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Original Articles

No paper published, or to be published elsewhere as original, will be accepted in this department.

TREATMENT OF APPENDICITIS.*

BY T. K. HOLMES, M.D., CHATHAM, ONT.

Few subjects have been studied more carefully during the past ten years than appendicitis, and the literature relating to it is so plentiful that the presentation of anything new and original can scarcely be expected. The anatomy of the appendix and of the adjacent organs, and the pathological changes occurring in appendicular inflammation, are so accessible in the literature of the subject that it would be unwarrantable to refer to these at any length in what is intended to be a short clinical paper. The position and shape of the appendix, its limited blood supply and its consequent low vitality, easily account for the frequency with which it becomes diseased, whilst a study of the sequence of morbid processes incident to this affection clearly accounts for and explains the clinical history of the disease. Educated medical men generally agree on all points connected with this subject except the treatment, regarding which there is wide difference of opinion. Many physicians maintain that most cases are amenable to medical treatment, and that surgical interference is rarely advisable, while surgeons consider the affection a surgical one, and nearly always requiring to be

*Read before the Lambton County Medical Association, July 12th, 1899.

treated as such. Extreme views are often wrong ones, and dogmatic claims uncertain and unsafe.

Deaver advises operation in all cases as soon as a diagnosis is made, except where there is persistent vomiting, a leaky skin, a rapid pulse with a diffuse peritonitis and approaching collapse. He says cases presenting these symptoms all die, and operating on them would only lead to disappointment and discredit.

Murphy thinks all cases should be operated on at the earliest time possible after diagnosis. Carstens holds similar views, and many other surgeons adopt this rule.

Deaver reports fifty consecutive operations, with twelve deaths, or twenty-four per cent. At Harper's Hospital, in 1898, there were eighty-four operations, with fourteen deaths, or nearly seventeen per cent.

These are probably about the average results of those who operate on every case, and it is fair to assume that the mortality would be greater in less experienced hands. It is a high death rate, and would seriously jeopardize the popularity of the operation in smaller cities or towns, where every case is known and discussed by the whole community.

During the first twenty years of my practice all cases coming under my care were treated medicinally by opiates, counter-irritation, hot fomentations, a liquid diet and rest in bed. The mortality under this plan of treatment was fourteen per cent. Of seventy-six cases coming under my care since 1890, forty-five have been operated on, with three deaths, or 6.6 per cent., and thirty-one cases have been treated without operation, with six deaths, or 19.3 per cent. Two of these six deaths were cases of such grave character that it is almost certain any surgical measures would have failed. They would be classed among those mentioned by Deaver as hopeless from a surgical standpoint, so that only four can be fairly classed among operable cases, or 12.9 per cent. These four cases died quite suddenly, and when the more acute symptoms were subsiding, from rupture of abscess into the peritoneal cavity. They undoubtedly should have been operated on. It is true that some of the cases of apparent recovery without operation are not free from danger of recurrence, but their condition is much more favorable for operation than it would have been in the acute stage of the disease.

A study of these seventy-six cases has led me to the conclusion that every acute case should be watched closely, and, if possible, tided over to the quiescent stage, when the appendix may be removed. While it is not possible always to do this successfully, it will be found that after eliminating those that can be so tided over, and also those in which operation in the acute stage is clearly imperative, there will remain but a small percentage who will die

from causes arising during the tentative period. Such deaths will generally be from rupture into the peritoneal cavity of an undetected abscess or from sudden development of diffuse suppurative peritonitis. If the plan of treatment here suggested be adopted, it only remains to consider the best means of carrying it out. The cases in which immediate and early operation is imperative are those of a fulminating character, in which the symptoms develop suddenly and violently, and progress with great rapidity towards general purulent peritonitis. These cases are generally due to sudden perforation or to gangrene of the appendix, and they constitute but a small proportion of the cases. I believe they will all die without operation, and that some of them will recover if operated on without delay.

The great majority of cases are not of this violent character, and if confined to bed, deprived entirely of food, local applications of ice or of hot fomentations be made and the bowels freely moved by calomel and castor oil or saline purgatives, the acute symptoms will be relieved and convalescence begin. Opiates and antipyretics obscure the symptoms, and leave the medical man in doubt as to the progress of the disease. The former constipates the bowels also, while the various drugs for reducing the fever depress the heart and lower the vitality. If the pain be absolutely unbearable a hypodermic of morphine may have to be given, but at the same time no effort should be spared to have the bowels freely moved. When salines or castor oil cannot be retained on the stomach a solution of two ounces of sulphate of magnesia used as an enema, and repeated every two or three hours, will often succeed in producing free catharsis.

