorities, that a vast number of nervous affections are to be traced to the absorption of these digestive-system toxins. Among the nervosa in this list are neuralgia, chorea, hysteria, melancholia, convulsions, strabismus, various spinal diseases, and epilepsy. Rheumatism, diabetes, uricaemia and uraemia have also been traced to this source. Mothers have been derided for excusing their chil-

dren's misdemeanors on the plea of indisposition; but very many times children are spanked for naughtiness or ill-temper directly due to leucomaine absorption. Our grandmothers administered a more judicious punishment in the shape of a dose of ipecacuanha, castor oil or brimstone and rhubarb; and while we make our doses more palatable we have not improved much on the efficiency of their treatment. In one household, of which the writer has some knowledge, the bottle of alkaline rhubarb with hydrastis held an honored place as long as there were children in the house; and every manifestation of original sin was followed by inquiry for the rhubarb. So well did the infants learn this lesson that when even the father attempted to reprove them, the youngsters, without a particle of malice or evidence of lacerated feelings, brought him the rhubarb. The probability is that they were right.

In the fevers of childhood, also, the absorption of toxins from the bowels plays an important part. Fever checks or stops the supply of nature's antiseptics, the bile, pancreatic secretion, etc.; and decomposition, the work of the intestinal micro-organisms, at once begins. In every case of fever, of whatever variety, simple or specific, so large a share of the symptoms presented are due to auto-toxemia, that intestinal antiseptics is the leading therapeutic indication. This accomplished, the attack is reduced to a comparatively innocuous malady, very often requiring nothing more than hygienic management.

Hitherto we have spoken only of the toxins generated in the intestinal canal as being the most important source of auto-toxemia and that most directly within our reach. But it must not be forgotten that in the operations of every cell in every tissue of our bodies, there is a constant formation of toxic matter, and that the getting rid of this waste product is essential to health. The kidneys are the main channels by which this excretion is performed, and the amount of solid matter thrown off in the urine is a fair indication of the state of this function. The day is at hand when no physician will be considered fairly equipped for his duties unless he has a laboratory at his command, with which the urine, faeces, sputa, blood, etc., can be scientifically examined. Our knowledge of the physiology of the tissues is unfortunately of the scantiest; of their pathology even less; consequently of their therapeutics there is hardly a vestige. In a general way we believe that calcium promotes the strength of the cell-wall, that phosphorous compounds favor the reconstructive work, and that the chlorides stimulate metabolism; while alkalides promote destructive metamorphosis, or katabolism, and the iodides stimulate the absorbents. But that there are much more definite indications behind these generalities, that there is a whole realm of truths as yet undiscovered waiting for recognition, no one who believes in the future of the medical art can doubt. — *The Medical Council*, August, 1896.

**THE VALUE OF THE OPHTHALMOSCOPE AS
AN AID TO THE DIAGNOSIS OF CEREBRAL
DISEASE IN PURULENT AFFECTIONS
OF THE MIDDLE EAR.**

Thomas R. Pooley, M.D., of New York, writes on this subject in the *Medical Record*, August, 1896.

Dr. Pooley gives the history of three cases reported by Dr. J. A. Andrews in 1883, where in chronic purulent otitis media, optic neuritis was observed. Also one reported by Dr. C. J. Kipp, of Newark, and one by himself. In these cases there is a history of otorrhoea for months or years, with meningitis and abscess or phlebitis of the lateral sinuses. In Dr. Kipp's case there was with the purulent inflammation in the middle ear a double optic neuritis, but without tenderness or swelling or of spontaneous pain in the mastoid process. Operation discovered an abscess in the mastoid, the healing of this cavity was followed by cessation of the otorrhoea, and later a subsidence of the optic neuritis and return to normal vision. The following deductions are made from a consideration of these cases:

Deductions.—From a consideration of these cases and many others in literature the following conclusions are drawn:

1. That the ophthalmoscope is of value in arriving at a diagnosis of the presence of cerebral disease—in some instances by confirming the evidence which is given by other symptoms, in others by being the principal if not the only reliable evidence of the existence of brain disease.
2. The subsidence of the optic neuritis after operation which gives a favorable turn to the ear disease, is shown by the recovery of the eyes and their restoration to normal vision. In this connection Kipp's case is particularly interesting and instructive, because there were wanting positive evidences of either mastoid disease or cerebral extension until the ophthalmoscopic examination detected double optic neuritis, upon which indication alone the operation was determined upon.
3. The percentage of cases in which the lesion under consideration is found is small, as, indeed, are brain complications. Kipp thinks that in most cases where meningitis is present there is some degree of optic neuritis. This seemed to have been the consensus of opinion in the discussion which followed the reading of the paper in the American Otological Society and was participated in by a large number of members present. This may be accounted for in a large measure, I think, by the neglect to look at the eyes—an omission which I for one confess to in many of my cases. Again, the attention is frequently not directed to the eyes, because, as is well known to ophthalmologists, vision is often unimpaired even in the most pronounced inflammation of the optic nerve.
4. The intra-ocular end of the nerve is never inflamed

when the disease remains limited to the middle ear and mastoid, but if it is, it is a certain evidence of brain disease. If, therefore, optic neuritis is found, the diagnosis of extension to the brain is certain, no matter whether other evidence exists or not.

5. The form of optic neuritis which exists is always of the kind seen in affections of the brain, viz., choked disc; but this may vary in degree from simple venous stasis, hyperaemia of the disc, oedema of the disc and surrounding retina, to, as in my case, the most pronounced choked disc. In my opinion the various forms described are only different grades of this form of neuritis. The eye trouble and impaired vision are most marked on the side where the ear disease is.

6. The presence of optic neuritis is unfortunately no aid in a solution of the difficult dilemma of locating the situation or even the nature of the disease, although, as we shall see under another head, the latter may be inferred from its more frequent occurrence in some of these affections than in others.

7. Optic neuritis occurs more frequently in cases of otitis media purulenta chronica than in acute cases, in which, indeed, its occurrence is very rare, the case of Kipp's in this respect being the earliest example of its occurrence after the onset of the ear affection. I have found that most of those I have looked up were observed in cases of otorrhoea of long standing, in many instances a number of years.

8. The list of brain lesions from otitis media purulenta in which optic neuritis has been observed, verified by autopsies, embraces nearly if not all those observed, i.e., abscesses of brain and cerebellum, meningitis, and sinus thrombosis.

9. The occurrence of optic neuritis in a case of otitis media chronica with implication of the mastoid, with a history of long-standing otorrhoea, is by inference very apt to be due to a cerebral abscess, although it must not be lost sight of that all of the lesions enumerated may be found in the one case—as in mine, where there was an abscess, meningitis, and sinus thrombosis.

10. The extent to which the presence of slight oedema of the optic disc should influence us in determining upon an operation on the mastoid is, in the absence of other sufficient evidences, necessarily an open question. But I think we may safely accept the conclusion arrived at by Dr. Andrews, a sound one, that “as the operation, when intelligently performed, is not a dangerous one, without waiting for pronounced neuritis we may accept the condition of oedema of the optic disc in the case under consideration as an indication for the opening of the mastoid; and if not with the expectation of liberating pus, at least to establish free drainage from the middle ear. The procedure is certainly consistent with a good surgical principle, and is not likely to add to the pre-existing mischief.” In regard to the presence of a marked neuritis alone or in connection with other symptoms being an indication to open the mastoid, no doubt can exist. Another

indication of great value is pointed out by Knapp, who has been guided by the recession of the ocular symptoms in arriving at a decision when to let the opening in the mastoid (after operating) close. It is not necessary, he says, to keep up the syringing and drainage from the mastoid cavity until the suppuration has completely ceased, and it is just in these cases that the use of the ophthalmoscope has been of advantage.

11. The existence of optic neuritis as an indication for a more serious operative procedure than opening the mastoid, of the nature of an exploration of the brain for intracranial disease, can be considered only in connection with other symptoms which would go to render so grave a procedure justifiable. So far as it goes, however, it serves to make the presence of intracranial disease more certain.

THE DIAZO REACTION OF EHRLICH IN TYPHOID FEVER.

Dalgoff has reported to the Russian Medical Congress the results of his researches of Ehrlich's typhoid fever reaction. The study extended over 133 clinical observations, and Dalgoff has formulated the following conclusions:

1. In all cases of typhoid fever, of three weeks' duration, the reaction is observed in a majority of instances. A failure is rare. It is especially manifest at the seventeenth or eighteenth day and it often disappears three or four days before the febrile lysis.

2. In all typhoid cases, with a duration of three to five weeks, the diazo reaction never fails; it is especially evident at the end of the second or commencement of the third week; it disappears, generally, five to nine days before the fall of the fever; but, in grave cases, it will persist one or two days after.

3. When the fever has a duration of more than five weeks the reaction is very marked at the end of the second week and it disappears four to nine days before the fall of temperature.

4. When there is a relapse the reaction will reappear and its intensity will vary with the gravity of the relapse.

5. The reaction is not modified by complications, as peritonitis, etc. The intensity of the reaction follows a typical course with the fever. It has an ascendent, stationary and descendent period.

6. The diazo reaction is a constant phenomenon in typhoid fever; it is present in 99 per cent. of cases.

7. The reaction persists with the fever, but it disappears a short time before the fever declines.

8. The intensity and duration of this reaction are of prognostic importance; in grave cases it is strikingly manifest and persistent; in mild cases the reaction is always of short duration, and it is generally less intense than in grave cases.

9. The amount of the chemical bodies which produce the reaction are directly proportionate to the gravity of the disease.

The author has attempted to define the pathological substance which gives the diazo reaction. His researches have not been complete, but it seems that he has isolated the substance as an ethersulphuric acid. It is probably produced by a peculiar trouble of nutrition, and it can not be classed in the category of ordinary pathological urinary bodies (as albumin, peptone, etc.).—*Medical Review*, Aug., 1896.

THE TREATMENT OF DIABETES MELLITUS BY URANIUM NITRATE.

Samuel West, M.D., F.R.C.P., in the *Medical Press and Circular*, August, reports his further experience with this drug. He claims that it diminishes the thirst, reduces the amount of urine passed and lessens the percentage of sugar. In his hospital cases the drug was tried only after the patient had been kept on diabetic diet, and until the benefit to be derived from dieting, rest, and freedom from care and fatigue had shown themselves, and the patient had arrived at a state of equilibrium. Five cases are reported; the remedy was given in doses of from 5 to 10 grs. three times daily, in one case 3 grain doses (all the patient could take) produced no benefit, in all the others a marked improvement in all the symptoms was observed.

SURGERY.

IN CHARGE OF

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THE STREPTOCOCCUS AND ANTISTREPTOCOCCIC SERUM.

Marmorek (*Annales de l'Int. Pasteur*, November 7, 1895; *Cent. für innere Med.*, December 28, 1895; *American Journal of Medical Sciences*, May, 1896), working in the same line as the diphtheria- and tetanus-serum theories, produced an anti-streptococcic serum which gave the following results in cases of erysipelas :

The mortality before its use was 5.12 per cent. During the period it was used there were 306 cases, 165 of these that were considered severe were injected; the mortality fell to 1.63 per cent., and if certain cases were left out that died

from other causes it would be only 1.2 per cent. A weaker serum was then employed, when the mortality rose to 4.82 per cent.

If the dose was sufficient, improvement in the subjective and local symptoms took place five to twelve hours after the injection. The temperature sank rapidly, and came to normal twenty-four hours afterward. If the temperature remained high, the dose was repeated at the end of twenty-four hours.

Albuminuria was never present in patients treated with the serum, and if it was previously present, it disappeared from twenty-four to forty-eight hours after the treatment commenced.

The dose varied according to the patient and the severity of the disease from 10 c.c. to 20 c.c. in severe cases. The total dose never exceeded 120 c.c. in ten days.

Gratifying results were also obtained in cases of puerperal fever, especially where the infection was not mixed, but a pure streptococcus infection.

SUTURE OF WOUNDED BLOOD VESSELS.

Two cases of this kind are recorded by Dr. Sabanyeff, of Odessa. In the first the suture was applied to the femoral vein, wounded during excision of the inguinal glands, and in the second to the femoral artery. In the latter case the patient died from the original disease, and the sutured artery was microscopically examined by Dr. Padalka, who found that the healing of the wound of the artery took place from outward to inward,—*i.e.*, that above all intima of the vessel healed, and parts approached by the suture healed sooner than those removed. In the same article the author studies the question of cardiac suture. He made a series of experiments upon rabbits, and arrived at the same conclusions as Block and Vecchio.—*Hirurgitchesky Archiv*, 1895.

THE GENERAL TREATMENT OF SYPHILIS IN PRIVATE PRACTICE.

Dr. RAMON GUITÉRAS gives an able paper on this subject in the *New York Medical Journal*, June 20th, 1896. He introduces his paper by saying: "This may be generally considered in about three lines, and as follows:

"For the first stage; the initial lesion; cauterize if necessary, and dress with aristol, iodoform, or calomel.

"For the second stage, prescribe pilula, hydrargyri protiodidi, from a third of a grain to a grain three times a day for the first year, and 'mixed treatment' for another year.

“For the third stage, if it occurs, employ ‘mixed treatment’ alone, or with fifteen grains of potassium iodide three times a day, the iodides to be increased if the lesions are serious, and use mercurials locally.”

After this introduction he takes up each stage and considers the treatment of different forms by certain methods.

In reviewing the primary lesion he emphasizes the fact that mixed infection should be treated first as a chancroid with frequent washings with an antiseptic wash, and the application of some bland antiseptic powder, and as the sore becomes infiltrated and hard, to treat it as such by antiseptic washes and a dusting powder of equal parts boric acid, bismuth subnitrate, and calomel. In the event of the sores taking on an ulcerating form, he recommends cauterization with a saturated solution of silver nitrate.

In reviewing the treatment of the secondary stage, he says: “Some keep the patient on mercury for two years. It is my custom to give it for one year, and then to change it to mixed treatment, which I continue for another year. In prescribing this I order a sixteenth of a grain of the biniodide of mercury, and from three to seven and a half of iodide of potassium in the compound syrup of sarsaparilla, or better, the same strength in the Fraser ‘mixed treatment’ tablets, to be taken three times a day.”

In the treatment of pytalism from mercury he uses a saturated solution of chlorate of potassium alternating with one of boric acid as a mouth-wash, and if the pytalism is marked controls it with small doses of atropine.

DIAGNOSIS OF CARCINOMA OF THE BREAST IN ITS EARLY STAGES.

A. MARMADUKE SHIELD, M.B. Cantab, F.R.C.S. (*British Medical Journal*, May 30, 1896) considers 2,531 cases of carcinoma of the breast. Hospital records show that the most likely age for cancer is between 40 and 55. A tumor commencing in the breast of a woman under the age of 20 or over the age of 80 is not likely to be a cancer. The likelihood increases from 30 up to the age of 60, then gradually lessens.

Dr. Shield points out that patients usually discover quite accidentally that they have a tumor of the breast. It is quite the exception to have anything like severe pain in early cancer of the breast. Pain if present is not constant, but of the neuralgic type; there is no throbbing, or especial tenderness on pressure, heat, and redness. Symptoms which

are more characteristic of a deep abscess or inflamed cyst, or interstitial inflammation of an area of breast substance, than of cancer in its early stages. A number of cases of widespread carcinoma are reported where the disease in the breast was not detected until secondary cancerous deposits in other parts attracted attention. This insidious onset is especially common in very fat women, indeed the dimple in the skin over the growth is held often to be the first to attract the attention of the patient. Thus a case of pleurisy in an elderly woman, coming on insidiously, may be due to a deeply seated nodule of cancer in the breast, and the same may be said about pains about the thorax or bones, often supposed to be "rheumatic."

Of still greater importance are the phenomena of spontaneous fracture, especially of the femur, or severe pain in the spine terminating in paraplegia, and the sudden and rapid appearance of innumerable disc-shaped nodules of cancer over the skin of the thorax and abdomen.

In all such cases as these I would advise you to examine the breast, and in a certain proportion of them a nodule of deeply seated carcinoma will explain a very mysterious illness.

In considering the question of heredity, he says: "On the whole I may confidently advise you to look upon the family history of cancer, so far as breast disease is concerned, as of no great value in aiding you to arrive at a right and certain conclusion."

Dr. Shield claims that an exploratory incision is far and away the most reliable guide in cases of doubt. He urges the importance of becoming thoroughly acquainted with the appearance of freshly cut scirrhus. Even a small scirrhous nodule is said to offer marked resistance to the scalpel. The section is white and glistening like a section of unripe pear. The hardness fades off into the surrounding tissues, which are drawn together and contracted. The surface is often covered with little yellowish puncta from which on squeezing a juicy exudation and cells escape.

THE SERUM TREATMENT OF SYPHILIS.

Barling (*British Medical Journal*, February 8th, 1896) reports a case, where results produced by the injection of antisyphilitic serum was remarkable. The infecting sore was severe,—in fact, had taken on a phagedænic character, and had extended two-thirds of the way through the penis when the first injection was given. The other early secondary symptoms were well marked. On December 31st, when there was

immediate danger of losing the glans, all medicines were stopped and the injection of antisyphilitic serum was begun.

"On December 3rd 1 c. cm. was injected into the left flank. There was no apparent effect. The evening temperature was normal.

"On January 1st, 1896, 2 c. c.m. were injected into the right flank. The evening temperature was 99.2° . The patient felt sick about two hours after the injection, but this passed off in an hour. There was distinct redness and increased swelling around the chancre.

"On January 2nd, 3 c. cm. were injected in the left flank. No further change was noted. The temperature was normal.

"On January 3rd, 4 c. c.m. were injected into the right flank. The chancre had certainly not spread since December 31st. The edges were now clear of slough. The patient said he felt 'all right.' The evening temperature was 98.8° . On January 4th the slough was separating and the secondary eruption was almost gone.

"On January 6th the slough had come away leaving a healthy granulating surface. The patient's general condition was improving.

"On January 25th the patient had been out for nearly a fortnight, and had put on almost a stone in weight. The wound was practically healed, chiefly by third intention."

The whole dose of 10 c. cm. was spread over four days, instead of seven as is usual, but the urgency of the symptoms seemed to warrant this. So far as can be judged from one case, the serum seems to have had a very good effect. It remains to be seen if the experience of others will confirm this opinion.

OBSTETRICS.

IN CHARGE OF

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POWERLESS LABOR.

If rigidity of perineum causes powerless labor—and this is more frequently the cause in primipara than any other—there are four ways of treating the case. You can wring out flannel cloths in very hot water and keep constantly applied to the perineum. If it does not yield to that, you can put the patient into a hot hip-bath, and keep her there for twenty or forty minutes. If unsuccessful in this, chloroform your patient, put her on her side, and put two fingers in vagina and pull it steadily back towards the coccyx. The last resource

is to dilate gradually with the forceps, while patient is anaesthetized. Of course, in all these cases, if after the cause is removed the "pains" are inefficient, the forceps may be required to terminate the labor.

CRACKED NIPPLES.

Dr. Virginia M. Davis, of New York, is accustomed to apply lanolin with the onset of labor four times daily till lactation is established. The nipples are then, after each nursing, anointed with the following:

R. Tinct. Benzoin Comp	15 drops.
Ol. Olivæ	2 drachms.
Lanolin	6 drachms.
M. Ft. ungt.— <i>Prescription.</i>	

LACERATION OF PERINEUM.

Dr. Batman, of Ind., says:

1. The obstetrician has not discharged his full duty to his patient until he has carefully determined the location and extent of all injuries to the soft tissues of the pelvic outlet occasioned by the labor, and has repaired such as are susceptible of immediate repair.

2. The time is not far distant, if not already here, when the courts will take cognizance of failures to render such services when thus indicated, since they are a part of the service which the thoroughly equipped practitioner renders his patient. The only amends which can be made for failure to make the immediate repair, in case the attendant is not prepared with appliances and a knowledge of the technique of the procedure, is to call for assistance upon some one that is prepared.

THE INFLUENCE OF ALEXANDER'S OPERATION UPON PREGNANCY AND LABOR.

Stoeker finds that this operation exerts no unfavorable influence upon conception, and in his extensive experience he had never seen a labor complicated by the results of the operation.

THE INFLUENCE OF SOMATOSE UPON THE MAMMARY SECRETION IN NURSING WOMEN.

Drews reports twenty-five cases in which somatose produced an abundant milk secretion in women who seemed to be unable to nurse, and also caused the milk to flow in cases where, from one cause or another, it had ceased to flow. The dose given was one teaspoonful in a cup of warm milk 3 or 4 times a day. As it is tasteless, patients do not object to it.

VERSION IN THE VENTRAL POSITION.

Mensinga, in *Cent. Fur Gyn*, claims for this position the following advantages: 1. The aperture of the pelvis is directed upward, instead of downward as in the dorsal position. This gives more room for the operating hand. 2. The arm remains continuously in a position of pronation, in which the acting muscles have a greater certainty of action, than in supination. 3. The ventral position produces a shortening of the uterus and vagina and a widening of the latter organ, enabling the hand to be introduced with greater ease. 4. The os is also widened and the contracting ring at the os internum disappears. 5. The dorsal surface of the hand remains in continuous contact with the spinal column; this forms an excellent guide to the operating hand. The maternal soft parts cannot be injured. 6. The shortening of the uterus enables the operator to grasp the foetal parts with greater ease. 7. The patient is in a more esthetic position. 8. The danger of tearing the uterus from the vagina is avoided, because the hand encounters no obstacles in its entrance to the vagina and uterus. 9. Air embolism cannot occur, as the uterine fundus forms the most dependent portion of the genital canal, and any air which might enter remains in the vagina. 10. The former reasons also explain why the operation is less painful and the external genitals are always in plain view.

WHAT FACTORS ARE TO BE REGARDED IN THE DISINFECTION OF THE HANDS.

Dr. F. Ahlfeld (*Monat fur Gebust und Gyn.*) gives the following conclusions as a result of his experiments:

1. An essential factor in the success or failure in disinfecting the hands is their previous condition. Hands with long nails, deep grooves around the edges of the nails, and rough, fissured skin are very difficult to sterilize.
2. A second factor is the energy, both physical and mental, with which the disinfection is conducted.
3. In the sterilization, alcohol plays the most important role, on account of its germicidal action.
4. The operation should begin with the trimming of the nails. Then the hands should be scrubbed one or two minutes with soap and hot water. After the nails have been carefully cleaned, the scrubbing should be continued again for one or two minutes. The water should be very hot, and changed frequently during the process.

Careful observation of these points produced satisfactory results in all the experiments.

CARE OF PREGNANT WOMEN.

Pinard (*Gaz. des Hop.*) calls attention to the fact that it is very important that women should be kept at rest towards the end of pregnancy. Hard work is an evil both for the mother and for the child. He has made a comparison of cases of women who sought relief at the lying-in-hospital usually after the first pains had occurred, with those who had resided some time in the hospital, and finds that the weight of the children born of those who had been cared for in the hospital for some time was considerably greater. They also all carried their children the full 280 days; while those that were hardworked up to the last, only one-half carried to the 280 days.

MANAGEMENT OF LABOR.

J. S. Thomson, in *Ed. Med. Jour.*, never allows the use of the vaginal douche in a patient who has passed through a comparatively normal labor, whether forceps have been used or not. He uses forceps once in every five cases, for, he says, that "with a well dilated os it is folly to wait for hours upon nature to complete what can be brought to a close in as many minutes." He also gives ergot as a routine practice immediately after the birth of the child, and always removes the placenta within fifteen minutes.

GYNÆCOLOGY.

IN CHARGE OF

A. LAPHORN SMITH, B.A., M.D., M.R.C.S., Eng.

Fellow of the American Gynecological Society, Gynecologist to the Montreal Dispensary and to the Samaritan Hospital; Surgeon to the Western Hospital, Professor of Clinical Gynecology in Bishop's University.

THE INFLUENCE OF CASTRATION ON STRUCTURAL CHANGES OF THE UTERUS.

Sokoloff (*Archiv für Gynakologie*, Band li, Heft 2, the *American Journal of the Medical Sciences*, June, 1896) presents the results of a series of interesting experiments upon bitches and rabbits, undertaken with the view of determining the anatomical changes which take place in the uterus after the removal of one and of both ovaries. After the former operation the heat returned as before, but in no instance after the removal of both ovaries. The animals were killed at different periods after the operation, varying from twenty days to fourteen months, their uteri were removed, hardened, and sections were made. No variations from the normal were noted in cases in which a single ovary had been removed, but after complete castration a well-marked atrophy of the circular muscular layer was observed, which reached its height

four months after operation, as well as a disappearance of numerous muscular fibres in the longitudinal layer. The caliber of the vessels was diminished and their walls were thickened, especially in uteri removed several months after castration. The endometrium remained unchanged even a year or more after the operation.

The writer denies that the atrophy of the uterus following castration is due to ligation of the spermatic arteries, since the collateral circulation is speedily restored. It must, then, be attributed to a disturbance of nutrition in the uterine tissue secondary to extirpation of the ovaries, of nervous origin, either central or dependent upon the removal of vasomotor or trophic centres in the ovaries themselves. The writer favors the latter theory. Every tissue must, in order to retain its normal structure, perform its normal functions, as well as receive a proper amount of nourishment. When the normal physiological stimulus of this tissue is absent and its function is accordingly suspended, it undergoes atrophy, even though its nutrition is not disturbed. The regular rhythmical contractions of the uterus cease after extirpation of the ovaries which are the seat of the exciting impulses; its normal functions, menstruation and pregnancy, are eliminated, and muscular atrophy results. The endometrium, not being influenced by these contractions, remains unchanged. The latter phenomenon may be explained on the theory that the mucosa and utricular glands are presided over by a special nerve-centre independent of the atrophic centre regulating the muscular tissue.

CONSERVATIVE SURGERY OF THE TUBE.

Gersung (*Centralblatt für Gynakologie*, 1896, No. 2) describes a conservative operation for hydrosalpinx after extirpation of the opposite tube and ovary, the corresponding ovary being normal. The sac was incised, its contents evacuated, and the ovary sutured in the opening with fine silk, so that only a portion of its upper surface remained visible. It seemed to be fairly certain that during ovulation the ova would escape into the tube, but, not having a probe, the operator was unable to satisfy himself that the proximal end of the tube was patent, so that conception might occur.

The patient was discharged at the end of three weeks; she menstruated a month later, and became pregnant after the second period. When examined, pregnancy had advanced to four months, and she was in excellent health.

The operation proved conclusively that a hydrosalpinx can, by conservative treatment, be transformed into a tube capable of performing its normal functions, and that the usefulness of a healthy ovary is not impaired by transplanting it into the wall of the sac.

FIXATION OF THE PROLAPSED OVARY.

SAENGER (*Centralblatt für Gynakologie*, 1896, No. 9, *American Journal of the Medical Sciences*, July, 1896) reports two cases in which he practised "pelvic fixation" of the ovaries. With the patient in Trendelenburg's posture, ventro-fixation of the retro-displaced uterus was first practised. The prolapsed ovaries were attached to the pelvic brim in one case by passing two fine silk sutures through each mesosalpinx near the ampulla of the tube, and then through the parietal peritoneum just in front of the attachment of the ovarian ligament. In the other case after ventro-fixation the ovaries (previously freed from slight adhesions) were drawn upward, ignition-puncture of several follicular cysts was performed, and the organs were then attached to the parietal peritoneum as before, except that the sutures were introduced around the infundibulopelvic ligament just behind the fimbria ovarica. In both instances all former painful symptoms were relieved, and the ovaries remained permanently in normal position. In the second case the patient had conceived, and was six months pregnant.

The operation is comparable with intra-peritoneal shortening of the round ligaments, and, like the latter procedure, aims at restoring the displaced organs to their normal position without impairing their natural mobility. It is, of course, impossible to accomplish this fixation of prolapsed ovaries except by cœliotomy. It is intended merely as a supplement to other conservative work upon the uterus and ovaries.

AIR-EMBOLISM DURING MYOMECTOMY.

BIERMER reports the following case, which he regards as unique: During the removal of a myoma of medium size from the anterior aspect of the uterus, a sudden hissing sound was heard as the growth was twisted out of its bed, and the cavity was filled with bloody foam. Less than two minutes afterward the patient ceased to breathe, her pulse became imperceptible, and although efforts at resuscitation were continued for an hour, she expired. The diagnosis of chloroform-asphyxia was made, but at the autopsy the right ventricle was found to be distended with large air-bubbles.

GONORRHŒA IN WOMEN FROM A MEDICO—LEGAL STANDPOINT.

NEISSER (*Centralblatt für Gynakologie*, 1896, No. 14, *American Journal of the Medical Sciences*, July, 1896) discusses this important question with especial reference to the importance of the diagnosis, which, he affirms, cannot be positively made without the aid of the microscope. A secretion may be pre-

sent which bears an exact resemblance, macroscopically, to gonorrhœal pus, but contains no cocci, or, in fact, any bacteria whatever.

Moreover, it is impossible to determine the time at which infection occurred, since its course differs so widely in different subjects. When the cervical canal is affected, but not the urethra, symptoms may be absent. The writer denies the truth of the statement that obscure acute gonorrhœal infection in the female may cause a chronic discharge in the male; the gonococci always possess the same virulence, and when they come in contact with healthy mucous membrane produce an acute inflammation. This explains the violent gonorrhœal attacks in newly married women, whose husbands regard themselves as entirely cured, and also the similar acute infection of men after intercourse with females whose physicians had discharged them as free from disease. In both instances the secretion is found to contain a few scattered cocci, which are only found after a long search. In the chronic cases the characteristic appearance of the gonococci within cells is often wanting, and the culture-test is frequently unsatisfactory. In short, the microscopical diagnosis is often exceedingly difficult. Still, this is the only one which should be admitted as positive in a court of law.

SIMON (*Revue Méd. de l'Est; Annales des mal. des Organes Gén-urinaires*, 1896, No. 4), after reviewing the opinions of various authors with regard to the importance from a medico-legal standpoint of the presence of gonococci in suspected vaginal discharges, the following interesting case is cited: A man, aged thirty-seven years, was accused of having committed rape upon a little girl five years of age, and of having infected her with gonorrhœa. An examination of the greenish pus which escaped from her vagina showed that it contained Neisser's cocci. The accused denied that he had had urethritis or any venereal trouble since an attack of clap fifteen years before, which had been promptly cured. Careful and repeated examinations of his urethra showed an entire absence of any abnormal secretion. A bacteriological examination of the urinary sediment demonstrated the presence of numerous epithelial cells containing bodies which somewhat resembled gonococci; but when subjected to staining by Gram's method failed to respond to the ordinary test. Under these circumstances it was impossible for the expert to submit a positive opinion. Hence the inference that when the question of the specific nature of an old urethral discharge is to be decided, too much reliance cannot be placed on the bacteriological evidence. Even when cocci are demonstrated in the vaginal secretion, the origin of the infection, whether direct or accidental, may remain in doubt.

TUBERCULOSIS OF THE FEMALE GENITAL ORGANS (INCLUDING TUBERCULOSIS OF THE KIDNEYS.)*

By ALBERT VANDER VEER, M.D.

In his paper some stress was laid upon the benefit accruing from the past study of abdominal surgery, also reference made to the pathology of old writers, and recent advances in this direction, one of the most important considerations being in the study of the pathological conditions presenting, from the standpoint of histological and bacteriological examinations for the tubercle bacilli. The subject of tuberculosis of the external organs of generation was carefully considered, also of the vagina and cervix, which, though exceedingly rare, still has a clinical history, and, while it is possible to find it as a primary development, from contact with the bacilli of the external surfaces, etc., careful investigation has proved that the ulceration is found, in the majority of cases, on the posterior wall of the vagina. This is the result of, possibly, the deposits of tubercular discharge from the tubes, from the uterus, possibly from bacteria being deposited there in the diseased condition of the male, or from such conditions as previous local lodgment, and the disease developed in that way.

Laceration of the cervix was also emphasized as being a point for development of tuberculosis. Stress was laid upon the fact that the disease was manifestly local, from a tubercular condition of the entire system. Some of the saddest cases in our practice are the ones associated with advanced phthisis.

Careful consideration was given to the subject of tuberculosis of the uterus in the form of tubercular endometritis, and to the fact that the uterus occupies a position for attack from the disease from without as well as from the secretions from the tubes. By far the largest number of cases are found in disease of the tubes, fully eight or ten per cent. of the cases of diseased tubes being of the character of tubercular trouble, and unquestionably the focus for the development of tubercular peritonitis. It is noted that the greater number of cases of tubercular disease of the tubes is found among young unmarried women, and not in women who have been married a number of years and borne children. Heredity presents as a strong element in these cases. Garrigues says that "the wall is swollen, its epithelium is thrown off, the ostia are generally closed, the calibre enlarged, and the tube filled with a caseous mass."

Tuberculosis of the ovaries is exceedingly rare, yet is to be observed in the form of the caseous variety.

* Read before the American Surgical Association, Detroit, Mich.

Tuberculosis of the female genital organs is of two varieties: miliary tuberculosis, and chronic, diffuse, fibroid tuberculosis, the latter being known and described in the past as the caseous form of the disease.

In the diagnosis of tuberculosis of the female generative organs, much attention should be paid to the conditions of that individual case, by differential diagnosis, or by exclusion. Whenever it is possible to secure some of the discharge, either from the tubes or from the uterus, more particularly, it should be examined for bacilli. The gross appearance of the sore, in connection with the external genitals, is that of the hardened split pea, more particularly, also within the vagina, with more or less moisture; and the greater the amount of discharge the more rapid seems the tendency to necrosis and breaking down of tissues, with increase of odor. Here the error has frequently been made, especially in regard to the cervix, in mistaking it for malignant disease in the form of carcinoma. The possibility of specific trouble must not be lost sight of. This error is to be avoided by careful microscopical examination of the secretions. There is no doubt that many of the so-called gonorrhœal cases of pyosalpinx, are the result of the grafting of the specific form of the disease upon the tubercular tubes already existing, and that it is in these cases we find, when cutting the tubes across, a solid mass of caseous infiltration.

Too much stress cannot be laid upon the necessity of an early diagnosis; and when the disease is locally confined to the external genitals, to the vagina, or to the cervix, or occurs in the form of tubercular endometritis, most gratifying results follow prompt energetic local treatment, such as curetting of external ulcers, of the cervix, or of the cavity of the uterus, the application of the carbolic acid or iodine or the use of peroxide of hydrogen; when the discharge is very free and contains pus, packing of the vagina and of the uterus thoroughly with strips of iodoform gauze is to be recommended, and is followed in many cases by prompt recovery.

Repair of a lacerated cervix is not to be forgotten, but is to be done thoroughly.

When it is positively decided that the tubes and ovaries are the source of the disease, a prompt operation for their removal is emphatically demanded. It cannot be done too early, and removal of the appendages on each side is recommended.

The writer's own preference is for abdominal section, believing that his results therefrom have been better than when working through the vagina.

Tuberculosis of the kidney still remains in an exceedingly obscure state. It presents in the form of miliary or general tuberculosis, and the caseous, scrofulous, or true disease of the kidney.

Reference was made to the lectures of the late Alonzo Clark, and his careful classification and diagnosis of the true scrofulous kidney. The symptoms are not altogether clear. The patient complains of pain about the lumbar region ; there is a group or lot of symptoms in addition to the lumbar pain, a sense of weight, of dragging about the side affected, extending downward into the inguinal region, accompanied, perhaps, with some nausea, with loss of appetite, emaciation, and a languid, restless feeling. The patient does not suffer the acute pain of renal colic, etc., that accompanies most of the other lesions of the kidney, but she is not well. Miliary tuberculosis is usually accompanied with development of this disease in other parts of the body. Miliary tuberculosis is the disease of childhood and adolescence, in children occurring more frequently up to the age of ten years. As to the manner in which the common, cheesy, surgical, scrofulous, tubercular lesions of the kidney present, it is believed by those who have studied the subject thoroughly that it is, as a rule, a primary tubercular focus in the lower urinary or genital structures, which gradually extends upward along the mucous surfaces to the bladder and ureter to the kidney.

Chronic renal tuberculosis is noticed in middle life and on in advanced life. It is possible for it to be confined entirely to one kidney, and perhaps destruction of that gland, resulting in a cirrhotic mass or cheesy substance, the kidney becoming encapsulated.

Temperature is the important consideration in the study of tuberculosis of the kidneys, there being a most decided rise at night, continuing thus for several days, which we are not able to account for in the search for tubercular lesions about the system elsewhere.

In all these cases the urine should be carefully examined as to the possibility of bacilli being present ; but Dr. Kelly, in a recent article in the *Johns Hopkins Hospital Bulletin*, vol. vii., February and March, 1896, states that this is a very difficult point to settle ; often bacilli are not to be found, yet on operation a tubercular condition of the kidney is present.

Dr. Vander Veer reported several cases from his own practice, and emphasized immediate or prompt removal of the kidney and ureter when once the diagnosis was clear, or that an exploration should be made. His own preference is for nephrectomy in all cases possible, doing an extraperitoneal operation, giving most decided endorsement to the nephroureterectomy of Kelly.

In all these cases the patient should be given the benefit of a general tonic course of treatment, such as tends to relieve general tuberculosis of the system.—*International Medical Journal*, June, 1896.

THE
CANADA MEDICAL RECORD

PUBLISHED MONTHLY.

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All communications for the Journal, books for review, and exchanges, should be addressed to the Editor, Box 2174, Post Office, Montreal.

Editorial.

THE BICYCLE.

This new means of rapid progression, now becoming so popular in all countries and among all classes of the community, is certainly, from a business and manufacturing point of view, the most prominent mechanical production of this age, and from all points of view current literature teems with references to it. In its present improved condition it is undoubtedly a convenient means, with favorable weather and roads, for rapid transit, and available for humanity in all its grades from childhood to old age, and in many families it will to a great extent supplement largely the use of the horse, and in many cases supplant him entirely, owing to the difference in the attention and care required, expense, and convenience, which stand in favor of the bicycle. A method of locomotion which is becoming so general, both as a means of recreation as well as in the pursuit of various occupations, deserves and demands the careful thought of the physician, who is now so often consulted in regard to it. We must be able to give sound advice to the young and the aged; as to the advisability and extent of its use by the female sex; in what diseased conditions its use may be permitted; and we should be competent to counsel all in regard to the amount and manner of indulging in this fascinating physical exercise. To do so one is much better qualified who has had personal experience, and who has felt the exhilarating influence and benefited by its judicious use, rather than having opinions based on prejudice or borrowed from those similarly inexperienced.

As a means for healthful exercise when taken in moderation, and with due regard to the strength of the individual, we can fully endorse the bicycle. On level roads with a modern wheel weighing from 22 to 25 lbs., no great effort is required to keep up a moderately quick pace, the lower extremities do most of the work, but those of the body and upper extremities are more or less in action, the latter more so when the handle bars are lowered. The heart feels the influence of the exercise in proportion to other muscles to a greater degree than in any other form of exercise, and is the organ most to be regarded, as in all over-indulgence it is the point where injury is most likely to occur, and in those unaccustomed to much exercise of any kind, the greatest moderation is required in the beginning to avoid excessive strain and over-dilatation of this organ, before compensating muscular growth occurs, and just here also is the danger from undue use of the bicycle by undertaking too long rides, excessive speed, riding against headwinds, or climbing long hills, hypertrophy and excessive irritability of the heart are apt to be engendered. The exercise is so fascinating and the exhilaration of a brisk ride so great, that without knowing it or the sensation of any feeling of fatigue, the heart may be overstrained. When the increase in the heart's beat, which is always associated with riding, becomes any way marked, the pace should be moderated or a complete rest taken. Sir Benjamin Ward Richardson, in a paper in *The Asclepiad* on this subject, gives the following conclusions:

(1) Cycling, when carried on with moderation, may, in so far as the healthy heart is concerned, be permitted, or even recommended, by practitioners of the healing art.

(2) In every case of heart disease it is not necessary to exclude cycling. It may even be useful in certain instances where the action of the heart is feeble, and where signs of fatty degeneration are found, since increased muscular exercise often improves the condition of muscle, and of no muscle more than the heart itself.

(3) As the action of cycling tells directly upon the motion of the heart, the effect it produces on that organ is phenomenally and unexpectedly great in regard to the work it gets out of it.