For relief of pain Deaver recommends assafœtida suppositories, and for persistent vomiting a small blister just below the lower end of the sternum. Blistering or any other form of counter-irritation over the appendix that destroys the integrity of the skin should be avoided because they are useless, and they interfere with operation, should that become necessary before the raw surface has healed. These measures, if resorted to early in an attack, will in the great majority of cases bring about a subsistence of the acute symptoms, and lead to a condition favorable for operation at a later period. If not followed by relief in twenty-four or forty-eight hours, and the case becomes more threatening, operation may become necessary without further delay. If the disease occurs in persons suffering from grave constitutional ailments, such as tuberculosis, diabetes, advanced Bright's disease, etc., operation should not be undertaken if it can be possibly avoided. Peritoneum that has been recently inflamed becomes immune to a surprising degree, and on this account will bear the exposure and manipulation incident to operation far better than normal peritoneal tissue. For this reason

operation three or four weeks after the acute symptoms have subsided affords the best chance of success, and this time should therefore be chosen, when possible, for removal of the appendix.

The question of the advisability of operation on cases that have apparently recovered entirely from a first attack will often present itself for solution to every medical man. I have so often seen a recurrence in such cases that I am satisfied an appendix once diseased is a menace to life and should be removed, for the danger in doing so by an experienced surgeon is less than the danger of leaving it. The following case will illustrate this: A lady had an attack of appendicitis, and was successfully treated by Dr. Hay, of Wallaceburgh. As soon as she had sufficiently recovered to travel he sent her to me for operation. I could detect no evidence of the disease remaining, and advised her to have nothing done. Three days later she had a severe second attack, and Dr. Hay at once sent her back to me for operation. On opening the abdomen I found the appendix acutely inflamed, and containing a fecal concretion near the distal end. She made a good recovery, but to have operated when she first came would have been better. Success in operating for appendicitis depends very greatly on attention to details in the preparation of the patient, the care exercised in guarding against infection through instruments, dressings, operator and assistants, skill in dealing with adhesions, and care in every step to avoid injury to the viscera and prevention of their contamination by any poisonous matter that may be encountered within the abdomen during the operation.

The difficulties encountered are sometimes so great that the most experienced surgeon will find his skill taxed to the utmost. Thorough evacuation of the bowels before any operation requiring an anesthetic is beneficial, and before a laparotomy is most essential, and for this purpose I prefer calomel and castor oil or some saline cathartic. Strychnine administered for a few days before an operation sustains the heart and lessens the liability to shock. If the patient be greatly exhausted from previous illness and the circulation weak, the transfusion of from two to four pints of normal salt solution may be practised by an assistant during or after the operation. I am sure I have seen this prevent fatal shock. The various steps in the operation are so minutely described by numerous writers that I shall not attempt to repeat here what is accessible to all, but content myself by reference in detail to some cases that were interesting and instructive to me, in hope that they may be so to others present.

CASE I.—A married woman, forty-five years old; had always been well until two years before I saw her, when she became ill with pain in the right side of the abdomen, and was treated for several weeks for typhoid fever. As the fever did not abate in the