(4) The ultimate effect of severe cycling is to increase the size of the heart, and to render it irritable and hypersensitive to motion, the cycling acting upon it like a stimulant.

(5) The over-development of the heart under the continual over-action and extreme over-action affects, in turn,

the arterial resilience, modifies the natural blood-pressure, and favors degenerative structural changes in the organs of the body generally.

(6) In persons of timid and nervous natures, "neurotics," the fear incidental to cycling, especially in crowded thoroughfares, is often creative of disturbance and palpitation of the heart, and ought to be taken into account in preventive advice.

(7) In advising patients on the subject of cycling, it is often more important to consider the peripheral condition of the circulation than the central. Enfeebled or worn-out arteries, that is to say, are more dangerous than the feeble heart, and, when connected with a heart that is over-active, are seats of danger. This same remark would, of course, apply to cases where there is local arterial injury, as in aneurism.

(8) Venous enlargements seem rather to be benefited than injured by cycling, and conditions marked by sluggish circulation through veins are often greatly relieved by the exercise.

(9) There are three sets of acts which are most injurious in cycling: (a) Straining to climb hills and to meet headwinds. (b) Excessive fatigue. (c) The process of exciting the heart and wearing it out sooner by alcoholic stimulants, to the omission of light, frequently repeated, and judiciously selected foods.

(10) The time has arrived when practitioners of medicine everywhere should make observations for themselves that confirm or confute these observations.

We should always recommend to riders the erect position or only slight forward inclination, the lowered handle bars and bent position which using them in this manner entails, should be avoided by all who are not training for the race course, or is permissible only in the way of altering muscular strain on long journeys.

E. B. Turner, F.R.C.S., in the *British Medical Journal*, draws attention to a condition called fatigue fever, induced by over-exercise, and caused by an excessive amount of waste material being thrown into the circulation; the symptoms are sleeplessness, thirst, anorexia, lassitude next day, headache, palpitation of the heart and great depression, with several degrees of elevation of the temperature, it disappears in a few days after rest.

The writer, whose series of articles on the bicycle appeared during the last 3 or 4 months, states that the bicycle may be used from the age of 7 years on to old age.

That the bicycle has been a boon to the female sex is ad-

mitted by all writers when a proper saddle is used, which does not permit of undue pressure on the perinaeum, and where the usual rules and precautions are observed. It will aid in bringing about needed reforms in dress, and in all such conditions as anaemia, neurasthenia, dyspepsia, constipation, amenorrhoea and dysmenorrhoea and general want of visceral and muscular tone, the result of a want of the regular exercise which the male sex indulges more freely in, it will become a valuable factor in bringing about a condition of normal vigorous health.

According to Turner, bicycling should not be allowed in aortic valvular disease, but may be beneficial in mitral incompetency and in functional cardiac diseases; it is contraindicated in arterio-sclerosis, it is especially useful in varicose veins and haemorrhoids, also in quiescent tuberculosis, and in pleuritic adhesions, and especially as a preventive in those predisposed to phthisis, as one of its principal effects is to increase the lung capacity. In all inflammatory pelvic affections in women, leucorrhoea, menorrhagia, it should be prohibited until inflammatory and congested conditions have subsided, when its use will promote absorption of exudates. Its benefits are more apparent in functional diseases, and especially those of the liver and nervous system.

The bicycle is thus seen to be a potent means for correcting diseased and unhealthy conditions, when ridden with due circumspection, and it may, when injudicially used, lead to harmful results, which it is the duty of the profession to recognize and obviate by constantly sounding a warning note when opportunity offers. Under the sway of the bicycle humanity is taking an upward move; the never waning fascination and pleasure associated with its use drives the indolent and debilitated from conditions of inactivity to roam out into the pure air and sunshine, thus conforming to the conditions we know to be so essential to sound mental and bodily vigor.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

PRELIMINARY PRESS NOTICE OF THE NINTH ANNUAL MEETING AT
RICHMOND, VA.

The ninth annual meeting of the American Association of Obstetricians and Gynaecologists will be held at the Hotel Jefferson, Richmond, Va., Tuesday, Wednesday and Thursday, September 22, 23 and 24, 1896.

The proprietors of the "Jefferson" offer special rates to the Fellows of the Association, their families and guests, as well as to any physicians who come to attend the meeting. It is confidently expected that the railways will offer transportation at a uniform rate of a fare and a third on the certificate plan to all in attendance. Let all obtain certificates from their local ticket agents, or from the nearest point where certificates are granted.

OUTLINE PROGRAMME.

The Association will meet in executive session with closed doors on Tuesday, September 22nd, at 9.30 o'clock a.m., for the election of new Fellows. The open session for the reading of papers will begin at 10 o'clock a.m. Recess for luncheon at 1 o'clock p.m. Afternoon session at 3 o'clock p.m. An evening session will be held Tuesday at 8 o'clock.

Morning session will begin Wednesday at 9.30 o'clock for the reading of scientific papers. Recess at 1 o'clock. Afternoon session at 3 o'clock. Adjournment at 5 o'clock. Executive session at 6.30 o'clock. Annual dinner at 8 o'clock p.m.

Thursday morning the session will begin at 10 o'clock. Recess at 1 o'clock. Afternoon session at 3 o'clock. Final adjournment at 5 o'clock. A full attendance is specially requested at the final session.

PAPERS PROMISED.

Note.—No attempt is made to arrange papers in the order in which they are to be read. That will be done in the permanent programme.

1. Principles and progress in gynaecology. President's address Joseph Price, Philadelphia.
2. Vaginal hysterectomy by the clamp method, Sherwood Dunn, Los Angeles.
3. Further experience with appendicitis, Al Vander Veer, Albany.
4. Relation of malignant disease of the adnexa to primary invasion of the uterus, A. P. Clarke, Cambridge.
5. Treatment of puerperal septicaemia, H. W. Longyear, Detroit.
6. Treatment of posterior presentation of the vertex, E. P. Bernardy, Philadelphia.
7. Relation of local visceral disorders to the delusions and hallucinations of the insane, W. P. Manton, Detroit.
8. Differential diagnosis of hemorrhage, shock and sepsis, Eugene Boise, Grand Rapids.
9. Movable kidney: local and remote results, A. H. Cordier, Kansas City.
10. Pathology and indications for active surgical treatment in contusions of the abdomen, W. G. Macdonald, Albany.
11. Some causes of insanity in women, George H. Rohe, Sykesville.
12. Subject to be announced, John Milton Duff, Pittsburg.
13. Shall hysterectomy be performed in inflammatory diseases of the appendages? L. H. Dunning, Indianapolis.
14. Subject to be announced, Rufus B. Hall, Cincinnati.
15. Subject to be announced, Geo. Ben. Johnston, Richmond.
16. Dynamic ileus: with report of cases, J. W. Long, Richmond.

17. Faradic treatment of uterine inertia and subinvolution, Charles Stover, Amsterdam.
 18. A plea for absorbable ligatures, H. E. Hayd, Buffalo.
 19. Treatment of the stump, J. F. Baldwin, Columbus.
 20. Limitations in the teaching of obstetrics and gynaecology as determined by state medical examining boards, William Warren Potter, Buffalo.
 21. Subject to be announced, Walter B. Chase, Brooklyn.
 22. (a) The philosophy of drainage; (b) Treatment of the pedicle in hysterectomy or hysteromyomectomy in the abdominal method, Geo. F. Hulbert, St. Louis.
 23. Removal of the uterine appendages for epilepsy and insanity; a plea for its more general adoption, D. Tod Gilliam, Columbus.
 24. Albuminuria of pregnancy, A. Fr. Eklund, Stockholm.
 25. Subject to be announced, Lawson Tait, Birmingham.
 26. Unnecessary and unnatural fixation of the uterus and its results, James F. W. Ross, Toronto.
 27. Sarcoma of the urethra, Charles A. L. Reed, Cincinnati.
 28. Appendicitis as a complication in suppurative inflammation of the uterine appendages, L. S. McMurtry, Louisville.
 29. Gunshot wounds of the abdomen with the new gun, J. D. Griffith, Kansas City.
 30. Subject to be announced, Walter B. Dorsett, St. Louis.
 31. Subject to be announced, W. E. B. Davis, Birmingham.
 32. Subject to be announced, E. Arnold Praeger, Los Angeles.
 33. Tubo-ovarian cysts with interesting cases, A. Goldspohn, Chicago.
 34. Obstruction of the bowels following abdominal section, Geo. S. Peck, Youngstown.
 35. Memorial of Dr. Hiram Corson, Trail Green, Easton.
- Correspondence is pending concerning additional papers. All titles must be offered before August 25th, when the permanent programme goes to press. The executive council directs attention to the following by-law.

PAPERS.

VI. The titles of all papers to be read at the annual meeting shall be furnished to the secretary *not later than one month before the first day of the meeting.*

No paper shall be read before the Association that has already been published or that has been read before any other body.

Not more than thirty minutes shall be occupied in reading any paper before the Association.

Abstracts of all papers read should be furnished to the secretary at the meeting.

All papers read before the Association shall become its sole property if accepted for publication; and the Executive Council may decline to publish any paper *not handed to the secretary complete before the final adjournment of the annual meeting.*

Dr. Geo. Ben Johnston, 407 E. Grace street, Richmond, Va., is chairman of the committee of arrangements, who should be addressed in regard to hotel accommodations and railway fares.

JOSEPH PRICE, *President.*

WILLIAM WARREN POTTER, *Secretary.*

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

MEETING AT ST. PAUL, MINNESOTA,

September 15, 16, 17, 18.

Office of the Secretary, 3559 Olive Street.
ST. LOUIS, 30th July, 1896.

Editor CANADA MEDICAL RECORD.

My Dear Doctor,—I desire to announce to you that the date of the meeting of the Mississippi Valley Medical Association has been changed to September 15, 16, 17, 18, in order to permit the members and their families to take the opportunity accorded by this change to make a pleasant tour through the Yellowstone Park, so justly celebrated as the Wonderland of America.

Prominent resident members of our Association in St. Paul and Minneapolis are formulating plans for the special Yellowstone Park excursion trip, to leave on the evening of September 18th, arriving in Mammoth Hot Springs in the Yellowstone Park about noon on the following Sunday, and devoting the following five days to the wonders of this remarkable region, returning to St. Paul Sunday, September 27th.

The cost of the trip, including all expenses west of St. Paul, will be announced in due season, but we are authorized to say that the figure will be a very favorable one, and we simply wish at this time to make the preliminary announcement of this most enjoyable feature of the St. Paul meeting, so as to give members the opportunity of making their plans in advance to join the party. It is desirable that there be a party of 100 or more, in order to obtain the benefit of the special train service in both directions.

It is urged that all members who desire to join the party should send their names to Dr. C. A. Wheaton, chairman of the Committee of Arrangements, St. Paul, at as early a date as possible. If you desire to read a paper before the meeting, please send to me the title at once.

Very truly yours,

HANAU W. LOEB,

(L.) Secretary.

AMERICAN PUBLIC HEALTH ASSOCIATION.

SECRETARY'S OFFICE.

Concord, N.H., June 24, 1896.

(Preliminary Circular.)

The Twenty-fourth Annual Meeting of the American Public Health Association will be held at Buffalo, N.Y., September 15-18, 1896.

The Executive Committee have selected the following topics for consideration:

- I. The Pollution of Water-Supplies.
- II. The Disposal of Garbage and Refuse.
- III. Animal Diseases and Animal Food.
- IV. The Nomenclature of Diseases and Forms of Statistics.
- V. Protective Inoculations in Infectious Diseases.
- VI. National Health Legislation.
- VII. The Cause and Prevention of Diphtheria.
- VIII. Causes and Prevention of Infant Mortality.
- IX. Car Sanitation.
- X. The Prevention of the Spread of Yellow Fever.
- XI. Steamship and Steamboat Sanitation.
- XII. The Transportation and Disposal of the Dead.
- XIII. The use of Alcoholic Drinks from a Sanitary Stand-point.
- XIV. The Centennial of Vaccination.
- XV. The Relation of Forestry to Public Health.
- XVI. Transportation of Diseased Tissues by Mail.
- XVII. River Conservancy Boards of Supervision.

Upon all above subjects special committees have been appointed. Papers will be received upon other sanitary and hygienic subjects also.

OFFICERS, 1895-1896.

President, Dr. Eduardo Liceaga, Mexico, Mex.; First Vice-President, Lieut.-Col. Alfred A. Woodhull, Medical Dept., U.S. Army, Denver, Col.; Second Vice-President, Dr. Henry Sewall, Denver, Col.; Secretary, Dr. Irving A. Watson, Concord, N.H.; Treasurer, Dr. Henry D. Holton, Brattleboro, Vermont.

 OBITUARY.

Dr. Adolphe Dagenais, one of the senior members of the profession in Montreal, died on June 29th, after only a few months illness, the cause being cancer of the tongue. He leaves a widow and four daughters. He was born in Hochelega in 1836. From *L'Union Médicale* (of which he was one of the founders in 1872 with Drs. Rottot and Desrosiers) we learn that he received his education in the Montreal College, and between 1854 and 1858 took the medical course at the

School of Medicine and Surgery, and became a member of the College of Physicians and Surgeons of the Province of Quebec in 1866. In 1867 he received the diploma of Victoria University of Cobourg, and was appointed editor of the *Gazette Médicale*, associated with Dr. Lemire. In 1870 he was appointed physician to the Hotel Dieu, and in 1872 Professor of Obstetrics in the School of Medicine, a position which he occupied until 1878. In 1872 he was nominated physician in chief to the Maternite de Montreal, and in 1876 President of the Societe Medicale. In 1878 Laval conferred its degree upon him and appointed him Professor of Obstetrics, which position he resigned in 1891 to devote himself to clinical teaching. He was consulting physician to the Notre Dame Hospital since its foundation. He was a prominent and active worker on the Board of the College of Physicians and Surgeons of the Province of Quebec, and held the position of treasurer since 1889. He was held in high estimation by his confreres, and his familiar face will be missed at the semi-annual meeting of the College of Physicians and Surgeons, in the proceedings of which he took such a prominent part.

Miscellaneous.

NATURE OF RELIGIOUS ECSTASY.

The sect known in the eleventh century as Hesychasts, and later the Omphalopsychics of Mount Athos, claimed to have, and doubtless did have, the same experience. Prof. Preyer, in a note to his *Hypnotismus*, has given an interesting account of them. Their method was to drop the chin upon the breast, fix the eyes upon the navel, and wait for the light to burst upon them. A great ecclesiastical controversy arose over these practices. The language which George Fox and the early Quakers use of the "inner light" seems to point to the same thing. One of my graduate students, while under ether, had a similar experience, which makes an excellent commentary upon Plotinus's statement that the soul is "pure light." "I took form, I was a body of light in an abyss of ethereal gray; in form I was, as memory reproduces size, eighteen inches by eight, a rounded disk: I was not *looking* at myself, but I knew and *saw* myself." Such experiences would seem, from my own inquiries, to be far from uncommon, and I would be grateful to any of my readers who can give me more cases.

Among the monks and nuns of the mediæval Church ecstatic states were common. The constant fasting and loss of sleep to which many of these saints condemned themselves are known upon independent evidence to be fruitful sources of hallucinations, and prolonged meditation upon a given topic determined the general form of the vision. The enforced celibacy of the monastic life and the practice of self-torture were further conditions of the greatest importance. Enforced celibacy frequently gives rise to reflex neuroses, and self-torture is in many neurotic individuals a direct stimulus to the very passions which the celibate most desires to repress. It is not surprising, therefore, that the religious ecstasies of the ascetic frequently assume a highly erotic form, although expressed in the most chaste language, and alternate with apparitions of the devil in the forms of *incubi* and *succubæ*.—*From Hypnotic States, Trance, and Ecstasy, by Prof. W. R. NEWBOLD, in Appletons' Popular Science Monthly for April.*

EXACT DOSAGE IN EXERCISE.

Housework, chores, gardening, walking, climbing, cycling, running, swimming, and many other sports give just the kind of exercise that is indicated in certain conditions, due regard being had to the physiological effects of varying dosage. Oertel has shown how the simple exercise of walking may be adapted to sufferers from cardiac debility by prescribing the distance and speed, and the number and length of the rests, on definite paths graduated according to their slope. His interesting and original work has not only given a new direction to the treatment of certain cardiac affections, but is destined to have an important influence in establishing accuracy in the prescription of exercise. Whoever has studied the map of the environs of Reichenhall, Bavaria, prepared by Oertel for the application of his method, will acquire a vivid idea of what precision of dosing in exercise means. In this map the different paths suitable for the work are marked in four different colors, to indicate those that are nearly level, those slightly sloping, moderately sloping, and steep, and figures are placed along each route to show the space that should be traversed in each quarter hour. The locality itself is prepared for its remedial use by placing benches for resting at suitable distances, and by marking on certain trees near the path circles, colored to correspond with the map, to indicate the difficulty of that particular section. By systematic practice on the easier paths the heart and system are progressively trained and strengthened. Intelligent analysis may do the same work for cycling, horseback riding, and many other familiar exercises. In this way the dosage is practically reduced to a definite number of kilogrammetres in a

given time, and a step has been taken in placing the prescription of exercise upon a scientific basis.—*From Exercise as a Remedy, by Dr. HENRY LING TAYLOR, in Appleton's Popular Science Monthly for March.*

VEGETABLE DIET IN RELATION TO THE LENGTH OF THE HUMAN INTESTINE.

The intestine of animal vegetable feeders is known to be of great length, but, so far, no detailed investigations have been made in this regard respecting those human races which mainly live on vegetable products. However, it is interesting to note that a professor of anatomy in the Academy of Medicine in Tokio has made some attempt in this direction by inquiring into the length of the intestine in Japanese persons. The inquiries included the measurement of the body and of the intestine in twenty-five cadavers, the ages of which varied from 17 to 60. The result of the measurement went to show that the length of the intestine in the Japanese was half as long again as the average length in a European. Thus, the suggestion has been made that the rice diet, so universally resorted to by the Japanese, would have more chance of thorough digestion in them than in Europeans, whose intestine is shorter. We merely state these facts for what they are worth. Whether or not they are true is another matter.—*Medical Press and Circular* (2967).

The *Medical Press and Circular* states that Dennis's System of Surgery by American Authors, published by Lea Brothers & Company; Nancrede's Essentials of Anatomy, published by W. B. Saunders & Company; and Leonard's Vest Pocket Anatomist, published by the author in Detroit, have been refused admission to England because of wholesale plagiarism from English writers. Until particulars are given and the defense is heard, it will be best to regard the matter as a mistake, so far as Dennis's System is concerned. It is very difficult to believe that any of the eminent collaborators of Dr. Dennis are guilty of such a heinous offence.—*Cleveland Journal of Medicine.*

It was a colored preacher who said to his flock: "We have a collection to make this morning, and, for the glory of heaben, whichever of you stole Mr. Jones' turkeys, don't put anything in the plate." One who was there says: "Every blessed niggah in de church came down wid de rocks."—*The Living Church.*

AMERICAN EXPLORATION IN BABYLONIA.

No piece of work done in America in a decade has so elevated the European estimate of American scholarship as the recent explorations in Babylonia under the auspices of the university. In the summer of 1888 the University of Pennsylvania equipped and sent out the first American expedition to the northern half of the plains of Babylonia to effect a thorough exploration of the ruins of Nippur. A short time before this a few citizens of Philadelphia had met in the house of Dr. William Pepper and formed the Babylonian Exploration Fund, with the purpose of effecting a systematic exploration of ancient Babylonia. Two professors, Dr. J. P. Peters and Dr. Hermann V. Hilprecht, were intrusted with the management of the expedition. The explorations were conducted amid the greatest difficulties, the chief ones being the deadly climate and the hostility of the natives. But the excavations were pressed on with energy and confidence, under the gracious protection of the Sultan of Turkey and Hamdy Bey, the Director-General of the Imperial Museum in Constantinople. The explorers penetrated deeper and deeper into the secrets and riddles of the huge mound of ruins at Nippur. Hundreds of graves, clay coffins, and urns were opened, and the ruins of demolished habitations and storehouses, along with the contents of their chambers, were explored. In this way thousands of documents, inscribed bricks, vases, and votive tablets were collected. Evidences of the activity which once pulsed in the streets of the city were unfolded before the eyes of the restless explorers. The terraces of the Temple of Ekur were disclosed. Numerous bricks bearing the name of the great Sargon came forth to the light of day under pickaxe and shovel. Under the building of Sargon one of the most important finds rewarded the labor that had been expended. An arch of brick was laid bare, and by this the question long discussed by the historians of architecture as to the antiquity of the arch entered upon a new stage, and its existence in Babylonia at the beginning of the fourth millennium before Christ was proved. The excavations have not yet reached the deepest foundations of this venerable sanctuary, whose influence for over four thousand years had been felt by all classes of the Babylonian people.—From *Science* at the University of Pennsylvania, by Lewis R. Harley, in *Appleton's Popular Science Monthly* for August.

MASSAGE IN SPRAINS.

No two *masseurs* are alike by nature nor in skill, tact, and education, and the one who knows his anatomy and physiology well, when called to a recent acute sprain, will not begin at once to *masser* the injured joint, but at a distance above it on the healthy tissues by gentle stroking or *effleurage* toward the heart, gradually proceeding nearer and nearer to the painful place. This has a soothing effect and pushes the flow along in the veins and lymphatics, making more space in them for the returning currents coming from beyond and carrying away the fluids that have leaked out of the vessels. The same should be done on the part of the limb beyond the joint, for the circulation is hindered both in going out and coming in by reason of the swelling.

Next, the *masseur* who knows his business will begin again at a safe distance above the injured joint, and use deep rubbing, kneading, or massage properly so called, one hand contracting as the other relaxes, alternately making circular grasps, with the greatest pressure upward, and this should be done on the parts above and below the seat of sprain. By this procedure the effects of the previous stroking or *effleurage* are much enhanced, an analgesic or agreeably benumbing effect is produced upon the nerves which extend to the painful place, and the retarded circulation is pushed along more vigorously, making room in the vessels for the swelling,

the effusion, the dammed embargo caused by the landslide of blood and lymph that is inundating the surrounding territory with exudates farther up the stream to float off, and preparing the way for the next step in treatment. At the end of fifteen or twenty minutes of this manner of working, gentle, firm pressure can be made immediately over the swollen and but recently very tender parts, which in a few seconds can have circular motion, with the greatest push upward added to it; and this, if sufficient tact be used, will in all probability not hurt but be positively agreeable.—Douglas Graham, M.D., in *Appletons' Popular Science Monthly* for July.

Book Reviews.

Practical Points in Nursing for Nurses in private practice, with an appendix containing rules for feeding the sick, recipes for invalid foods and beverages, weights and measures, dose list, and a full glossary of medical terms and nursing treatment, by Emery A. M. Stoney, graduate of the Training School for Nurses, Lawrence, Mass.; Superintendent of Training School for Nurses Carney Hospital, South Boston, Mass. Illustrated with 73 engravings in the text, and 9 colored and half-tone plates. W. B. Saunders, Philadelphia, publisher, 925 Walnut street.

This is a valuable book, containing in a very attractive form the essential information required by the aspirant for the important qualifications of a competent trained nurse.

It is a complete guide to those engaged in private nursing rather than hospital work. The subject is considered under the following headings:

1. The nurse—her responsibilities, qualifications, equipment, etiquette when out nursing.
2. The sick room—its selection, preparation and management.
3. The patient—duties of the nurse in medical, surgical and gynaecologic cases, catheterization, enemata, the administering of medicines.
4. Nursing in accidents and emergencies, duties in cases of accidental poisoning.
5. Nursing in special medical cases.
6. Nursing of new born and sick children.
7. Physiology and descriptive anatomy.

The book is profusely illustrated, cuts show the method of giving hot air baths, the sheet bath, cold packs, and all varieties of bandaging, positions of patients for tracheotomy and intubation, the arrangement of a croup tent, scale of urinary colors, and a number of anatomical plates. A very useful appendix gives instructions for feeding the sick and recipes for a variety of invalid foods and beverages. At the end is a dose list and comprehensive

glossary. This book is one that the physician would derive much profit from a careful study of. The carrying out of the details herein depicted is of more importance often than the prescribing of medicines, and when the physician is not versed in all the details of nursing he cannot well correct and advise those placed in charge of his patients, when often the favorable termination of the case may so much depend on the strictest attention to such minute instructions as are so clearly laid down in this book.

Multum in Parvo Reference and Dose Book.—New and enlarged edition, by C. Henri Leonard, M.A., M.D., Professor of the medical and surgical diseases of women and clinical gynaecology, Michigan College of Medicine. The Illustrated Medical Journal Co., Detroit.

This is a pocket volume of about 150 pages bound in leather, and contains a variety of information which it is often well to have at hand. There is a list of all the newer remedies and a very complete dose list, a list of incompatibles, poisons and antidotes, tests for urinary deposits and microscopical appearances, an obstetrical resume, with measurements of pelvis and foetus, signs of pregnancy, treatment of various accidents, some points in medical diagnosis are given, weights and measures; at the end is a therapeutical index for various diseases.

Diet for the Sick.—Contributed by Miss E. Hibbard Principal of Nurses' Training School, Grace Hospital, Detroit, and Mrs. Emma Drant, Matron of Michigan College of Medicine Hospital, Detroit. Second edition, enlarged. Limp Cloth, 16mo., 100 pages. Price, 25 cents, postpaid. Detroit, Mich., The Illustrated Medical Journal Co., 1896.

In this little book there is, besides the useful formulæ for "Sick Dishes," foods and cooling drinks for convalescents, quite complete diet tables for use in anaemia, Bright's disease, calculus, cancer, chlorosis, cholera infantum, constipation, consumption, diabetes, diarrhoea, dyspepsia, fevers, gout, nervous affections, obesity, phthisis, rheumatism, uterine fibroids. It also gives various nutritive enemata. The physician can use it to advantage in explaining his orders for suitable dishes for his patient, leaving the book with the nurse.

DiETING in disease is as important as any other means used for restoration to health, and is receiving more attention now than formerly. Physicians and nurses cannot be too thoroughly versed in the subject which in this little vest pocket volume is so ably epitomized.

A Manual of Obstetrics.—By W. A. Newman Dorland, A.M., M.D., Assistant Demonstrator of Obstetrics, University of Pennsylvania, etc., etc. Published by W. B. Saunders, Philadelphia. \$2.50 Net.

We have in this volume one of the best text books for students published this year. While on the one hand it is not so profound as to be useless to the student, on the other it contains all the needful information for students going up for examination. It is very methodical, and the manner in which Dr. Dorland draws his distinctions in making his diagnosis between different conditions or diseases in parallel columns is one that every student can easily grasp and remember. It is modern in its teaching, the plates most excellent, a large number being new, and all measurements being given in both the English and decimal systems. Dr. Dorland divides obstetrics into physiologic and pathologic. Under physiologic obstetrics there are eight chapters. These include from the physiology of the generative organs of the woman to even the outing required for the new born. Pathologic obstetrics is considered in six chapters with a large number of divisions in each chapter, making altogether a very complete work, and one which should be in every practitioner's library, as well as in the hand of every student. We can heartily recommend it to everyone who desires an up-to-date work on mid-wifery.

PUBLISHERS DEPARTMENT.

LITHIA WATER TABLETS VS. LITHIA WATER.

The "Monthly Retrospect" in its July number prefers Lithia Water Tablets to the natural Lithia Water, and says: We would recommend the using of the tablet for various reasons, viz: They admit an accuracy of dosage not otherwise obtainable, and unless the physician knows what quantity of Lithia he is administering, how can he expect definite results? If an antiseptic solution, say 2 per cent. carbolic acid, is desired at the clinic, what surgeon would accept a solution of carbolic acid, the percentage of which he was entirely ignorant? Do not the fundamental rules of therapeutics demand an intelligent knowledge of the quantity of a drug administered? What physician would think of prescribing a mixture containing strychnine unless he knew the amount of strychnine in the compound?

The knowledge that it contains strychnine is not sufficient. It is how much. Why then do with Lithia what you avoid with any other drug?

Lithia prescribed definitely is, as we have said, one of the foremost remedies of its kind, but its administration otherwise cannot be too vigorously condemned.

Another salient feature of the Lithia Tablet is the convenience of administration, avoiding the "bulkiness" which is connected with Lithia waters. The cost is less, no doubt due to the fact that the transportation charges of the tablet are fractional compared with that of cases of bottled water; you also avoid the cost of unnecessary and useless containers, cost of bottling, etc.

A bottle with a base about one and one-half inches square and three inches high, containing Lithia water tablets, easily carried in the pocket, constitutes the equivalent of two and one-half gallons definite Lithia water as prepared by Wm. R. Warner & Co.

Vomiting in Pregnancy is to-day one of the most difficult conditions with which the physician has to deal. The patient is seized with uncontrollable vomiting, is soon exhausted, and on account of the extremely delicate condition of the patient at the onslaught of these attacks, she not infrequently becomes dangerously ill. The attack is generally preceded by severe pains in the abdomen, accompanied by faintness, which is immediately followed by vomiting. The author has tried a great many remedies for this vomiting in pregnancy, and with varied results.

What is a remedy in one case may have absolutely no effect in another and similar case. However, I received a sample of Ingluvin by mail about a year ago, and as I had at that time a very persistent case of vomiting in pregnancy, which had resisted all remedies I had used, I determined to try it. The patient was extremely emaciated from the continued vomiting, and was very despondent. I administered 10 grains at first, followed shortly after by another dose of similar proportion. The effect was quickly discernible. The vomiting decreased. I continued the treatment with most gratifying results. My sample being exhausted, I purchased a 1-ounce original package, and am glad to say that my patient went to full term uneventually and made a good recovery. She has rapidly regained her previous good health, and I attribute it to that matchless remedy, Ingluvin, and shall always prescribe it wherever indicated.—*Monthly Retrospect of Medicine and Pharmacy.*

SANMETTO IN IRRITABILITY OF BLADDER IN PATIENT NINETY-ONE YEARS OF AGE.

Dr. Robert Cochrane, L.R.C.S.I., L.M., Blackhill, Coleraine, Co. Derry, Ireland, says: "I prescribed a bottle of Sanmetto for an old gentleman aged ninety-one years. This patient was suffering excruciating pain from irritability of bladder, scarcely ever got warm in bed on account of the repeated calls to void urine,—in fact, he was delirious. A few doses of Sanmetto gave him great relief, and before the bottle was done he had not to rise once during the night. He is going about now, hale and hearty at his advanced age."

In cases of pernicious, progressive anemia in young girls, no matter from what cause, Dr. Mary Ward Mead, Camden, Ill., writing, says: "The arrest of development of the generative organs retards cure. I am early on the track for speedy development in those slow puberty cases, and when I see the dormant spot puff for a mammary gland I know that restoration will surely follow, and to arouse this slumbering, sympathetic and vaso motor system, Sanmetto is truly great."

APPLETON'S POPULAR SCIENCE MONTHLY FOR AUGUST, 1896.

The August *Popular Science Monthly* opens with a discussion on "The Proposed Dual Organization of Mankind," by Prof. William G. Sumner, of Yale, who maintains that the Eastern and Western continents can not be isolated from each other in political or commercial or monetary affairs. The dominant subject in this number is the science of mind. Prof. J. Mark Baldwin, of Princeton, concludes his examination of "The Genius and his Environment" begun last month; Prof. W. R. Newbold, of the University of Pennsylvania, treats of "Spirit" Writing and "Speaking with Tongues," examining these alleged powers in the light of modern science, and giving several facsimiles of the writing; there is also an account of "Epidemics of Hysteria," by Dr. William Hirsch, one of Nordau's critics. An art based on psychology is represented in

"The Aim of Modern Education," a forceful essay by Dr. C. Hanford Henderson, which will interest teachers who wish to make the coming year's work better than the last. Hon. David A. Wells concludes the historical division of his series on "Principles of Taxation" with a description of the Swiss cantonal fiscal systems. An account of the facilities for the study of science at the University of Pennsylvania, with many portraits and views, is contributed by Lewis R. Harley. Other illustrated articles are "The Stone Forest of Florissant," in which Prof. Angelo Heilprin describes a group of agatized tree stumps in Colorado; "Early Years of the American Association," by William H. Hale, with portraits of founders and early presidents of this great scientific society; and "The Scallop," by Fred. Mather. The subject of the usual "Sketch and Portrait" is William W. Mather, the Ohio geologist. The editor comments on woman suffrage and on a recent panic of devil-seeing in certain New York schools. New York: D. Appleton & Company. Fifty cents a number, \$5 a year.

AN OLD FAVORITE WITH NEW FEATURES.

It is announced that the publishers of the old standard eclectic weekly, *Littell's Living Age*, founded by E. Littell in 1844, are about to introduce several new and valuable features in their magazine. The most important of these is a Monthly Supplement, given without additional cost to the subscribers, which will contain readings from American magazines, readings from new books, and also a list of books of the month.

It is also proposed to extend their field by giving occasional translations of noteworthy articles from the French, German, Spanish and Italian reviews and magazines.

A year's subscription to *The Living Age*, will then include more than thirty-five hundred pages, filled with the best things in current periodical and general literature, and making four large volumes, for only six dollars.

Each of the weekly numbers of the magazine contains sixty-four pages. Fiction, travel, essays, biography, poetry, and a wide range of general discussion and information are included in the contents.

To new subscribers remitting before Nov 1st (in which month the first of these new features will be introduced) will be sent gratis the intervening weekly issues from date of payment. Address, The Living Age Co., 13½ Bromfield street, Boston, Mass.

"Mahayana Buddhism in Japan," is the title of a most interesting paper in the August *Arena*, by Mrs. Annie Elizabeth Cheney, who has for years been a close student of the Flowery Land and the customs, manners and religions of her people. The impetus given to the study of Oriental religions by the Parliament of Religions at the World's Fair has led to much serious investigation along these lines and has dispelled many of the absurd ideas in regard to Eastern religions which have so long gained currency amongst all Western peoples. Mrs. Cheney gives a definition of Nirvana which will be new to many readers, and her thoughtful and sympathetic analysis of Mahayana Buddhism will form a valuable contribution to the literature dealing with Oriental religions.

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Original Communications.

**STREPTOCOCCIC PUERPERAL INFECTION—IN-
JECTION OF MARMOREK'S ANTISTREPTO-
COCCIC SERUM—RECOVERY.***

By H. L. REDDY, M.D., L.R.C.P. London.

Professor of Obstetrics, University of Bishop's College, Physician Accoucheur to the
Women's Hospital, etc.

Mrs. C. English, age 20, primipara, slight build, well-nourished, married twelve months; entered the Hospital July 7th, 2.30 a.m., in labor, and was confined 1½ hours later.

Labor normal; position L.O.A.P. throughout, lasting 7½ hours; was delivered of a well-nourished child, weighing 7¼ lbs.

The ordinary aseptic precautions were taken, such as are used in all cases in the Hospital. The only abnormal thing to be noticed was an enlarged varicose vein at the inner side of the left labium, near the posterior commissure. There was no laceration of cervix or perineum. Temperature first two days, normal.

July 9th. Third day, temperature 100, pulse 90. A dose of castor oil was given, which produced a good motion; patient feeling well.

July 10th. Temperature still remained 100, pulse 90.

July 11th. Temperature 101, pulse 90, no cause for the increase of temperature could be found in the pelvis or elsewhere; lochia normal.

July 12th. Patient had a chill, and temperature rose to 104, pulse 106, respirations 28. Tongue thickly coated with

* Read before the Canadian Medical Association in Montreal, August, 1896.

a heavy white fur ; headache. On examining the vulva the varicose vein was seen to have burst, and on its site a whitish membrane about half an inch in diameter was noticed. To the membrane was applied peroxide of hydrogen, and an intra-uterine douche given of a solution of permanganate of potash and the vagina packed with dry iodoform gauze. Ten grains of sulphate of quinine internally and a tablet of two grains of protonuclein given every two hours.

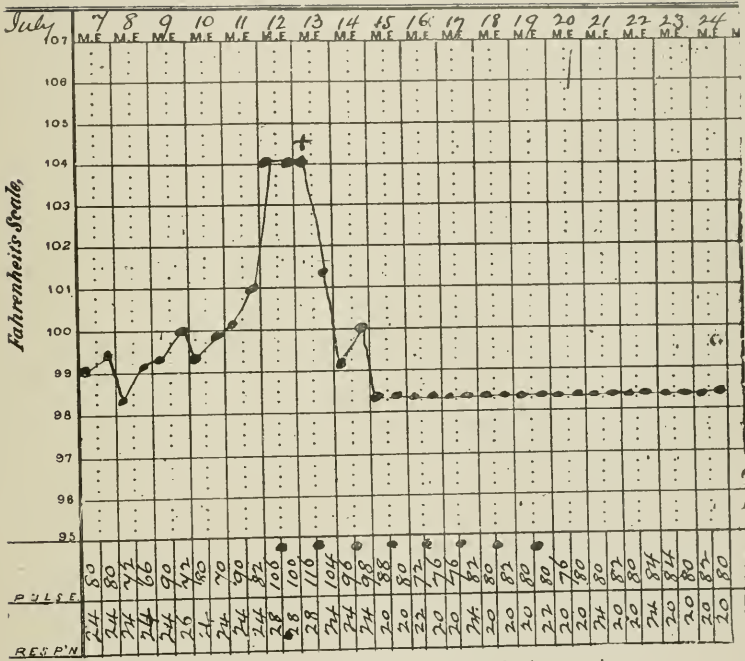
As she had hardly any milk, the child was stopped nursing, and she was given Tait's mixture until it had freely acted.

I requested my friend, Dr. A. J. Richer, who had just returned from a lengthened period of study at the Pasteur Institute, to make a cultivation of what I believed, and which proved to be, streptococcus membrane, and whose report on the matter I attach.

The intra-uterine douche was ordered every three hours, as well as an application of peroxide of hydrogen to the membrane which had now spread to the right side, there being a couple of patches, each about the size of a quarter of a dollar. Between the douches, the vagina in the vicinity of the patches was packed with wadding, soaked in peroxide of hydrogen, left *in situ* 10 minutes and afterwards packed with dry iodoform gauze.

The following is Dr. Richer's report :—

“ On the 12th of July was asked by Dr. Reddy to make a
 “ bacteriological examination of a woman confined five days
 “ previously ; temperature 104 F, pulse 106, face flushed,
 “ suffering no pain, who had received previously several vagi-
 “ nal injections of permanganate of potash, a local application
 “ of peroxide of hydrogen, and had been kept tamponed with
 “ iodoform gauze. Direct microscopical examination as well
 “ as inoculation in culture media gave negative results. The
 “ next day after having the vagina thoroughly douched with
 “ boiled water, inoculation and direct microscopical examin-
 “ ation showed streptococci in fairly large proportions, along
 “ with numerous colonies of staphylococci, and strepto-
 “ bacilli which appeared to be saprophytic. On the 13th of
 “ July an injection of 10 c.c. of Marmorek's antistreptococcic
 “ serum (obtained from a horse) was given on the right side
 “ about the middle of abdomen, the ordinary precautions
 “ being observed. For forty-eight hours following the injec-
 “ tion there was numbness and tingling of the extremities,
 “ and no pain, with the exception of a little at the seat of the



Dots represent the douches. Cross shows when the injection was given.

"injection, which was quite free from swelling and redness." No rash was observed."

The injection was given at 1.10 p.m. on the 13th of July. Temperature at the time of the injection of the serum 103.2-5, pulse 116; two hours later temperature 104, pulse 110, full, well sustained. Patient complained of sharp pain on the right side of the abdomen, at the site of the injection, and tingling and numbness in arms, fingers and feet, which continued 48 hours. Urine 23 oz. in amount, normal in character.

At eleven p.m. (ten hours later), the temperature had fallen to 101.2-5, pulse 104. After 11 p.m. it fell a degree every two hours until six o'clock the following morning, July 14th, when it fell to 99.1-5, and the membrane on both the right and left side of the vagina and labium had completely disappeared, leaving a raw surface.

July 15th, at 2 p.m. temperature rose to 100; pulse 96. On account of the character of the pulse the patient was given 2 drams of brandy every four hours, local treatment being continued. Haematuria appeared of a severe character. At 8 p.m. the temperature fell to normal, where it remained until the patient left the hospital.