usual time it was thought to be chronic malarial poisoning, and was treated as such by quinine, arsenic and tonics. After several months a swelling was discovered in the region of the right kidney, and the patient, who lived in the village of Morpeth, went to London to see the late Dr. Fraser, who thought the swelling was an enlarged kidney, and gave an unfavorable prognosis. She then consulted a leading surgeon of Detroit, and, I think, some other medical men there. These gentlemen confirmed the diagnosis of diseased kidney, and, as they did not hold out much encouragement, the patient returned home, and was for several months under the care of the late Dr. Shaver, of Blenheim. She next became a patient of Dr. Caron, of Morpeth, and it was through his courtesy that I saw her. At this time she was confined to bed, was greatly emaciated, exceedingly anemic, and had a pulse of 120 and a temperature of 100°. There was a distinct tumor on the right side of the abdomen, on a level with the umbilicus. It was hard, tender and immovable, and she gave me a history of acute exacerbations of pain every few days, and said that when these came on the tumor became hard and more tender, and that the subsidence of pain was always accompanied by a slight diminution in the hardness of the tumor. The early history of the case was that of appendicitis, and the coincidence of the hardness and the severe attacks of pain afforded me a clue to the correct diagnosis. It seemed to me the symptoms could be explained by the presence of an abscess cavity communicating by a small fistulous opening into the colon, causing hardness and pain when the cavity became distended by pus and feces, and relief and a diminution in the hardness occurring when the contents escaped into the gut. There was no history of renal calculus, and the urine was normal. I advised an exploratory operation, but the patient's family would not consent to have it done. A week later the pain became so severe that I was asked to operate, which I did, being assisted by Drs. Shaver, Caron and Stevens. An incision over the most prominent part of the tumor opened into a cavity from which pus, feces and gas escaped, and on irrigating freely a small fistulous opening in the colon was found. For six weeks all discharge from the bowels came through the incision, which was kept open by a large rubber tube. After that time the bowels began to move naturally, and the opening in the side closed by granulation from the bottom.

CASE II. was that of a gentleman about 40 years old, who was under the care of Dr. Shaw, of Courtwright. He had been ill for several weeks with the ordinary symptoms of appendicitis, and at the time of my visit had a large well-defined hardness in the region of the appendix. I had the advantage of Dr. Wilkinson's advice and assistance at the operation, which was performed on the 8th of November, 1894. There was a large abscess and the operation

was very easy and simple. The patient improved steadily for about three months, and was able to attend to some of his professional duties, but the cavity did not fill up well, and about the first of February, 1895, a fistulous opening into the bowels was observed. On the 18th of February, assisted by Dr. Wilkinson, I made a counter opening in the loin to facilitate drainage, but the patient gradually grew weaker and died two or three weeks afterwards. This was one of my three fatal cases, and as the other two have some points of interest I shall briefly relate them here.

CASE III.—Mr. N. Y., aged 67 years, had a typical first attack, and was attended by Dr. Lockhart, of Florence. On the morning of the ninth day of his illness, and when he seemed to be improving, the abscess ruptured into the peritoneal cavity, and he nearly died from shock before the doctor could reach his house. A hypodermic of morphine relieved the pain, and strychnine and stimulants were freely given. I saw him about three o'clock that same afternoon and operated without delay. I made a large incision and found pus free in the peritoneal cavity. Thinking it might not be distributed very widely I did not irrigate, but introduced strips of gauze in various directions for the purpose of drainage. Much to our surprise he rallied well, and after four or five days had a good appetite and was free from pain and fever, and his bowels moved regularly under the use of epsom salts. All went on well for nearly two weeks when he began to vomit and rapidly sank and died. I did not see him after the operation, and Dr. Lockhart was unable to secure an autopsy.

CASE IV.—This was the third fatal case and presented no difficulty whatever in the operation. The patient was a lady 36 years old, and she had been suffering from short attacks of acute pain in the region of the appendix for eleven years, and had frequently importuned me to operate on her, but as the attacks were short and did not seem to endanger life I had allowed the case to go on under palliative treatment. Her life was finally rendered so miserable I decided to try and relieve her. There was a tender place always present at McBurney's point. The appendix was found without trouble or delay and was removed in the usual way by tying off the meso appendix, turning back a cuff of peritoneum and sewing this cuff over the stump of the appendix after it had been tied, amputated and disinfected with pure carbolic acid. She suffered from nausea and pain extending up towards her right shoulder for the first twenty-four hours. The second night she rested fairly well, but towards morning pulse became very frequent and small, her respiration hurried and laborious, and she sank rapidly and died fifty-six hours after the operation. The color of her lips remained good to the end, nothing could be

detected wrong in the chest, or indeed anywhere to account for her death. She had suffered so many years from the attacks of pain and from loss of rest, and also from the indigestion usually seen in these chronic cases that these may have made her an easy prey to any surgical operation. She had taken chloroform a couple of years before her death to have some teeth extracted, and was much prostrated and ill for several hours after. The appendix was bent on itself and was hard, like fibrous tissue. It contained no foreign body, but its lumen was obliterated in two places. There was no tympanitis after the operation, and no evidence of hemorrhage. I have always felt at a loss to account for her death.