July 16th. Temperature normal. Haematuria continues, but is not so severe. Urine greatly increased in quantity.

July 17th. Brandy was stopped, and five minims of tincture of digitalis given three times a day. The protonuclein was stopped, and patient was douched only twice a day. Patient feeling well, sleeping well, eating well.

On July 18th, bowels moved twice with Tait's mixture, and as the urine drawn off by a catheter still contained blood, a linseed meal poultice was applied over the kidneys.

July 19th. Urine passed naturally without blood or albumen, 40 oz. in 24 hours; patient sleeping well, and good appetite. Douche stopped.

July 20th. Patient stronger, feeling well, temperature normal, no blood in the urine.

July 21st. Patient sat up for an hour; steadily improving.

July 24th. Patient left the hospital perfectly recovered. On examination, before leaving the Hospital, no signs of the local lesion were observable.

It will be noted that the reaction after the injection was

marked by tingling and numbness of the extremities which continued 48 hours.

Also that within 36 hours haematuria appeared as a direct effect of the injection (and probably slightly affected the pulse, requiring stimulants to be given), and apparently, as the result of the poultice, as rapidly disappearing. The severity of the action on the kidneys may have been due to one or both of the following causes : the serum was obtained from a horse, was the strongest so far made by Marmorek, and the dose was large.

The protonuclein, although undoubtedly of service in many cases, as I have proved at least to my satisfaction, aided in lowering the temperature, probably through phagocytosis or leucocytosis, but I do not think could be credited with the complete removal of the membrane in less than twenty-four hours.

The first attempt to get cultures after antiseptics were used failed, showing that they had affected the surface to a great extent, but had failed to reach the bacteria more deeply seated, and those who have had cases of streptococcic infection know by experience that no antiseptics known to them can remove the membrane in less than 24 hours so that there shall be not the slightest return of it.

The douches as well as the protonuclein tablets were continued, so as to aid in every way possible the recovery, and although for experimental work it might have been very interesting to have depended upon the serum alone, I felt that I should use every means to help the recovery of my patient.

There has as yet been comparatively little work done in obstetrical cases of this kind with serum, and with the literature on the subject you are all doubtless familiar. It seems so far to have proved of value in at least 50 per cent. of the cases in which it has been used. This I think is sufficiently encouraging for us to give it a fair trial, especially as it seems to produce but trifling ill effects which rapidly disappear in the majority of cases. In a large number of such cases we find that the streptococcus, if not alone the cause, is at least one of the most dangerous causes of a condition which unfortunately is present in nearly every country, and which proves so fatal. If we cannot always prevent infection, we should endeavor to promptly arrest it, which I feel may now be done if the condition is recognized early enough, and antistreptococcic serum injected.

I need hardly say in the majority of cases, in order to treat it scientifically, we should always have a bacteriological examination made.

Although one case would certainly not prove that we have at last found a certain remedy for so fatal a condition, still I believe that if sufficiently used there will be found to be such a measure of success that not to have given it a fair trial would lay one open to the charge either of ignorance or malpractice.

TETANY FOLLOWING SCARLATINA.*

By J. BRADFORD MCCONNELL, M.D.

Associate Professor of Medicine and Neurology, University of Bishop's College, Montreal.

Tetany is observed but rarely; besides the present case I have met with it in only one other instance, a case in which the affection was of the intermittent type and occurring in a man 55 years of age, hence the interest that attaches to the present case and the advisability of placing it on record.

The patient was a boy of Italian descent, 5½ years of age, strong looking and well developed. I saw him on the 16th April, 1896. I had attended him for an attack of scarlatina which had developed on the 4th of the same month; it was a well marked case with somewhat severe throat symptoms, the tonsils being much enlarged, although very little false membrane appeared; no untoward symptoms occurred, the course being normal, and desquamation was in progress. I learned that while the child appeared to be doing well in the afternoon of the previous day, his hands and legs had become stiff and extended and painful, and that the condition had remained continuously since that time; he had not slept and was very much distressed.

The boy is the eldest of three living children; one other child had died in infancy. He had been fairly strong and healthy, although he was a mouth breather until about a year ago, when adenoids were removed from the vault of the pharynx. His tonsils had been enlarged since his second year, has had measles and whooping-cough, had attacks of convulsions frequently during the period of dentition, his mother states, one with the eruption of each tooth. When one and a half years of age an attack similar to the present

* Read before the Canadian Medical Association, Montreal, August, 1896.

one occurred; the child was apparently well at bed-time, but in the morning the arms and legs were stiff, and his mother states that the feet pointed downwards and the hands were extended. This condition lasted a week before entirely disappearing. During the last three years until the present attack of scarlatina he has been well.

The family history points to a strong neurotic tendency. The paternal grandfather is an epileptic now in Longue Pointe Asylum, and his great-grandfather was an epileptic. His maternal grandmother died of apoplexy. An aunt and an uncle are epileptics. His elder brother died of convulsions at the age of fourteen months.

On examination it became apparent that there were present the symptoms of tetany of the continuous spasm type. The fingers were stiff and extended, lying closely together, flexed at the metacarpo phalangeal joints, the thumbs pressed in upon the middle and index fingers; the hands were flexed on the arms, and the elbows slightly flexed, shoulder not affected and freely movable; the legs were also extended at the ankle, the toes pointing downwards and inwards, and toes flexed, resembling the position in talipes equino-varus, as some have aptly described it. The ankles and wrists were swollen and tender, and the child gave evidence of intense suffering if an attempt was made to move them. The skin was slightly reddened over the joints, the condition resembling acute articular rheumatism. No other muscles were affected. The child cried at intervals from pains in the limbs, doubtless caused by painful muscular cramps. Otherwise, unless moved, he appeared not to suffer. No abnormal condition could be discovered in any other part of the body. Temperature 101° . Urine contained traces of albumen, and excess of phosphates.

In the treatment of the case, salicylate of soda, bromide of sodium and pot bicarb were used. The condition improved after the second day, and all symptoms had disappeared at the end of a week, and the spasms did not recur.

Tapping the course of the nerves or squeezing the limbs increased the contractions. This is analagous to Trousseau's sign, in which in the intermittent variety the spasm can, in the interval, be produced at will by pressure on the larger arteries or nerve trunks.

Chovestek's symptom could not be elicited in the facial.

The electrical irritability was not tested ; there was marked hyperaesthesia of the limbs.

Tetany appears to occur under a variety of conditions. Among the causes we find mentioned diarrhoea, exposure to cold, debility due to lactation, rickets; it may appear during gestation, ceasing after delivery, or after parturition, intestinal worms ; it has followed most of the acute infectious diseases ; it sometimes occurs in the epidemic form, after thyroidectomy, with dilatation of the stomach, Bright's disease, lead poisoning, and in hysteria symptoms simulating tetany have been observed.

The opinion is entertained by some that it is of the nature of an infectious disease. It is thus classed by Osler in Dercum's *Nervous Diseases by American Authors*.

Von Jaksch describes an epidemic form coming on in the spring, affecting men of the working class about the ages of 17 or 18, in whom the facial phenomena, or Chovestek's symptom, was very constant ; this is ascertained by tapping on the facial which causes tetanic contraction of the muscles supplied by it. Bernard Vaughan, in an article in the *New York Medical Journal*, December, 1893, holds this view in regard to its etiology.

It may be doubted that a special organism exists, whose toxin has a selective action, as in tetanus. Owing to the great variety of causes which may induce an attack, the view that we have here an unstable condition of the nervous system, either hereditary or brought about by debilitating influences, in which various forms of irritation, either central or peripheral, mostly toxic and central, excite the attacks, would seem more in accord with our present knowledge.

The fact that in all cases there is an increased excitability of the nerves and muscles to mechanical and electrical irritation is interesting ; this is better observed in the intermittent variety. Most observers find increased excitability to the galvanic current as compared with the faradic, and spasm is more easily excited with anodal opening and closing, than with cathodal, as pointed out by Erb. In this case the child has a history of having had a similar attack to the present one while teething, and we have here a well marked neurotic family history, and the child's liability to convulsions points to a weak and unstable nervous system. The cause in most instances is probably some toxic condition of the blood, as

in most of the exciting causes, such as diarrhoea, the infectious diseases, dilatation of the stomach, removal of the thyroid, etc., toxic substances are generated. Bramwell's experience with thyroid extract in tetany, in which good results were obtained, is interesting in this connection, and the possibility of its being of use in the frequently associated condition of rickets and laryngismus stridulous is suggested by him; it has been noted that laryngospastic symptoms are more likely to be present when the affection is associated with rickets.

Von Frankel Hochwart has pointed out that the faradic irritability may be normal and the facial phenomena absent, and from experiments he has proved that Trousseau's phenomena is dependent entirely on pressure on the nerve and not on the vessels.

The pathology of the disease is still obscure, no recent light having been thrown upon it, and the question is still open as to whether the seat of change is in the cells and fibres of the cord and medulla or cortical; and as to how the irritation keeps up a tonic spasm is still a problem, which possibly the recent views of Dercum, Wiedersheim and others as to the mobility of the neurons may make clear. If the neurons, whether peripheral, cerebral or in the cord, can separate so that one is isolated from the other in the various nervous arcs, and are only in contact when in action, it would be apparent how a tetanic condition may be kept up by an abnormally continuous approximation of associated neurons.

Abstract of Paper on

**ONE HUNDRED AND TEN OPERATIONS FOR
RETRODISPLACEMENT OF THE UTERUS
WITH SUBSEQUENT RESULTS.***

By A. LAPHORN SMITH, B.A., M.D., M.R.C.S. England,

Fellow American Gynæcological Society; Gynæcologist to the Samaritan and Western Hospitals, and to the Montreal Dispensary; Professor of Clinical Gynæcology in Bishop's College.

DR. LAPHORN SMITH, of Montreal, read a report of one hundred and ten operations for retrodisplacement of the uterus, of which forty-two were Alexander's operations of shortening the round ligaments, and sixty-eight ventro-fixa-

* Read before the Canadian Medical Association on 26th August, 1896, at Montreal.

tions or suspensio-uteri operations. He said that he now felt justified in coming to certain conclusions concerning these two operations since he had been performing them for over six years, the first Alexander's having been performed on the 23rd January, 1892, and the first ventrofixation on the 18th March, 1890.

Most of the patients had been seen and examined not only by himself but also by many other physicians and students attending his clinics, while the few who had not been seen had been heard from through the physicians who had sent them to him. The results of both operations had on the whole been very satisfactory, with the exception of two cases, in which the ligaments broke, being very fatty, and also partly owing to the method of operating, which he has since improved; in one of these cases he immediately performed ventrofixation with good results; the other was a complete failure, having declined further operation. Also in one of the Alexander cases the uterus remained in good position for six months, when it began to fall a little. The failures all occurred among his earlier cases, none having occurred among those operated upon during the last two years. So far no case of hernia had resulted from the operation. The ventrofixations gave even better results than the Alexander's. They were performed for the most part upon women who not only had retroversion with fixation, but the ovaries and tubes were at the same time prolapsed and bound down by more or less dense adhesions. In many of these also there was laceration of the cervix and perineum with cystocele and rectocele. In those cases in which he had performed seven operations at one sitting occupying from an hour and ten minutes to an hour and a half, he had obtained the most gratifying results. These operations were: 1st, rapid dilatation with Goodell's dilator; 2nd, curetting with Martin's curette; 3rd, repair of lacerated cervix by Emmett's method, or amputation by Schroeder's method; 4th, tightening up the relaxed anterior vaginal wall by Stoltz's method; 5th, repair of the perineum by Hegar's method; 6th, removal of diseased tubes and ovaries, and breaking up all adhesions binding uterus down; and 7th, scarifying the anterior surface of the uterus and posterior surface of abdominal wall, and stitching the ute-

rus to the latter by two fine buried silk sutures, most carefully sterilized. The disasters following ventrofixation were two hernias and one relapse, all of which were subsequently remedied by a second operation. At the present time Alexander's operation has no death rate, while ventrofixation, while it has not any death rate in simple non-adherent cases of retroversion, yet it must have a small death rate, at least when it follows the removal of very bad pus tubes.

He had performed both Alexander's operation and ventrofixation for prolapse as well as for retroversion, and as the results were excellent provided the pelvic floor was at the same time repaired, he much preferred these operations to vaginal hysterectomy for prolapse, an operation which he had performed a few times, and found easy, but which he hardly felt justified in doing.

Although several of the Alexander's had subsequently become pregnant, in no case did any untoward accident happen. But he had heard that some one on whom he had performed ventrofixation had subsequently become pregnant and aborted, but he had so far been unable to verify it. He was not aware that any of them had even become pregnant. This was probably owing to the fact that he had in most of them removed the tubes and ovaries, while in those in which he had left one or both ovaries and tubes, they were diseased and unable to functionate. He was frequently asked which of the two operations he preferred. This was difficult to answer. Alexander's was safe, but he preferred ventrofixation, because it had given him the best results. He would probably continue to do Alexander's operation in young married or marriageable women in whom the ovaries and tubes were perfectly free from organic disease; while he would reserve ventrofixation for women who were sterile or who had marked adhesions, and who had suffered so much and so long in spite of treatment that the appendages had to be removed.

Medical Society Proceedings.

CANADIAN MEDICAL ASSOCIATION.

The twenty-ninth annual meeting of the Canadian Medical Association was held in this city, August 26, 27 and 28, 1896.

There was a large attendance ;—the largest in the history of the Association.

Dr. C. F. Martin, of Montreal, read the first paper on "Observations on the relation between leucaemia and pseudo-leucaemia," prepared by himself and Dr. G. H. Mathewson. The paper pointed out that the matter of blood examination, though very important, could not be relied on alone in diagnosing any disease, yet it was on this feature, the amount of leucocytosis, that the differentiation of the two diseases under consideration was made, although their morbid anatomy and other clinical features were alike. The authors quoted many authorities to show that there were many instances where Hodgkin's disease apparently changed into a true leucaemia. Two cases were noted where the blood condition was so on the border line between Hodgkin's disease and true leucaemia that it was quite impossible to decide definitely whether they were dealing with one or the other malady. The paper also held that too much stress must not be laid on the value of differential stains for distinguishing different forms of granular leucocytes. The decision of the authors was to regard these two diseases under the one category, and not to rely on leucocytosis as a basis of classification.

The Committee on Inter-provincial registration then retired to consider the following resolution of last year's meeting :—

"The Committee appointed at last meeting to look into the question of inter-provincial registration would beg to express their regret, that by the system which at present obtains, a graduate in medicine entitled to practise in one Province is not free to exercise his functions in all the Provinces of this large but sparsely settled Dominion.

"That this condition of things prevents the names of medical practitioners in this Dominion being placed on the British register, becoming thereby British practitioners, which the Council of Medical Education of Great Britain has more than once signified its willingness to grant.

"That with this end in view it is, therefore, most desirable that there should be a uniform standard of matriculation, a uniform standard of medical education and a uniform method of examination for the whole Dominion.

“That to effect this purpose, the Secretary be instructed to communicate with the various Provincial Councils, before their next meeting, asking that each Council discuss the question, and, if possible, appoint one or more delegates to a Dominion Committee, for the purpose of adjusting a suitable curriculum and carrying out the suggestions herein contained, and that such Committees be requested to forward their finding to each of the Provincial Councils and to the Secretary of this Association before the next annual meeting.”

A Sub-Committee drew up a scheme, which was accepted by the Committee, and adopted.

The report on Interprovincial Registration was read by Dr. Roddick, and as it dealt with several important subjects, it was listened to with more than ordinary interest. It was as follows:—

“Your Committee beg leave to report that, having examined the present requirements of the Licensing Boards of the several Provinces, with a view to obtaining by mutual concession a uniform standard of matriculation, education and examination, would recommend the following:

“I. Matriculation—The schedule of subjects shall comprise: (1) English language, including grammar, composition and writing from dictation; (2) arithmetic, including vulgar and decimal fractions and the extraction of the square root; (3) algebra, to the end of the simple equations; (4) geometry, Euclid, books 1, 2 and 3, with easy deductions; (5) Latin grammar, translation from specified authors, or of easy passages; (6) elementary mechanics of solids and fluids, comprising the elements of statics, dynamics, hydrostatics and elementary chemistry; (7) history, England and Canada, with questions in modern geography; (8) and any one of the three following subjects:—French, Greek and German, the requirements being the same as in Latin.

“Fifty per cent. of the marks in every subject shall be necessary for a pass, and 75 per cent. for honors.

“In lieu of the above will be accepted a degree in Arts of any university in Her Majesty’s dominions, or from any college or university that may hereafter be recognized; but no matriculation in Arts in any university will be recognized.

“II. Professional Education—The curriculum of professional studies shall begin after the passing of the matriculation examination, and shall comprise a graded course in the regular branches of four yearly sessions of not less than eight months of actual attendance on lectures in each year, the subjects to be anatomy, physiology, chemistry, materia medica, therapeutics, practical anatomy, histology, practical chemistry, pharmacy, surgery and clinical surgery, medicine and clinical medicine, including diseases of eye, ear, throat and nose, and mental diseases, obstetrics, diseases of women

and children, medical jurisprudence, and toxicology, hygiene, pathology, including bacteriology.

"That at least twenty-four months out of the graded four years, of eight months each, be required for attendance on hospital practice, to begin with the second year of study. That proof of attendance on not less than six cases of obstetrics be required.

"III. Examinations—(a) All candidates for registration in the various Provinces, in addition to having fulfilled the foregoing requirements, shall be required to undergo examination before examiners to be appointed in each of the Provinces by their respective Councils, or by means of assessors, as in the Province of Québec, or by delegating their authority to one central body, as has been done in Manitoba. Each examination shall comprise all the subjects of professional study, shall be both written and oral, and 50 per cent. of the marks shall be required in every subject for a pass. (b) The Committee make these resolutions merely as suggestions for the consideration of the Councils of the several Provinces as a mutual basis of agreement, and that each be requested to report thereon to the next annual meeting of the Association, and also to send one or more delegates to represent them at that meeting.

"In order that the Councils may be enabled to consider the question with a full knowledge of the facts, it is desired that each registrar should send to every member of every Council in Canada a copy of the statutes and of the regulations in connection with the Council that he represents."

The report was signed by Drs. R. A. Pyne, R. S. Thornton, Thomas Walker, J. M. Beausoleil and Edward Farrell, representing five of the Councils of the Dominion.

A minority report from Drs. MacLeod and MacNeill, two members of the Committee, was also presented, in the absence of these gentlemen, by Dr. Roddick.

After a brief discussion, the majority report was adopted by the Association, and was ordered to be printed and sent to every member of the different provincial Councils in the Dominion.

The Association then removed to the General Hospital, where interesting clinics were given by Drs. Shepherd, Blackader, Hutchinson, Wilson and Campbell. A light luncheon was provided at the Hospital. The members were then given a street car ride about the City.

WEDNESDAY, P.M.

Dr. H. Meek, of London, reported three cases of abdominal section. He said they were for conditions comparatively rare. The first was for a fibro-cystic tumor of the uterus; the second was for a carcinomatous ovary. Recoveries in both cases good; the third was done for a volvulus of the

splenic flexure of the colon. There were some old adhesive bands of its mesentery which were probably accountable for the condition.

During convalescence, which commenced well, insomnia followed by acute mania set in, and death ensued. He was unable to explain the cause of the mania, unless due to the absorption of toxins. There was not sufficient iodoform to account for it.

Dr. Gardner, of Montreal, and H. P. Wright, of Ottawa, discussed the paper.

A child with a deformity of the auricle of the ear and an imperforate external meatus was shown by Dr. Proudfoot of Montreal. He said he proposed operating to relieve the conditions.

Dr. R. Ferguson, of London, read a paper on *Ophthalmia Neonatorum*. The points dwelt upon by the essayist were : The great prevalence of blindness due to this preventable disease ; the prophylaxis by treatment of the gonorrhoea of mother, and the immediate treatment of the eyes of the newborn by aseptic and antiseptic cleansing. He dwelt at length on the treatment of the disease when once established. Frequent cleansing from a fountain syringe, suspended two feet above the head was of the greatest value. A tuft of absorbent tied over the mouth of the nozzle would serve as a filter and break the force of the current, allowing the stream to flow gently upon the eyeball. The nurse should rest the infant on her lap upon its back, holding the hands and steadying the head which is allowed to droop slightly over a basin which catches the water as it flows from the child's head. A quart of water should be used to thoroughly flush out all the secretion. Wipes of lint or cotton should never be employed for this purpose. The treatment may be necessary every two hours, if the discharge is free and purulent. Boracic acid was probably the best solution to use.

The matter of cold and hot compresses was also discussed, and the use of nitrate of silver. He advocated that this should be placed on the list of contagious diseases. A resolution to this effect was made, to be forwarded to the different Provincial Boards of Health, and unanimously carried.

Dr. T. T. S. Harrison, of Selkirk, Ont., read a paper on "Some Observations on the Heredity of Cancer." It consisted in the report of several cases occurring in a family during three generations.

The question which arose in his mind was : whether the cancer cells in cases of recurrence lay dormant until aroused into activity some years after by an irritant, or whether merely the tendency was hereditary.

Sir William Hingston, Drs. W. Mills, Christie, Dickson, Moore and Wright discussed the paper.

Dr. Thorburn, president, then delivered his annual

address, commencing his remarks by expressing his thanks for the honor that had been conferred upon him in electing him President of the Association—the highest honor in the gift of the profession in Canada. Speaking of the death of Pasteur, and the loss to medical science, he said that the great advance in the practice of surgery was due largely to the discoveries of the great scientists, alluding incidentally to Pasteur's successful treatment of hydrophobia, rabies, septicaemia, etc. After referring to the discovery of vaccination by Jenner, and the celebration of his centenary, he said that during the past year medical science had lost a valued son in Pasteur, who might fairly be credited with having put the germ theory of disease beyond all doubt. His success in the handling of patients who were presumably inoculated with rabies was well known, and the knowledge that they had recently obtained respecting both the diagnosis and treatment of such diseases as hydrophobia, anthrax, tetanus, diphtheria, tuberculosis, Asiatic cholera, typhoid fever and septicaemia had already been productive of good results, and was likely to do much more in the future. After a passing reference to vaccination and its discoverer, Jenner, the President alluded to the deaths of Drs. Fenwick and Saunders, of Kingston, and Dr. Macfarlane, of Toronto, three honored members of the Association, who had all died from septic poison received in the discharge of their duties. The important subjects of a common registration for the Dominion, or interprovincial reciprocity, was next dwelt upon, and the opinion expressed that the time had arrived when the obstacles in the way might be overcome by mutual concessions on the part of the different Provincial medical authorities. On the question of a curriculum suited to the whole Dominion, the President suggested a four years' course of eight or nine months, instead of five years of six months and a summer session, and hoped that the committee assembled at the last annual meeting would be able to report favorably for the eight months' session. The subject of the relationship of medical men to life insurance and the question of professional secrecy were also touched upon, as well as the wonderful discoveries of modern days, especially in reference to mechanical appliances.

The uses of electricity and the discovery of the Roentgen rays was mentioned as likely to prove of great assistance in the diagnosing of many diseases hitherto obscure, and there was no doubt that the use of this instrument would become most frequent as improvements were made on it. In closing his remarks, the President alluded to the honor conferred on Montreal by the unanimous decision of the Council of the British Medical Association to hold its annual meeting in this city next year, and he tendered his congratulations to Dr. Thos. G. Roddick, the President-elect, winding up by expressing the hope that the Association would continue to extend its usefulness and maintain its high reputation, and

that ere long they would have a common standard of medical education in Canada, with reciprocity between the different Provinces, and also between the Dominion and the Mother Country.

Dr. Roddick, seconded by Dr. Bray (Chatham), moved, in a few appropriate remarks, a vote of thanks to the President for his able and interesting address, which was supplemented by short addresses from Dr. Christie, of St. John, N.B., and Dr. Tobin, of Halifax.

Dr. Wyatt Johnston gave an address on some applications of entomology in Legal Medicine. The doctor gave a resume of his researches with Dr. Villeneuve on the fauna found on dead bodies during different stages of decomposition. Their observation, although conducted in Canada, coincided almost completely with Mignon, the great French authority. The progress of the putrefaction (the body being exposed to the air) might be divided into four periods: The first was of three months, in which the bodies were attacked by flies. Then by *Pyophila* when the series of fatty acids are formed, and the bodies become repulsive to the flies.

The bodies are then taken possession of by various forms of Insects Hister, etc. In the next period, the drying, the Acari infest the bodies, following these certain beetles, the *Ptinus* and *Tenebrio* are found. In buried bodies the *Rhizoglyphus* and the *Philontes* are the forms noted.

THURSDAY, A.M.

Dr. H. P. Girdwood gave a demonstration of the Roentgen Photography, which excited much interest.

Dr. Price-Brown, of Toronto, read a paper on clergyman's sore throat. The essayist commenced by showing how inappropriate and unscientific this word was. He referred to what various authors had to say of it. The majority agree that the most common throat disease clergymen suffer from is follicular pharyngitis. Bosworth does not use the term. The essayist called attention to the fact that the large majority of chronic throat diseases had their origin in nasal or naso-pharyngeal obstruction. The functions of the nose were then stated, and it was shown when these were disordered by reason of obstruction, follicular pharyngitis was one of the most frequent results, particularly in voice users. The symptoms, however, occasionally arose reflexly from some abnormal condition of the digestive tract. Ten cases were then reported, in which in most after the removal of the nasal trouble recovery followed.

Dr. Geo. Wilkins, of Montreal, delivered the address in medicine, taking as his subject:—"The Modern Treatment of Some Diseases as the result of experimental investigation."

The essayist drew attention to the commencement of the work of the modern scientific school, and briefly reviewed

the work of Linnaeus, Ehrenberg, Holland, Virchow, Jenner, Pasteur and Lister. The whole question of serum therapeutics was discussed in its applications to such diseases as are already proven to be unquestionably caused by germs. The application of the principle to the treatment of typhoid, pneumonia, pyaemia and septicaemia was referred to. Many published cases give a favorable report of the result of this mode of treatment. Serum therapy had a great future, but care was required that the causation of disease was not lost sight of in the eager hunt for cure and the enthusiasm with which each newly discovered antidote was hailed. The question of auto-intoxication was then taken up, and the work of the physiologist in discovering more and more the function of the various secretory and excretory organs commented on. Then followed a resume of the work done on the treatment of disease by animal extracts. The aid contributed by the physicist and the chemist was of wondrous value to the worker in experimental medicine. What position, the essayist asked, would scientific medicine occupy were it not for the advances in microscopy? The grandest discovery of the present century was due to it.

Dr. A. R. Robinson, of New York, read a paper on "Acne Vulgaris."

The author dealt with the etiology, the pathology, the semeiology, the prophylactic and curative treatment of this condition. Of three views held as to the causation of this disease, he endorsed that held by the least number who treat this disease, viz., that it arises largely from local conditions, and hence may be relieved by local remedies. The elements in its causation he believes are an oily seborrhoeaic condition of the skin, the deposit of germs (*Unna* had mentioned a specific bacillus) which readily adhered to the skin in this condition, the formation of a hyperkeratosis from increased activity of the glands which conduces to the comedo formation. Where constitutional disorders were present in these cases they needed treatment; but in other cases the local treatment was sufficient. This consisted in the removal of the seborrhoea oleosa by, say, potash soap, of some reducing agent like sulphur or resorcin to lessen the hyperkeratosis, the opening of the comedones and immediate antiseptic treatment; the use of hot water, steam and massage to improve the circulation and tone up the expulsive power of the glands.

Drs. Wesley Mills and J. W. Scane gave some physiological demonstrations referring to the question of cerebral localization. The experiments were made on the brains of the pigeon, the rabbit, the cat and dog, the motor areas of the brain, the selection of the site being confirmed by electrical stimulation on one or both sides being removed. The animals were to some extent disabled, those in which the brain was more primitive less than those in which the brain

was more highly developed; and complete restoration of power returned in the same order.

Dr. W. B. Thistle, of Toronto, presented a paper on "The Theory of the Eliminative Treatment of Typhoid Fever."

This paper was prepared by the essayist in support of the theory he had advanced in 1893, of treating typhoid fever by purgatives given daily through the entire disease, the administration of antiseptics, and the ingestion of large quantities of water. More especially did it vindicate his views which had been assailed by the author of a recent work on medicine as to the pathology of the disease. His contention, that the specific bacilli were found in the disease, although disputed in the work referred to, had been verified by recent investigators, so that the early and continuous application of the eliminative treatment served to a great extent to mitigate the severity of the disease by lessening the toxicity of the alimentary canal, saving infection and necrosis of Peyer's patches, and thus minimizing the danger of perforation and haemorrhage.

Dr. W. Osler, who was present, admitted the error Dr. Thistle had pointed out, but stated that up to the time the article appeared, the specific bacilli had not been found in the faeces. He said the theory of elimination by purgation which was not by any means new, was good, but its practice was disastrous. A clinic was then given by Sir William Hingston at the Hotel Dieu, in which he reviewed the progress of surgery as he had noted it during the past thirty-five years.

Dr. D. C. Meyers, of Toronto, presented a paper on "Hereditary Cerebellar Ataxia" (with patient).

Dr. John Stewart delivered the address on surgery on the work of Lister. He said the enormous practical importance of the work done by Lister in establishing antiseptic surgery had, he thought, overshadowed, to some extent, the equally great improvement of his earlier work on pathology. It was impossible to over-estimate the importance of such researches. They had occupied several years, and were published in the transactions of the Royal Society for 1858, and might be called the *Principia of Pathology*. This work removed many erroneous impressions as to the nature of the inflammatory process. As a result of his experiments, he found that the arteries were regulated by their contractility, the amount of blood transmitted in a given time through the capillaries, but neither full dilatation, extreme contraction, nor any intermediate state was capable, *per se*, of producing an accumulation of corpuscles in the latter. His next experiment went to establish the fact that inflammation might be brought about in two totally distinct ways, viz., either by the direct operation of an unconscious agent upon the tissues, or indirectly through the medium of the nervous system. Dr.

Stewart outlined the two foregoing experiments by which Lister established these facts. Other experiments showed that the phenomena of inflammation could be introduced in the tissues entirely cut off from the influence of the nervous or circulatory system. Lister also had shown in a series of most remarkable experiments that blood in its normal condition had no tendency to coagulate. A review was then given of his study of healing wounds and ulcers. Lister showed that the less the antiseptic acted on a wound, the better. When the most extravagant ideas were abroad in regard to the antiseptic treatment, when wounds were being pickled in antiseptic and abscess cavities distended with carbolic acids, Lister says that where the injured tissues do not need to be stimulated or treated with any mysterious specific, "all that they need is to be left alone." Nature will then take care of them.

Hon. D. Marcil read a paper in French on "Thyroidectomy." It was discussed by Drs. Hingston and Shepherd.

Dr. G. Lenox Curtis, of New York, read a paper on "Theories and Results." He referred to the painful ignorance of the mouth and its diseases among medical men. It should, he said, being the gate-way to the alimentary tract, the portal through which passes the food which nourishes the body, receive the first and closest consideration. The essayist then gave the history of some cases which had come under his treatment, which emphasized what he had said concerning the lack of knowledge in this department by many men. He strongly urged that Medical colleges should pay more attention to the teaching of oral surgery.

Dr. F. Buller agreed with what Dr. Curtis said, and referred to disturbances of the eye resulting reflexly from disease of the teeth. Dr. T. T. S. Harrison related the history of a case of strabismus, which was relieved by the removal of a bad tooth.

Dr. F. Buller, of Montreal, read a paper on "Some Cases of Foreign Bodies in the Eye," in which the electro-magnet was used successfully.

Dr. R. A. Reeve, of Toronto, reported the history of similar cases. Drs. Philp, of Hamilton, and Curtis, of New York, also took part in the discussion.

Dr. J. F. W. Ross, of Toronto, gave the address on midwifery, subject, "Abdominal and Pelvic Operations for the Relief of Conditions Incident to the Puerperal State." The following complications were dealt with: Fibroids, ovarian cysts, hydramnios simulating ovarian cyst, pelvic contractions, and intra-abdominal disease. He then called attention to the close similarity of symptoms accompanying three conditions that were commonly met with which might require abdominal section. These were: (1) gonorrhoeal endometritis and salpingitis, (2) ruptured ectopic gestation, (3) attempted abortion with perforation of, or intraperitoneal escape from, a pregnant

or a non-pregnant uterus. The essayist closed with the report of a case of rupture of the uterus at parturition, in which he performed section, removing all the blood from the abdomen and drawing a gauze drain down through into the vagina. Recovery followed.

Dr. J. C. Webster, of Edinburgh, read a paper on Pessaries. He said that, owing to the advance in our knowledge of the etiology and pathology of displacements of the uterus, the use of pessaries was becoming less and less; for instance, in cases of anteversion the mal-position was due to a chronic metritis, so that the cure of the condition lay in the treatment of the metritis. In regard to anteflexion, there was considerable difference of opinion in regard to pain and sterility. It was extremely improbable that excessive anteflexion *per se* was really the cause of these symptoms; for many women are found in whom the anteflexion existed without these symptoms. It was to the pathological accompaniments that attention must be directed, in the uterine wall and outside, and the treatment of stenosis of the os. The danger of the use of pessaries in this condition was pointed out. All forms of the stem pessary should be abolished in the treatment of this condition. Where the uterus was very much enlarged (though usually it is small), the Hodge pessary or the ring pessary might be used tentatively, until the congestion had subsided. In regard to retroversion, he said, that there was considerable difference of opinion as to the part played by backward displacements of the uterus in the causation of symptoms often found accompanying this condition. Some authorities held that retroversion, *per se*, did not produce troublesome symptoms. Such authorities held that the normal uterus was constantly changing its position according to changes in the bladder and bowel. They held that the pain and weakness in the back, menorrhagia, etc., were due to accompanying pathological conditions, viz., inflammations outside and in the uterus, of the subinvolution, prolapse, etc. In favor of this opinion might be mentioned the fact that cases were found in which, along with the retroverted uterus, no pain was found. Another school held that backward displacements led to bad symptoms. The former school held that the pessaries should be used not at all, or only in a small number of cases. The latter school held that where the uterus was retroverted, it should be turned to the front and kept there by means of pessaries. The writer's opinion was that more attention must be paid to the views of the former school than had been done. The pessary should be used in this condition with great discrimination. The essayist called attention to those varieties of retroversion in which the pessary might be used. In every case the accompanying causative condition should be attended to in like manner. A similar principle, the doctor held, should guide the practitioner in the treatment of the other misplacements.

Dr. Laphorn Smith, of Montreal, read a report of one hundred and ten operations for retrodisplacement of the uterus, of which forty-two were Alexander's operations of shortening the round ligaments, and sixty-eight ventro-fixations or suspensio-uteri operations. He said that he now felt justified in coming to certain conclusions concerning these two operations since he had been performing them for over six years, the first Alexander's having been performed on the 23rd January, 1892, and the first ventrofixation on the 18th March, 1890. See page 576.

A clinic was then held at the Royal Victoria Hospital.

Dr. James Bell presented first some brain cases. The first patient was a man aged 29 who had suffered from otitis media, followed by mastoid disease, in 1895. On the 1st of Sept., Dr. Buller trephined but found no pus. Symptoms increased in severity, headache, high fever, etc. In three or four days there was twitching of the left side, followed by paresis of the left arm. A brain abscess being diagnosed in the middle fossa, a little opening was made in this region. The dura was found to be bulging. On opening, two or three drams of pus escaped. He cut to the base to allow free drainage. Communication was made between this and the trephined opening in the mastoid antrum which Dr. Buller had made. There was an immediate amelioration of symptoms, paresis disappearing at once. The temperature fell to normal, recovery was not so smooth, however, patient having troublesome symptoms. On the 30th of September, the doctor re-opened the soft tissues and found hernia of the brain, which upon opening he found consisted of a small abscess. Upon opening more deeply, it was found that the whole temporo sphenoidal lobe was excavated by a large abscess from which a considerable quantity of pus escaped. From this time the progress was satisfactory for a time, but the sinus persisted. The patient was discharged the 4th of November, and re-admitted the 17th of January, having had a convulsive seizure the week before. This time the sinus was re-opened. This was found leading to the cranial vault. It was drained, and the patient was discharged in April. Has been in good health since. The next patient was a boy aged 12, who was admitted the 18th of May, 1894, for thrombosis of the left sigmoid sinus. Dr. Buller trephined. A cord-like mass extended down the side of the mastoid, which Dr. Buller thought was an inflammatory area about the mastoid process. It extended, however, from day to day. In about 48 hours it had reached the jugular vein. This vessel Dr. Bell ligatured below the omo-hyoid. An incision was made over the mastoid, and the jugular fossa cleared of clot. The symptoms abated, and the patient has since been perfectly well.

The next patient was a girl 6 years of age. She had been playing about in a room where there was a revolver. She

dragged it down from its place, when it discharged into her forehead. No severe symptoms. Was chloroformed, when bullet was found to have fractured the skull and gone deeply in the brain substance, two inches from the surface. Forceps were carefully introduced, but it was impossible to grasp the bullet, so it was left alone. An X ray skiagraph was taken of the head and showed the bullet clearly. This picture was passed around.

Two cases of sutured patella were then shown, both contracted by indirect violence. Silk suture was used. Good recovery. In recent cases his practice was to use gut sutures.

The next case was where operation had been done for floating body, a piece of free cartilage, in the elbow joint. Good recovery.

The next was an operation on an elbow joint where ankylosis had followed a bad injury to the elbow. The joint was excised on the 9th of April, which left him a good arm.

Next case was also one of excision of the elbow for tuberculosis followed by paralysis of the muscles of the forearm, due, Dr. Bell thought, to using Esmarch's bandage too tightly applied. He reported a similar case in his practice four or five years ago. The lesson was to use a hollow rubber tube or a flat bandage.

Next patient shown was a woman aged 53, on whom he had done nephrectomy for pyo-nephrosis. This was followed, for subsequent trouble, by removal of the kidney by the abdominal incision. The patient was now suffering from occasional swelling of the other kidney.

Dr. Bell presented a number of other interesting cases.

Dr. James Stewart presented six patients,—three males and three females—suffering from intra-thoracic aneurism, giving a history of each. The 7th case was one of multiple neuritis. A second case of multiple neuritis was shown. The 9th case was a man who had suffered from symmetrical gangrene.

Dr. J. E. Graham, of Toronto, presented a paper on "The Influence of Mitral Lesions on the Existence of Pulmonary Tuberculosis."

After discussing the relations existing between tuberculosis and various heart lesions he said in part :

The question now arose, why should the lungs become a less favorable ground for the tubercle bacilli when mitral disease is present? Various reasons have been propounded.

(1) That, on account of the passive congestion, there is a greater transudation of serum, which causes foreign bodies to be more easily removed from the bronchial tube. (2) The transuded serum acts as a germicide, thus preventing the growth of the bacilli. (3) In passive congestion a great number of leucocytes are exuded, and these carry off the bacilli, while at the same time the lymphatic circulation is stimulated.

Prof. Peters in the *Gazette des Hôpitaux*, Aug., 1873. gave the following explanation: The apices of the lungs are the most frequently attacked by tuberculosis, because they contain less blood, and, owing to the comparatively immovable character of the chest walls, there is less ingress and egress of air. The difficulty of inflating the apices is also to some extent due to the way in which bronchi leading to these parts branch off from the main tube. This can be demonstrated in *post mortem* conditions when, owing to passive congestion and to the presence of hæmorrhagic foci, the lower portions of the lung are not sufficient for the aeration of the blood,—greater expansion of the part is absolutely necessary, and the patient is compelled to use greater efforts in respiration, which results in greater dilatation of the air cells in the apices of the lungs. Under such circumstances there is less tendency to the development of tuberculosis.

He called attention to the pathological changes, which were: (1) A change in the capillaries in the walls of the air spaces. These are dilated and tortuous, and project into the air spaces. The degree of dilatation varies very much.

(2) A thickening of the walls of the air spaces due greatly to the growth of smooth muscular tissue and partly to an increase of the connective tissue.

(3) The deposit of pigment.

(4) The formation of cells within the inter-spaces. In considering these changes, one might at once conclude that some at least are of no value in preventing tuberculosis,—for instance, fibroid thickening and the deposit of pigmentary matter.