CASE V.—Mrs. M., aged 30 years; has had two children, and at the time of her attack was pregnant four months. She had felt a pain in the right iliac region for ten days, but had continued to do some work about the house every day. On the morning of the tenth day, while sweeping the floor, she was suddenly seized with violent pain in the abdomen and sank to the floor. She was lifted into bed and Drs. Wright and Millen, of Wheatley, were called to see her. She was given a hypodermic injection of morphine and was kept very quiet. Dr. Wright, who sent for me, thought it a case of ruptured tubal pregnancy, and as no history of the case could be obtained that threw any light on the attack, this conclusion seemed a reasonable one. I arrived at the patient's house at four o'clock in the afternoon, and about eight hours after the sudden seizure. Her temperature was normal with her pulse 140. She was perfectly quiet from the morphine. The abdomen, which had been larger on the right side in the morning when Dr. Wright arrived, was uniform in appearance when I saw her, and there could be detected distinct fluctuation from fluid that was evenly distributed as she lay in the dorsal position. Uncertain as to the nature of the case it was decided to open the abdomen below the umbilicus, in the median line. As soon as the peritoneum was opened a copious flow of thin watery pus poured out of the wound. I now poured in warm sterilized water at a temperature of about 110° and continued to do so until it returned perfectly clear. I thought it was a suppurating ovarian cyst that had ruptured, but on enlarging the incision I soon found the appendix and brought it out of the wound. It was doubled on itself like a closed pocket knife, and the surface on one side was of an ashy color, as if it had been touched with solid nitrate of silver. I tied it close to the cecum, cut it off, cauterized the end of the stump with pure carbolic acid, closed the abdominal wound and left a glass drainage tube which reached into the pelvis. The uterus was seen extending above the pubes and was of a deep red color and quite soft. To my great surprise and delight this patient made an excellent recovery. The operation was performed on Saturday

afternoon, and on Monday evening Dr. Wright removed the drainage tube, and there was no further trouble. She did not abort, but was delivered at full term of a healthy child. The appendix, which I here exhibit, will be seen to be doubled on itself so that its sides lie parallel and in direct contact.

CASE VI.—W. F., a young man 18 years of age, was sent to me by Dr. Hird, of Wallaceburgh. He had been ill a week, and as his condition was not alarming I gave him saline cathartics and secured a free evacuation of the bowels. From this time his pulse improved, his temperature fell and the pain was less severe. The hardness about the appendix however, remained, and at the end of the second week of the attack I operated. The lower end of the cecum was firmly bound down to the back of the abdominal cavity by firm adhesions, and while I succeeded in finding the distal end of the appendix I could not bring the whole organ into view. While holding the distal end of the appendix with one hand and trying to separate the adhesions that bound the other end and the cecum down, the whole organ, or what I thought was the whole, separated and came away in my fingers. Deeming it unsafe to make any effort to find the stump, lest in doing so fecal matter would be driven out of the cecum into the abdominal cavity I quickly pushed a strip of gauze down to the place where the appendix had separated, packed it firmly in place and leaving the gauze with which I had previously packed off the intestines in position with the ends projecting from the incision I partially closed the abdominal wound. At the end of thirty-six hours I removed the whole of the gauze packing and replaced only the piece that had been introduced down to the end of the cecum. The wound closed completely in a couple of weeks and recovery was perfect. Some of the remaining thirty-nine who recovered after operation presented interesting features, but not sufficiently so to merit a record of their history, because it would make this paper too long without any compensating advantage.

Clinical Reports

Contributions are solicited for this department

ANENOEPHALUS.

BY GEORGE ELLIOTT, M.D., TORONTO.

Miss M. C., domestic, first presented herself for examination as to pregnancy in May, 1897, stating she had missed one menstruation period, and that she would be pleased to be returned to her normal condition. She was counselled to proceed to full term, which advice she very judiciously followed. After pursuing her domestic duties up to the middle of December, she removed to a maternity home, where she was delivered of an anencephalic monster on January 17th, 1898. Labor had been in progress fully twenty-four hours before she informed the nurse of her condition, and even after the rupture of the membranes and subsequent flow of waters, she had not thought fit to inform the attendant of the fact. It was only when the pains became severe that the nurse was instructed to call the physician. Abdominal palpation was first practised, and information gained that no solid body such as the head could be felt. On passing the finger into the vagina it first impinged on a kneec, which proved to be the right one. Further up and backwards, the left was next felt, and proceeding in the examination, the heels were found in close contact with the buttocks. The diagnosis revealed that the abdomen of the foetus was lying behind the left groin, and on passing the examining finger in this direction a soft piece of tissue was felt, which imparted sensation to the finger as though it were a piece of placenta. It was thought this might be the case, as there was considerable hemorrhage, more, in fact, than the attending physician had ever before experienced in normal labors. A portion of the cord could be felt far back, and, as there was no pulsation, the patient and nurse were advised to expect a still-birth. The feet were liberated and brought without the vulva, then the hands were palpated lying in either groin. They seemed rather large, but no suspicion aroused as to the true nature of the case. The buttocks were quite large, and occupied a good deal of time in their passage. After the birth of the buttocks, the whole foetus was immediately expelled, when it was noticed that the product of conception was a "frog" fetus—an anencephalic monster. There was a defect in closure of the abdomen around the umbilicus to the extent of two by three inches, which accounted for the peculiar body felt by the examining finger behind the left groin. There was also double talipes varus.

As regards the family history of the patient, her mother had, so she says, three paralytic strokes, two, the patient affirmed, before she (the patient) was born. So far as she knew, the rest of the family history proved negative. The father of the monstrosity was strong and healthy, and of good physique; no deformities. The patient herself had to do heavy domestic work all her life, and even up to within a month of her confinement. During her pregnancy she had three or four bad frights, one in particular scaring her very much when she was about three months pregnant. She was not told that she had been delivered of anything but an ordinary child, dead. The patient was strong and robust, weighing about 150 lbs.

The anencephali are the most common of all forms of monsters, one usually falling to the lot of every practitioner during his lifetime. Puech estimates that they occur about 14 in 100,000, *i.e.*, one to 7,143.

A STRANGE CASE OF EXFOLIATION.

BY L. H. MARKS, INDIANA.
First Assistant Surgeon National Military Home.

The case which I am about to describe is a very interesting one, and one which is seldom met with. It is peculiar, inasmuch as it presents a feature so entirely different from the ordinary, every-day case of alcoholism.

Treatises on medicine and text-books on surgery do not reveal the much-desired information concerning these cases, and thus we are compelled to resort to empiricism in their management.

These anomalies, however, tend to stimulate research, the results of which are being rapidly shown by the improved methods and treatment of to-day.

The previous history of this case is negative, no similar train of symptoms having occurred before September 30th, 1898, although the patient had been an habitual consumer of alcoholic beverages.

Wm. W—, age 69, was admitted to the hospital on September 28th, 1898, suffering from sub-acute alcoholism. His temperature stood at 102°, pulse rate 100, respirations 22.

The following symptoms were present: Nervous—Tremor, restlessness, irritability, insomnia. Digestive—Tongue coated, breath foul, nausea, anorexia, bowels constipated. Urinary—Urine scanty and highly colored.

He was immediately given a course of alteratives and salines and placed on a milk diet. Bromides were given to allay restlessness. Quinine was also administered.

On the 30th inst. the whole surface of the body became erythematous. The rash was universally diffused, and resembled scarlatina. Patient states that it first appeared on the flexor surfaces of his fore-arms, afterward spreading over the whole body. On firm pressure the parts scarcely showed any change of color when the fingers were removed.

On October 2nd exfoliation began on the chest, and continued until the whole body had been denuded of its epidermal covering. The ears, nose and scalp were also affected.

Complete casts of the palmar surface of the hand and plantar surface of the foot were removed. By the 16th inst. the exfoliation was complete, and sedative ointments were applied to relieve the sensitive surface.

The temperature became normal on the sixth day after admission.

November 28th, 1898, patient was again sent to hospital on account of dissipation. Symptoms were analagous to those previously noted. Temperature reached 103° , and declined to normal in three days. December 7th the skin became hyperemic, and exfoliation began three days later. Pruritis was very annoying.

The third admittance took place on April 17th, 1899. Cause: Alcoholism. The nervous and gastric symptoms were again present, with slight variation. The temperature only reached 99.2° on this occasion.

The usual treatment was given, and exfoliation was completed by April 30th. Complete casts of both heels and the greater portion of one hand were secured.