There are then four conditions present which may aid in the prophylaxis of phthisis: (1) Increased pressure of the pulmonary circulation. (2) The presence of transuded serum in the tissue. (3) The increase of involuntary muscular fibre. (4) The presence of an increased number of leucocytes in the alveoli.

The essayist was much more inclined to agree with Peters, that the passive congestion of the lungs acts as a prophylactic by producing an increased amount of chest movement especially in the apices, thus expanding the alveoli. The increase of involuntary muscle fibre, which is more especially referred to by Rindfleisch, enabled the patient by coughing to expel foreign matter from the alveoli and bronchi.

This paper was discussed by Drs. Wm. Osler and Blackader.

The rest of the papers, for want of time, were read in part, or a few of the leading points referred to by their authors.

"Militia Medical Reorganization" was the subject of a paper by Dr. W. Tobin, of Halifax.

"Tetany following Scarlatina" was the title of a paper by Dr. J. B. McConnell, of Montreal. See page 573.

Dr. F. J. Shepherd reported a case of Excision of the Scapula.

Dr. H. L. Reddy presented a case on Streptococcic Puerperal Infection—Injection of Antistreptococcic Serum—Recovery. See page 569.

"Electric Baths and Dyspepsia" was the title of a paper by A. L. DeMartigny, of Montreal.

Dr. H. D. Hamilton read a paper on "Non-Malignant Tumors of the Tonsil," with the report of a case.

Dr. Roddick, M.P., then submitted the report of the nomination committee, who had chosen the undermentioned gentlemen for the offices named, and they were unanimously approved by the Association: President, Dr. V. H. Moore, Brockville; Vice-Presidents, James Conroy, Charlottetown, P.E.I.; J. T. Black, Halifax; T. Walker, St. John, N.B.; J. M. Beausoleil, Montreal; W. W. Dickson, Pembroke; R. S. Thornton, Deloraine, Man.; E. H. C. Roleau, Calgary; Dr. Harrington, New Westminster, B.C.; General Secretary, F. N. G. Starr, Toronto (re-elected); General Treasurer, H. B. Small, Ottawa (re-elected). Local Secretaries: Prince Edward Island, H. D. Johnston; Nova Scotia, A. T. Mader, Halifax; New Brunswick, G. A. B. Addy, St. John; Quebec, J. B. McCarthy, Montreal; Ontario, W. G. Anglin, Kingston; Manitoba, W. H. Smith; Northwest Territories, George Macdonald, Regina; British Columbia, A. Weld, Vancouver.

On the suggestion of the Nomination Committee, Montreal was chosen as the next meeting place of the Association, it being thought advisable to meet here in 1897, owing to the fact that the British Medical Association will also assemble here during the course of the coming summer.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, May 16th, 1896.

A. D. BLACKADER, M.D., President, in the Chair.

DISCUSSION ON ALBUMINURIA.

Dr. R. F. Ruttan and Dr. H. A. Laffeur introduced the subject.

Dr. F. W. Campbell said he would confine the few remarks which he would make to a form of albuminuria, of which he had had a great many cases, in fact was meeting with very frequently—he meant what is termed normal albuminuria. Most medical writers use the term albumen, but the most modern authorities call it albumin. The word albumen is simply the Latin word, meaning “white of the egg,” though as a matter of fact it is applied to every form of albumin, the latter representing the proximate principle. In Watt’s Dictionary of Chemistry, one of the most important works of its kind in the English language, the termination *in* is exclusively used. That the mere presence of albumin in the urine or its absence does not indicate that nephritis exists or does not exist, is not generally recognized. The former is, however, often a phenomenon of such grave import that its recognition and meaning is a matter which demands serious consideration. It is now fully admitted that albumin may be met with in the urine as a physiological event, sometimes small, sometimes in fairly large quantity; sometimes transient, sometimes remaining for weeks, and be perfectly compatible with perfect health. In this category he did not include the albuminuria following deranged digestion, great mental or physical exertion, excesses in eating or drinking, or exposure to low temperature, because although it is sometimes found in the urine during all these conditions, its discovery under such circumstances is extremely difficult, even with the most delicate tests. The cases to which he referred were those where with the ordinary tests albumin is readily found in the urine of persons enjoying perfect health, and we cannot find any assignable cause. It was during his work as a life insurance examiner that he met with the great majority of these cases. He referred only to renal albumin and not to cases which accompany blenorrhœa, vaginitis or cystitis. The first suggestion of its existence was made by Gabler in 1865. In 1870, Ultmann recognized albumin in the urine of eight perfectly healthy persons. From that time onward the number of cases largely increased, this discovery in the majority of instances being due to life insurance examinations. He said how this came about would be readily understood when he stated that a few years ago the urine of a life insurance candidate was only examined under special conditions, and therefore rarely, whereas now it is examined in every case. Such an important fact has attracted a great deal of attention, and some writers have attempted to explain that its presence was due to some pathological cause, which in many instances is of so slight a nature as to be overlooked. Chateauburg found that the urine of 46 out of 50 pupils at one of the government schools, who were busy preparing for examinations, contained albumin. The same authority after numerous experiments came to the following conclusions:

1. Albumin is found in the urine of the majority of persons, more or less abundantly, and transient in its character.
2. Rest in bed has a clearly marked influence in diminishing the amount of albumin excreted.
3. Bodily fatigue greatly influences the production of physiological and transient albuminuria.
4. Intellectual labor augments with most people the quantity of albumin existing in the urine.
5. Cold bathing exerts considerable influence in increasing physiological albuminuria.
6. Sexual excitement and menstruation manifestly affects albuminuria in the healthy.
7. Albuminuria is as frequent in children as in adults, but the quantity of albumin excreted is less.

8. Digestion if accompanied by rest does not exert much influence upon physiological albumin.

Dr. Campbell, in conclusion, said that these investigations were of practical importance, as the discovery of albumin is calculated, unless its significance be understood, to create undue anxiety. With its real meaning understood, and with a microscopic examination, the physician is in a position to reassure his patient and to avoid the errors of unnecessarily energetic measures of relief from dangers which do not exist. The microscope is the only reliable test as to whether or not renal disease does or does not exist.

Dr. J. B. McConnell thought that the subject had been very fully covered by both the papers, and that it was one of the greatest importance from a life insurance point of view. He drew attention to the point that in testing with nitric acid and heat, acid albumin, which is soluble in water, may be formed and lead to an error. He noted that both speakers had rejected the pressure theory, but thought that the fact that albuminuria occurred after violent exercise in athletes and soldiers rendered the theory probable.

Dr. J. G. Adami was glad to see, from what had been said by the readers of the papers, how fully it was accepted now-a-days that Heidenhain was right, and that the presence of albumin in the urine must be regarded as due to a disturbance of the secretory mechanism of the glomerular epithelium. And he certainly believed that the main bulk of the escaping albumin passed through the glomeruli; but there were certain cases of extensive and acute congestion of the kidneys, as in acute parenchymatous nephritis, in which there is a most pronounced breaking down of the protoplasm of the convoluted tubules; and with such breaking down he considered that there must be a certain amount of albumin passing into the urine, originating thus from the disintegration of the cells. In the mammary gland the secretion is largely the result of active cellular destruction, and milk is rich in proteids. This breaking up of the cells in the kidney tubules is, as is well known, associated with the development of curious vacuoles, which eventually are to be recognized free in the lumen of the tubules. As to the exact composition of these delicate vacuoles, nothing is known, but certainly, they can be and are associated with cell destruction and approaching dissolution.

Dr. N. D. Gunn referred to several classes of albuminuria of interest to the general practitioner. The albuminuria of pregnancy was of interest because of the liability of serious trouble later on. If the case is seen early enough, the condition can be controlled, but if the patient is allowed to follow her daily avocations, it goes on to uræmia too often. This is really a physiological albuminuria passing off with the birth of the child. The amount of albumin present is no index of the conditions present; it was not the amount of albumin secreted, but the amount of toxic products in the blood not excreted, which did harm.

Another class of cases was that in which there were nervous symptoms, the commonest being occipital headache, and where this was associated with a high tension pulse, a diastolic valvular action, coupled with hereditary taint, even though no albuminuria was present, a pre-albuminic stage might be pronounced.

Dr. C. F. Martin drew attention to the absence of albuminuria occasionally where most extensive lesions of the kidneys might be found. This occurred not only in conditions of chronic interstitial nephritis of the ordinary type, and in senile renal changes, but in other conditions as well. He had for some time made examination of the urine of moribund patients at the Royal Victoria Hospital, and subsequently observed the renal changes detected at the autopsies. In a number of instances there had been apparently normal urine as examined carefully in the usual manner, and yet the kidneys had often presented distinct evidence of parenchymatous change, with degeneration of the tubular epithelium and the presence of detritus in the lumina of the tubules. In a large number of cases, too, there was apparently a recent productive change as well, and yet the urine was free from albumen.

Examination of fresh sections under these conditions had showed, too, considerable fatty degeneration of the epithelium, and yet the urine had been normal. A few cases are on record where extensive fatty change and necrosis in the parenchyma had been present with unaltered urine.

That the epithelium is, however, to some extent capable of influencing the presence of albumin may be argued from the theory generally recognized that

hyaline casts, *i.e.*, an altered form of albumin, seem at times to originate from the epithelial cells of the tubles; yet in these instances the circulatory system must be undoubtedly altered, too, in order to induce an albuminuria which responds to the usual tests. To say that the so-called physiological albuminuria is really a misnomer, and that the presence of discernible albumen in the urine implies some lesion of the renal structures, would seem quite rational on an analogy with the conditions usually found in ordinary parenchymatous nephritis. Under those circumstances it is only local areas of the kidney that are affected, while adjacent parts appear quite normal. In the same way when only a trace of albumen is present, it is more than probable that some minute local lesion of the parenchyma is present as a cause of the abnormal urine.

Dr. W. F. Hamilton referred to two cases of albuminuria in connection with angina.

In one seen in Vienna there was no evidence of infectious disease, and it was looked upon as a case of general infection from streptococcus. In the other, under Dr. Buller's care, there was mild angina, a little later severe nervous symptoms, and later again albumen casts were demonstrated in the urine.

He emphasized the importance of determining the presence of peptone as already referred to by the leader in the discussion.

Stated Meeting, May 29th, 1876.

F. G. FINLEY, M.D., First Vice-President, in the Chair.

MYXO SARCOMA OF FEMUR.

Dr. Jas. Bell reported this case.

EXCISION OF THE RECTUM BY HEINECKE'S METHOD.

Dr. G. E. Armstrong reported the following case and showed the patient: M. M., *æt.* 58, was admitted into the Montreal General Hospital suffering from carcinoma of the rectum. The growth involved the upper part of the external sphincter and the whole circumference of the rectum as high as the finger could reach. It was quite evident that the whole growth could not be removed from the perineum, and that the sphincter was so much involved that it could not be saved. The lumen of the rectum was so much encroached upon that only liquid *fæces* could be passed.

On the 5th of March I performed a left inguinal colotomy after the method of Maydl, and on the 27th March proceeded to remove the growth according to Heinecke's method.

First, I placed the man in the lithotomy position, and after introducing a sound through the urethra into the bladder to act as a guide, I made a curved incision in front of the anus and carefully separated the rectum and all infiltrated tissue from the urethra, prostate, and posterior surface of the bladder. This being accomplished, and all bleeding points controlled, I turned him on to his side and made a median incision down over the centre of the sacrum and coccyx. I then with a saw divided the sacrum and coccyx in the line of the superficial incision, and the sacrum transversely below the level of the third sacral foramen. I could then out-fold my two flaps. This gave me perfect access to the pelvis. I then deliberately opened the peritoneal cavity and separated the rectum and meso-rectum from the anterior surface of the sacrum until I was well above the limits of disease. I could catch the large vessels in the meso-rectum before dividing them, thus reducing the hæmorrhage to a minimum.

After all bleeding points were secured, and when I was ready to close the opening in the sacrum and soft parts the rectum was divided at a point well outside the body, thus insuring against infection. The upper end of the rectum was attached externally.

The patient has made a perfect recovery, has gained in weight, and is now, as you see, in comparatively good health. He walks well, can sit down with comfort, and does not seem in any way to suffer from the division of the sacrum or coccyx.

Dr. James Bell considered the great drawback to excision of the rectum was the almost constant involvement of the pelvic glands. He recommended inguinal colotomy as a preliminary operation in order that a more perfect diagnosis could be reached, and where the glands were not involved a further operation could then be performed.

VOLITIONAL TREMOR SIMULATING DISSEMINATED SCLEROSIS.

Dr. G. Gordon Campbell exhibited the patient and gave the following account of the case :—

L. F., a French-Canadian aged 71, came to the Out-patient Department of the Montreal General Hospital two years ago complaining of shortness of breath and swelling of the legs. Physical examination revealed the presence of valvular disease of the heart. At the same time a tremor of the upper extremities was noted, and enquiry elicited the fact that the patient had suffered from it all his life, and it had not interfered with his occupation of carpenter and cabinet maker. The tremor was distinctly "intentional" in character, being absent while the limbs were at rest and becoming marked on the performance of voluntary movements. It was best brought out in the act of writing or lifting a cup of water to the mouth : was more marked on the left side and was increased by emotion. Fine movements, such as threading a needle, were performed without difficulty. No other symptoms indicative of sclerosis were present, and the personal and family history had no bearing upon the case. After being two years under observation the condition described was unchanged.

Dr. J. B. McConnell referred to an almost identical case in which the legs also were affected. He looked on it as insular sclerosis without other symptoms.

D. F. G. Finley had examined the case and thought it was difficult to classify tremors of this sort. He had noticed a report of two cases in Berlin recently. In one which had been diagnosed as hysteria the post-mortem revealed disseminated sclerosis. In the other, thought to be sclerosis, no lesions were found.

TUBERCULAR ULCERATION OF THE CÆCUM.

Dr. J. G. Adami exhibited this case, which showed peculiarly extensive tubercular ulceration and loss of tissue. Tubercular ulceration of the cæcum and of the colon is relatively common, but in general the ulcers are not very extensive. Here the ulceration had been so extreme that over the greater part of the cæcum there was one large area of ulceration. A few stray islands of mucosa persisted sharply cut off from the floor of the ulcer, which was granular, but relatively smooth. The ulceration extended into the colon, where the largest ulcer (in the ascending portion) was 10 cm. long and completely surrounded with the narrowed viscus. There was a well marked patch of ulceration in the appendix, and again another ulcer within 1 cm. of the anus. This had perforated and communicated with the skin immediately outside the anus, forming a fistula. The specimen was obtained from a girl of 24, presenting chronic ulcerative tuberculosis of the epiglottis, larynx and trachea, and of the small intestines and peritoneum.

Dr. Wyatt Johnston asked Dr. Adami if he had noticed and could explain the difference in the distribution of tubercular ulceration of the ileum. In one set of cases the lesions were limited mainly to the typhoid position, namely, the lower part of the ileum ; in the other they were more numerous in the duodenum and upper part of the jejunum, and scanty or absent in the lower part.

Dr. Adami had noted a great number of cases in which there was simulation of the typhoid distribution, but had not noticed so many where the upper end of the intestine was affected.

WOUNDS FROM FIREARMS.

Dr. Wyatt Johnston exhibited a series of specimens illustrating the various wounds produced by firearms.

PURE MILK.

Dr. J. B. McConnell read a paper on this subject, in which, after dealing with the composition and impurities often found, he gave in detail the precautions that should be taken to ensure a supply of pure and wholesome milk to the consumer. See page 371 May Number 1896, of this Journal.

CONCURRENT DIABETES AND EXOPHTHALMIC GOITRE.

Dr. C. F. Martin read the following case report: The coincidence of two such maladies as diabetes and exophthalmic goitre in the same patient has already been recorded in not a few cases, and yet each newly added instance is of more than ordinary interest in view of the apparently associated features in their etiology. The subjoined report is therefore very briefly submitted, though without any effort to comment on the nature of such an association.

A French-Canadian aged 28, who was a piano maker by trade, came to the out-patient department of the Royal Victoria Hospital complaining of frequent micturition, excessive appetite, general weakness and persistent sweating. He had been ill about one year, the weakness being an early symptom and progressive, while the micturition, sweating and increased appetite supervened some months later. To these signs were added a gradually developing tremor, great nervousness, palpitation, and dyspnoea on exertion; also gastric disturbances with occasional obstinate vomiting. During the year he had lost about twenty pounds. There was no history of diarrhoea.

He was a man of temperate habits, and except for the usual diseases of childhood he had always enjoyed good health. The family history presented no evidence of hereditary taint.

An examination of the patient showed him to be a remarkably thin young man, with small, soft muscles and moist skin. His eyeballs were markedly prominent, giving him an expression of terror and anxiety. Von Graef's and Stellwag's signs were distinct; that of Möbius could not be definitely made out.

The thyroid gland was enlarged bilaterally and rather soft.

His pulse was of low tension, soft and rapid, beating 150 to the minute. The heart sounds were normal. The respirations were increased in number, but the lungs themselves appeared free from disease.

The urine was pale and clear, acid in reaction, sp. gr. 1035; a small quantity of albumin was present and a large amount of sugar.

The nervous system was not abnormal further than is implied in the symptoms just mentioned.

He was admitted to the wards for a few days and further notes of the case were made by Dr. Fry, the house physician. During his sojourn he had slight pyrexia, a constantly rapid pulse, persistent nervousness and excitability. The glycosuria remained unaltered in amount, though there was never marked polyuria. He was discharged after twelve days, and for a short time only attended the dispensary. Just one year later he returned to the out-patient department of the hospital, where I again examined him. He had maintained fair health in the interval; the goitre had somewhat increased in size, and there was still a large quantity of sugar in the urine.

The above notes, which, though brief, state the main features of the case, are sufficient to render it certain that we were dealing with a case of true diabetes associated with Graves' disease, and not merely a transitory glycosuria. And their concurrency is especially interesting in view of the numerous analogies which may be formulated in their respective etiologies and morbid anatomy. In both diseases, for example, heredity is thought to play a part; both occur in neurotic individuals, and not infrequently are preceded by great mental excitement, worry, fright, etc., sometimes, too, after trauma, and in both we find individuals affected at the same period of life.

In conclusion it may be said that while the occurrence of transitory glycosuria is a fairly common occurrence perhaps in marked forms of Graves' disease, and that in two cases recently in the hospital we have met with that condition, nevertheless the permanent presence of glycosuria with other definite symptoms of diabetes seems to be very much more infrequent.

Stated Meeting, June 12th, 1896.

F. G. FINLEY, M.D., First Vice-President, in the chair.

LYMPHANGIOMA OF THE TONGUE.

Dr. G. E. Armstrong exhibited a photograph of the tongue and read the following report :

This photograph represents a lymphangioma of the tongue which I removed from a young woman 22 years of age. She first noticed it fifteen years ago. It occupied the right anterior third and a portion of the left side of the tongue. During the past few years it has been growing rather rapidly, and when she was admitted into the hospital it was so large that she could not bring the upper and lower teeth together for purposes of mastication and it seriously interfered with speech. I removed it by a V-shaped incision and fortunately obtained perfect union by first intention. Dr. Johnston reports it to be a lymphangioma. It is doubtless of the same nature as the enlargement in macro-glossia, but the lymph spaces are very distinct—more so, I think, than is generally the case in the latter condition.

Dr. F. G. Finley asked if the glands were affected, and if there were lymphatic growths in the other parts of the body as well. Dr. Armstrong replied that they were not affected.

Dr. J. G. Adami asked if the vesicles were thin walled and showed any tendency to rupture, and was answered in the negative.

A CASE OF BACILLUS ÆROGENES CAPSULATUS.

Dr. W. H. Jamieson read a paper on this case.

Dr. J. G. Adami congratulated Dr. Jamieson on getting pure cultures. He also had found that he rarely got the capsule except where the organisms were present in great masses, as in the kidney when a distinct halo was noticed between the various bacilli. He found them to stain well, and some of the best results obtained were from hæmatoxylin.

Dr. G. E. Armstrong referred to the clinical history as given by Dr. Jamieson, and said after the patient was brought into his ward there had been a sudden change for the worse, and the condition seemed to be that of acute anæmia due to a fresh hæmorrhage. The patient had taken ether badly, and before the incision a litre of normal salt solution was injected into a vein and the condition improved. On emptying the cavity another litre of salt solution was given, but the patient died while he was exploring the cavity.