Casts showed the usual markings. As to the etiology of this erythema and subsequent exfoliation, the only theory advanced, is that the vaso-constrictors in the vessel walls of the skin were temporarily paralyzed owing to loss of centric influence, the latter condition being due to excessive use of alcohol.

Prof. Anthony, of the Chicago Polyclinic, to whom casts were sent, stated that undoubtedly the case belonged to a scarlatinoid group, in which exfoliation of hands and feet occurred.

During the course of treatment the bromides of potassium, sodium and ammonium were used. These, if given in large doses, could not produce a rash similar to the one described.

Osler, Strümpel, Loomis, Tyson and Hughes make no mention of such a condition accompanying alcoholism.

[The casts of heels and hand will be exhibited at meeting of Canadian Medical Association.—E.D.]

Reports of Societies

LAMBTON MEDICAL ASSOCIATION.

The regular meeting was held in the town of Sarnia on July 12th. Present: Drs. Wilkinson (Pres.), Bentley, Henderson, Merrison, Pousette, McDonald, Fraser and Bell, of Sarnia; Fisher, Bridgen; Newell, Wyoming; Scott, Courtright; Hubbard, Forest; Newell, Watford; and Holmes, Chatham. After the transaction of routine business, Dr. T. K. Holmes, of Chatham, read an instructive paper on "The Treatment of Appendicitis." He took a conservative stand respecting operative procedure, and believed that by proper medicinal means, such as purgation, warm applications and rest, better results were obtained than by operating early. He discouraged the use of opium; operated in the interval after the urgency of the disease had abated, and in recurrent cases between the attacks. In the fulminant form he advocated early operation in order to save life, and even then the mortality would be high. The doctor reported a number of interesting cases in which he had operated. The discussion on the paper from the medical standpoint was opened by Dr. Fraser. He believed that one cause of appendicitis was the poison of rheumatism, which was relieved by salicylate of sodium. He thought the disease amenable to medical treatment in many cases, and had used opium in sufficient doses to ease the suffering, with benefit. When pus had formed he thought it would be judicious to wait till adhesions formed before evacuating, so as not to infect the general peritoneal cavity by manipulation. Dr. Bentley said his experience in the treatment was limited, but agreed with much that Dr. Fraser had said. Dr. James Newell, of Watford, led the discussion from the surgical standpoint. He said he did not believe every case should be operated on, irrespective of the symptoms. The surgical treatment was in a state of evolution, and the last word had not been said or written on this disease. Consequently, no absolute rule of treatment could be formulated. He still believed in the efficacy of medical means in many cases, but in the fulminant form and in cases in which the pulse ran high, from 110 up, he would operate without delay. He had seen cases in which there were pus and perforations of the appendix twenty-four hours after the onset of the attack. In the recurrent form operation was the only procedure. Dr. Wilkinson said he had some time ago operated in every case, but the mortality was so high he had become less radical and tried to carry his cases over the acute stage and then operate. By this method his success was much better. Recurrent cases should be operated on. He thought the surgical treatment would be much simplified when we were able to differentiate the

causes and recognize the particular germ that was the causative agent. The discussion was continued by several members.

Dr. Newell, of Wyoming, read an interesting article on "The Pneumonia of Children and its Treatment." The doctor said the disease was generally secondary in origin and was attended by a high mortality. Fresh air, maintenance of the circulation, and nutrition were insisted upon as a *sine qua non*. Did not believe in poultices and had discarded the use of expectorants. He thought small doses of grey powder advisable. Dr. Merrison, in opening the discussion, would dissent from the reader of the paper regarding the high mortality. Few of his cases were secondary and the mortality was low. He used poultices at the start. Quinine and ammon. carb. had given good results. Dr. James Newell advocated pure, fresh air (open the doors or windows), reduction of high temperature by cold baths. Envelop the chest in a cotton-wool jacket and give nutritious food. He thought he had seen good results from quinine. Dr. Fraser said this was a disease that was generally secondary and was attended by a high mortality. Dr. Holmes did not believe in the cotton-wool jacket. When you have opened the bowels by a purge, such as castor oil, reduced the temperature by the cold water bath and given nutritious food, you have done about all that can be done to promote recovery. Irrespective of treatment a high mortality obtained. He had used cold baths in all cases of high temperature in children, irrespective of the cause, since 1875 and with good results. The next meeting of the association will be held in Petrolia, on the second Wednesday of October, at 2 p.m.