BRANCHIOGENIC CYST.

Dr. J. G. Adami reported this case.

Dr. James Bell said the patient had been sent to him with the diagnosis of a suppurating lymphatic gland, which he confirmed. On making his incision he opened the cyst, the contents of which were like *café au lait*, with very little, if any, grumous material. He was struck with the ease with which the mass was dissected out, quite unlike lymphatic glands in general.

RESECTION OF BOWEL.

Dr. J. Alex. Hutchison read the following case report :

M. St. J., aged 48 years, was admitted to ward K, Montreal General Hospital on April 14th, 1896, suffering from obstruction of the bowels of six days' duration.

The patient was unintelligent and could give no satisfactory history of her illness.

On examination no signs of abdominal obstruction could be made out, the walls were flaccid. In the right inguinal region a small round tumour was felt, freely movable, with flat percussion note; no impulse on coughing. Friends stated this had been present for nine years.

Temperature 98° C, pulse 100, respiration 24. No pain or vomiting. Large enemata of hot water and of olive oil were given without relief.

On the 15th I opened the abdomen in the median line and finding the small bowel passed through the internal abdominal ring, sutures were applied to the wound and an incision made over the tumour, and the bowel drawn down after cutting the stricture.

A gangrenous patch with a perforation was found. Resection of about $2\frac{1}{2}$ inches was done, the ends being brought together by Czerny Lembert sutures and the parts returned.

On the 16th and 17th the patient did fairly, but signs of collapse were present. On the 18th the condition was desperate; some stercoraceous vomiting, but the condition improved; retained nourishment; bowels moved with no pain; tenderness and tympanitis.

This condition continued for some days, when collapse returned, the patient dying of exhaustion on the 27th, or twelve days after operation. Temperature was sub-normal from date of admission, for several days remaining at 96° . Pulse between 100 and 120 per minute.

THE
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Editorial.

CANADIAN MEDICAL ASSOCIATION.

The recent meeting held in this city was one of the most successful in the history of the Association. Some two hundred members attended, representing all parts of the Dominion. A number of representatives from the neighboring Union also graced the occasion, prominent among whom was Prof. Osler, from the Johns Hopkins University, and whose presence and criticisms of the papers read added much to the interest of the meeting.

There was ample material in the way of papers, so much so that quite a number for want of time could not be read. A noticeable feature was the lack of discussion of the papers read. The defective acoustic qualities of the hall in which the meeting was held may account for this apparent want of interest in the subjects presented. Ability to hear with ease all that is said at a meeting of this kind is of the utmost importance, and should at future gatherings receive the careful attention of those to whom is committed the preparation of arrangements for the meeting.

It is admitted by all that the question of inter-provincial registration has made more progress at this meeting than it has for the past twenty years; and we hope that when delegates from the various provinces of the Dominion meet at the next annual meeting of the Association, they will all be empowered to adopt the report of the committee as presented at this meeting and accepted, in regard to a uniform standard

of matriculation, curriculum of professional studies, and examinations. The method of conducting the examinations will doubtless be where the greatest difficulties may be apprehended; and whether they are conducted in each province by examiners appointed by the several provincial councils, by the teachers under the supervision of assessors as in this province, or by a central Dominion examining board, or otherwise, will be a matter for careful consideration and thought during the interim; and we hope to see a final favorable decision in this matter at our next annual meeting, and the inauguration then of a uniform standard of medical education for the Dominion and general reciprocity in the registration of degrees. Should such a desirable arrangement obtain, we understand that the probability of such reciprocity obtaining throughout Britain and countries owning her sway would be great, and it would doubtless be an event of the near future. The meeting of the British Medical Association here next year, into which will be merged the next annual meeting of the Canadian Medical Association, would be a favorable occasion for the consideration of such an important topic.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

The sixth annual meeting will be held this year on Sept. 29th, 30th and Oct. 1st, in Alloton Hall, Boston, Mass., under the presidency of Dr. Robert Newman, New York. A very interesting programme has been arranged consisting of fifty-one items. Members of the profession generally are invited to attend. Dr. Emil Henel, 352 Willis avenue, New York City, N.Y., is secretary.

FASHION AND HEALTH.

At the close of the summer holidays and the opening of the many city schools, it must be apparent to the most casual observer in our streets that, at certain hours of the day, the composition of the passing throng has materially changed from what it was during the summer months. Among the busy money-seekers are groups of merry school children, and numbers of more serious students, with books under their arms, all wending their way to or from some place of instruction. But what peculiarity attracts your attention to them? How do you recognize that you have not met them daily through the summer season?

Ah ! you have it now, it is the tanned or sunburnt face which rivets your attention at once. You certainly have not noticed so many healthy, merry faces during the hot weather, although now that the idea is suggested you recall the pale, bleached faces you have met daily for so long. A more extensive observation shows you that the healthy tan is not alone seen in the schoolboy or girl, but the young lady of fashion has coveted and obtained this wealth of color. Truly, fashion is not without its redeeming points !

But how has all this come about, this increased number of tanned faces we see each year ? A glance at the railway and steamboat time tables, with their cheap return fares and commutation tickets; or a visit to the mountain, river, and lake resorts, with their scores of new boarding houses and hotels, will readily explain the reason why. Increased accommodation changes the habits and customs of people. Custom is showing us a new phase in her evolution each year, and following this change in custom comes the natural effect on the people influenced by it.

One can hardly take up a daily paper without noticing in the sports column some announcement of a record being broken, or some feat of strength or endurance detailed for general admiration. And yet the pessimist will tell you that our race handicapped by fashion and society is rapidly degenerating. He will say: "Look at your hospitals, full to overflowing; look at your asylums, forever enlarging their accommodation; and above all look at the standard of health of the women of to-day. Show me the army of healthy mothers as of old, who never knew what sickness was, and yet reared large families. Then note the large number of specialists, who are making a fat living from the ills of the mothers of to-day, and tell me that our race is not degenerating !"

But you are just a little too superficial, my pessimistic friend ; you must remember that "the sins of the parent shall descend unto the child to the third and fourth generation," and that the sufferings of the present generation are to some extent traceable to germs of disease planted long years ago, to pernicious habits, exposure, or bad hygienic surroundings with resulting epidemics and their sequelae. If those rugged mothers of years ago had taken more care of their offspring, ensured better hygienic surroundings, and fostered proper habits of living, who can say but that the present generation would not have been the better for it ?

If omnipotent Fashion, in the future, will but promote those customs which tend to develop, mentally and physically, the young lady of to-day, and frown upon the many artificial accessories which beautify (?) the wearer at the expense of her health, she will put a spoke in the wheel of evolution which will influence the generations to come.

This myth Fashion is as changeable as the wind, and like the wind is hard to suppress, but more easy to direct. As all power properly directed is an aid, let us as physicians strive to direct it aright, by educating its slaves to become its masters, and to appreciate the benefits of health-giving habits, and the pernicious effects of the unnatural adornments affected by not a few.

G. F.

MOODY'S MAGAZINE OF MEDICINE.

This is the title of a new medical periodical published in Atlanta, Ga., and edited by Dr. Ralcy Husted Bell. It has a bright, lively appearance, being illustrated and having a striking cover in red and black. It aims to represent the rank and file of the profession, particularly in the new South and West, and expects to have a circulation of 20,000 before its second year begins. It has a railway department, a woman's home, and educational departments, in addition to medical contents, also poems by the editor and others, and a charming photogravure of a youthful female of perfect anatomical proportions reclining in innocent nudity on the banks of a placid stream. We prosy, matter-of-fact Northerners stare a little at the interesting medley which is conceived to suit the requirements of our tropical brethren, but the racy blending of well written articles on medical topics and modern science and literature constrains us to commend this new journalistic candidate, and wish it every success, and we will welcome it among our exchanges as a spicy breeze from the South.

Miscellaneous.

MOVING TOWARD THE LIGHT.

The modern developments in physiological chemistry and bacteriology, as well as the accumulated evidence of experience, has convinced the great majority of skilled and well-educated physicians in the ranks of homoeopaths, that the sectarian bounds of their school were too small for the exercise of the practice of rational medicine; and numerous attempts have been made to enlarge the boundaries set by Hahnemann, the founder of this school of medicine.

This movement has finally gained such proportions that there was recently organized at Buffalo a medical society known as the American Association of Physicians and Surgeons, made up of qualified members of the profession of different schools, the purpose of which is to break down the bars of sectarian medicine, and make a platform large enough to admit any intelligent or qualified practitioner, irrespective of his sectarian antecedents. So far as its medical creed is concerned, the regular profession has long ago abandoned sectarianism, and ceased to subscribe to the principle of *contraria contrariis curantur* attributed to it by Hahnemann.

We are glad to see this movement. It is in the right direction, and it is the sincere hope of the writer that some time in the future there may be only two recognized classes of physicians; viz., those who are practising medicine on a rational and physiological basis, and those who are pursuing blindly irrational methods.

The long fight among the different schools of medicine has been based upon differences of opinion upon the so-called action of drugs; but intelligent physicians are finding out (many long ago made the discovery) that in the relation of the human body and drugs, it is the cells of the body which are active, and not the drugs. The body acts upon the medicine, not the medicine upon the body. Modern developments in hydrotherapy, electrotherapy, massotherapy, and the various branches of physiological medicine, including dietetics, have left comparatively little room for pharmaceutical products, so it is exceedingly foolish to still maintain the old quarrel about big doses and little doses, when doses of any sort have so small a part to play in the rational treatment of disease. The high-potency delusion seems about dead.—*Modern Medicine and Bacteriological Review*, July, 1896.

THE NEW NURSE.

Under the above caption, a recent editorial in the *Practitioner* contains the following well-timed criticism: "The first volume of Professor Clifford Albutt's monumental 'System of Medicine,' which has recently appeared, contains an article written by a nurse. This is a somewhat

startling sign of the times. Doctors were formerly supposed to teach nurses; now, apparently, the nurses are to teach the doctors. The next thing will probably be courses of instruction in nursing for medical men, who must at least be taught their place in relation to the New Nurse. This knowledge is becoming more and more necessary to the practitioner, and the want of it is likely to get him into trouble. The New Nurse waxes every day fatter, figuratively speaking, and 'kicks' more vigorously. She is no longer, it would seem, contented with a certificate; she must have a degree. At least 'post-graduate' lectures are given by learned ladies, and reported in the *Nursing Record* for her edification. "Exhibitions' are arranged where medical and surgical appliances of all kinds are displayed, to the admiration of the public and the greater glory of the New Nurse. Her tastes are strongly surgical, and she has a scarcely concealed contempt for the general practitioner. Even the hospital physician is made to feel that his attempts to hide his ignorance do not impose on her. If his cases recover, the credit is hers; if they do not, the fault is his. She is more tolerant of the student, for—to say nothing of his possibilities from a matrimonial point of view—he is more keenly conscious of his inferiority and more grateful for her patronage."—*Pacific Medical Journal*, Aug., 1896.

PROBABLE NATURE OF "SPIRIT" WRITING.

The chances of coincidence are much increased by the extremely illegible character of much of the script, which leaves wide room for "interpretation." I can not but suspect that the "anagrams" sometimes written automatically often owe their existence to this kind of "interpretation." Yet, after making all allowances for coincidence and forgotten memories, nearly all investigators admit that there remains a residuum which can not plausibly be explained by any accepted theory. I can not discuss this residuum here; it is enough to point to its existence, with the caution that no theory can be regarded as final unless it can explain all the facts.

The importance of this material from a psychological point of view cannot be overestimated. If the man's hand can write messages without the co-operation of the man's consciousness, we are forced upon the one horn or the other of a very perplexing dilemma. Either these utterances stand for no consciousness at all, merely recording certain physiological processes, or else they indicate the existence of mentation which does not belong to any recognized human being. The first would seem to deny the doctrine of parallelism, according to which physiological processes of the degree of complexity requisite to the production of writing necessarily generate mental states, and this would lead us toward the old theory of the soul, or something like it. The second would compel the assumption either of personalities distinct from that of the subject, which is the theory of possession, or of segregated mental states. The latter is the theory which I am developing in these pages, and although I am far from satisfied with it, it is more in line with our present scientific conceptions than others, and accounts for some of the facts fairly well.—Prof. William R. Newbold, in *Appleton's Popular Science Monthly* for August.

Book Reviews.

A System of Medicine by many Writers.—Edited by Thos. Clifford Allbutt, M.A., M.D., LL.D., F.R.C.P., F.R.S., F.L.S., F.S.A., Regius Professor of Physic in the University of Cambridge, etc. Volume I. Published by Macmillan & Co., New York and London. Representatives in Canada The Copp Clarke Co., Ltd., 9 Front street, Toronto.

On this side of the Atlantic, systems of medicine and surgery by American authors and publishers are not uncommon nor infrequent in their appearance, and have been very generally subscribed for by the members of the profession. The appearance of a system of medicine by English authors will undoubtedly be welcomed by the practitioners of the United States and Canada, when it is understood that a work representing the best thoughts of the ablest men of the British Isles is offered for our perusal and study.

The volume before us is the first of five, and contains two divisions of the subject matter to be presented, in which are included a consideration of the following subjects:

Prolegomena, Medical Statistics, Dr. Billings; Anthropology and Medicine, Dr. Beddoe; On Temperament, Dr. Rivers; On the Laws of Inheritance in Disease, Mr. Hutchinson; Medical Geography of Great Britain, Mr. Haviland; Inflammation, Dr. Adami; The Doctrine of Fever, Dr. Burdon-Sanderson; The General Pathology of Nutrition, Dr. Mott; General Pathology of New Growths, Mr. Shattock and Mr. Ballance; Principles of Drug Therapeutics, Dr. Leech; Climate in the Treatment of Disease, Dr. Hermann Weber and Dr. Michael G. Foster; Artificial Aerotherapeutics, Dr. Theodore Williams; Balneology and Hydrotherapeutics, Dr. Hermann Weber and Dr. Parkes Weber; The Medical Applications of Electricity, Lewis Jones; Massage: Technique, Physiology and Therapeutic Indications, Dr. Kearsley Mitchell; The General Principles of Dietetics in Disease, or the Feeding of the Sick, Sir Dyce Duckworth; The Diet and Therapeutics of Children, Dr. Eustace Smith; Nursing, Miss Amy Hughes; The Hygiene of Youth, Dr. Dukes; Life Assurance, Dr. Symes Thompson; Insolation or Sunstroke, Sir Joseph Fayrer; The General Pathology of Infection, Dr. Kanthack; Septicaemia and Pyaemia, Mr. Watson Cheyne; Erysipelas, Mr. Watson Cheyne; Infective Endocarditis, Dr. Dreschfeld; Puerperal Septic Disease, Dr. Playfair; Furuncle, Carbuncles, Dr. Melsome; Epidemic Pneumonia, Dr. Whitelegge; Epidemic Cerebro-Spinal Meningitis, Dr. Ormerod; Influenza, Dr. Gee, Dr. Thorne Thorne, Dr. Kanthack and

Dr. Herringham; Tetanus, Sir Geo. M. Humphrey and Dr. Sims Woodhead; Enteric Fever, Dr. Dreschfeld; Cholera Asiatica, Dr. Macleod, Mr. Ernest Hart, Dr. S. C. Smith, Dr. Kanthack, and Mr. J. W. W. Stephens; Plague, Dr. J. F. Payne; Relapsing Fever, or Famine Fever, Dr. Rabagliati and Dr. Westbrook.

The wide scope of this volume, and the many interesting subjects treated, may be learned from this list of authors and the articles contributed by them. Among the many chapters of interest we especially note that on Anthropology and Medicine. The special susceptibility to disease of men and women is compared, the influence of color, the distribution of disease among different races and countries, urban and rural residences, the influence of defective teeth, special susceptibility of certain classes of individuals to disease, etc. The article on Inflammation, by Prof. Adami, of Montreal, is one of the most interesting in the book; it is thoroughly exhaustive of the subject, and may be regarded as the most complete up-to-date exposition of inflammation extant in the English language. The article on the General Pathology of Infection, by Dr. Kanthack, is one of great value and worthy of careful study, presenting the most modern views in regard to immunity and serum therapeutics. Of exceeding interest are the articles on the general pathology of nutrition, climate in the treatment of disease, balneology and hydrotherapeutics, the medical applications of electricity, etc. A number of wood cuts, colored illustrations and charts contribute to the elucidation of the text. The printing and binding are excellent. Judging from this volume we can thoroughly recommend the work to our readers as a thoroughly up-to-date scientific exposition of medicine, representing fully the culmination of the scientific work of the nineteenth century.

Minor Surgery and Bandaging. By Henry R. Wharton, M.D., Demonstrator of Surgery in the University of Pennsylvania, Surgeon to the Presbyterian Hospital, etc., etc., published by Lea Bros. & Co., New York.

This is the third edition of this work, and is worthy of the highest recommendation. It contains 475 illustrations on fractures, dislocations, bandaging, and those minor operations which are so necessary for every medical man to be versed in. The part on bandaging is admirable, and much more exhaustive than in any other work of this kind. To the student attending clinics it is invaluable, and for the busy practitioner it is conveniently arranged for ready reference. Those desiring a work of this kind will certainly profit reading one so well prepared in every way and thoroughly up to date.

PUBLISHERS DEPARTMENT.

THE REALITY OF WART-CHARMING.

The ease with which warts can be "charmed away" by suggestion has long been known. I will quote two cases. The patient in the first case was my wife, then a little girl, and the account was written for me by her mother. "I remember it all perfectly. It was when E—— was about six years old, just before we went to Boston to live. She had had warts on her hands for over a year. They had spread until her hand was not only badly disfigured, but very painful, as they were apt to crack and bleed. Two physicians, both relatives of ours, had prescribed for them, and we had followed directions without success. We were in Lawrence, at M. P——'s. A lady came to tea, noticed the warts, and offered to remove them by a 'charm.' As I had once or twice been relieved in childhood in the same way, I was delighted at the offer. She went through some mummary, rubbing them and muttering something, I think, and then announced that they would be gone in a month. They were, every one. In a few days they began to dry up and disappear. So far as I can remember, she never had another. When I was a child there was a neighbor of ours who used to remove all the warts in the neighborhood. I never heard of his failing, and I know of many successful removals in our own family. He used a piece of thread. He would tie it around the wart—if he could—with great solemnity, rub it three times, and very carefully put the piece of thread in a paper in his pocketbook. This made a very great impression on us, I remember. It seemed next to a church service, having your wart taken off."—*From Suggestion in Therapeutics, by PROF. W. R. NEWBOLD, in Appleton's Popular Science Monthly for July.*

"ONE OF THE CERTAINTIES OF MEDICINE."

Belcher Hyde, M.D., of Brooklyn, N.Y., writes: "Antikamnia is an American product, and conspicuous on this account and because of the immense popularity which it has achieved. The literature is voluminous, and clinical reports from prominent medical men with society proceedings and editorial references, attest its value in actual practice in an endless variety of diseases and symptomatic affections. The fact stands incontrovertible that antikamnia has proven an excellent and reliable remedy, and when a physician is satisfied with the effects achieved he usually holds fast to the product. Antikamnia is one of the certainties of medicine. This is the secret and main spring of its success."

SANMETTO IN BRIGHT'S DISEASE.

Dr. C. E. Stafford, Trigg, Va., writing, says: "I have used Sanmetto with the very best results. I succeeded in making a case of Bright's disease much more comfortable by the use of Sanmetto, and am satisfied it should be used oftener in this disease. I regard Sanmetto as an efficient and elegant remedy for diseases of the genito-urinary organs."

SANMETTO IN AFFECTIONS OF THE GENITO-URINARY TRACT.

Dr. Robt. Park, M.D.; L.F.P.S. Glasgow, L.S.A., M.R.C.V.S., etc., 288 Argyle St., Glasgow, Scotland, says: "I find in Sanmetto an extremely elegant preparation, and one very effectual in remedying those medical affections of the genito-urinary tract for which it is especially designed. I was particularly pleased with its successful action in a case of irritation of the bladder neck, and frequent micturition and incontinence in a young adolescent female."

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GERSTS