HURON MEDICAL ASSOCIATION.

The meeting of this association was held in the Council Chamber, Clinton, on Wednesday, July 12th, at 1.30 p.m. Dr. A. F. McKenzie, President, in the chair.

Dr. Bryce, Secretary of the Provincial Board of Health, presented a paper on "Tuberculosis in Ontario and the Relations of Medical Men as regards Treatment and Prevention."

Short addresses were given in connection, viz.: "Clinical Diagnosis in Early Stages," Dr. Smith; "Hygienic Home Treatment," Dr. Robertson; "Tubercular Peritonitis," Dr. McGinnis; "Prevalence of Disease in Cattle," Dr. Shaw; "Diagnosis of Tubercular Meningitis," Dr. McKay; "Glandular Tuberculosis," Dr. McCallum; "Influence of Heredity," Dr. Bethune; "Climatic Treatment," Dr. Taylor; "Medicinal Treatment," Dr. Shannon; "Legislation," Dr. Graham; "Guinea-Pig Test and Tube Cultures," Dr. Deacon; "Staining of Bacilli," Dr. Gunn.

Members also exhibited pathological specimens and patients with interesting features of the disease.

Goderich.

A. G. HUNTER, *Secretary*.

Special Selections.

ON THE PHYSIOLOGICAL ACTION OF CHOLINE AND NEURINE.*

BY F. W. MOTT, M.D., F.R.S., Pathologist to the London County Asylums ;
and W. D. HALLIBURTON, M.D., F.R.S., Prof. of Physiology,
King's College, London.

The cerebro-spinal fluid removed from cases of brain atrophy, particularly from cases of general paralysis of the insane, produces, when injected into the circulation of anaesthetised animals (dogs, cats, rabbits), a fall of arterial blood pressure, with little or no effect on respiration. This pathological fluid is richer in proteid matter than the normal fluid, and among the proteids, nucleo-proteid is present. The fall of blood pressure is, however, due not to proteid, nor to inorganic constituents, but to an organic substance which is soluble in alcohol. This substance is precipitable by phosphotungstic acid, and by chemical methods was identified as choline. The crystals of the platinum double salt, which, when crystallised from 15 per cent. alcohol, are characteristic octahedra, form the most convenient test for the separation and identification of this base.

The nucleo-proteid and choline doubtless originate from the disintegration of the brain tissue, and their presence indicates that possibly some of the symptoms of general paralysis may be due to auto-intoxication; these substances pass into the blood, for the cerebro-spinal fluid functions, as the lymph of the central nervous system. We have identified choline in the blood removed by venesection from these patients during the convulsive seizures which form a prominent symptom in the disease.

Normal cerebro-spinal fluid does not contain nucleo-proteid or choline, or if these substances are present, their amount is so small that they cannot be identified. Normal cerebro-spinal fluid produces no effect on arterial pressure; neither does the alcoholic extract of normal blood or of ordinary dropsical effusions.

The presence of choline in the pathological fluids will not explain the symptoms of general paralysis; for instance, it will not account for the fits just referred to. Its presence, however, is an indication that an acute disintegration of the cerebral tissues has occurred. If other poisonous substances are also present, they have still to be discovered.

* Abstract of a paper read before the Royal Society on April 20th, 1899.

Our proof that the toxic material we have specially worked with is choline rests not only on chemical tests, but also on the evidence afforded by physiological experiments; the action of the cerebro-spinal substance exactly resembles that of choline. Neurine, an alkaloid closely related to choline, is not present in the fluid; its toxic action is much more powerful, and its effects differ considerably from those of choline.

PHYSIOLOGICAL ACTION ON CHOLINE.

The doses employed were from 1 to 10 c.cm. of a 0.2 per cent. solution, either of choline or of its hydrochloride. These were injected intravenously. The fall of blood pressure is in some measure due to its action on the heart, but is mainly produced by dilatation of the peripheral vessels, especially in the intestinal area. This was demonstrated by the use of an intestinal oncometer. The limbs and kidneys are somewhat lessened in volume; this appears to be a passive effect, secondary to the fall in general blood pressure. The drug causes a marked contraction of the spleen, followed by an exaggeration of the normal curves, due to the alternate systole and diastole of that organ.

The action on the splanchnic vessels is due to the direct action of the base on the neuro-muscular mechanism of the blood vessels themselves; for after the influence of the central nervous system has been removed by section of the spinal cord, or of the splanchnic nerves, choline still causes the typical fall of blood pressure. The action of peripheral ganglia was in other experiments excluded by previous intravenous injection of a solution of nicotine.

Section of the vagi produces no effect on the results of injecting choline. We have obtained no evidence of any direct action of the base on the cerebral vessels. Choline has little or no action on nerve trunks, as tested by their electrical response to stimulation. This aspect of the subject has been taken up by Dr. Waller and Miss Sowton, who will publish their results fully in a separate paper. Choline has no effect on respiration.

The effect of choline soon passes off, and the blood pressure returns to its previous level. This is due partly to the great dilution of the substance injected by the whole volume of the blood, and may be partly due to the excretion of the alkaloid, or to its being broken up into simpler substances by metabolic processes. We could not find it in the urine.

If the animal has been given a hypodermic injection of morphine and atropine prior to the administration of the ether or A.C.E. mixture, the effect produced by choline is a rise of arterial pressure, accompanied by a rise of the lever of the intestinal oncometer. We consider this observation of some importance, for it shows how the action of one poison may be modified by the

presence of another. This has some bearing on general paralysis, for the arterial tension in that disease is usually high, not low, as it would be if choline were the only toxic agent at work.

PHYSIOLOGICAL ACTION OF NEURINE.

The doses employed varied from 1 to 5 c.cm. of a 0.1 per cent. solution. These were injected intravenously.

Neurine produces a fall of arterial pressure, followed by a marked rise, and a subsequent fall to the normal level. Sometimes, especially with small doses, the preliminary fall may be absent. Sometimes, especially with large doses, by which presumably the heart is more profoundly affected, the rise is absent. The effect of neurine on the heart of both frog and mammal is much more marked than is the case with choline; in the case of both choline and neurine, the action on the frog's heart is antagonized by atropine.

The slowing and weakening of the heart appear to account for the preliminary fall of blood pressure; in some cases this is apparently combined with a direct dilating influence on the peripheral vessels. The rise of blood pressure, which occurs after the fall, is due to the constriction of the peripheral vessels, evidence of which we have obtained by the use of oncometers for intestine, spleen, and kidney. After the influence of the central nervous system has been removed by section of the spinal cord, or of the splanchnic nerves, neurine still produces its typical effects. After, however, the action of peripheral ganglia has been cut off by the use of nicotine, neurine produces only a fall of blood pressure. It therefore appears that the constriction of the vessels is due to the action of the drug on the ganglia; in this, it would agree with nicotine, coniine, and piperidine. Section of the vagi produces no influence on the results of injecting neurine. In animals anesthetized with morphine and atropine, injection of neurine causes only a rise of blood pressure, which is accompanied with constriction of peripheral vessels.

Neurine produces no direct results, so far as we could ascertain, on the cerebral blood vessels. Neurine is intensely toxic to nerve trunks (Dr. Waller and Miss Sowton). It produces a marked effect on the respiration. This is first greatly increased; but with each successive dose the effect is less, and ultimately the respiration becomes weaker and ceases altogether. The animal can still be kept alive by artificial respiration.

The exacerbation of respiratory movements will not account for the rise of arterial pressure; the two events are usually not synchronous, and an intense rise of arterial pressure—due, as previously stated, to contraction of peripheral blood vessels—may occur when there is little or no increase of respiratory activity, or during artificial respiration.

As confirmatory of Cervello's statement that neurine acts like curare on the nerve endings of voluntary muscle, and to which he attributes the cessation of respiration, we may mention that after an animal has been poisoned with neurine, asphyxiation causes little or none of the usual convulsions.

The full paper contains references to previous work on the subject, and complete details of the methods used, and the cases investigated; it is illustrated by reproductions of numerous tracings.

[*Note added April 20th, 1899.*—It should be mentioned that in the case of brain atrophy referred to the cerebro-spinal fluid was removed soon after death. Since the foregoing abstract was written we have, however, by the kindness of Dr. Turner, had the opportunity of examining two specimens removed during life by lumbar puncture, and the results of our experiments with: these corroborate the conclusions previously arrived at.]—*B. M. J.*

HYDROTHERAPY IN TYPHOID FEVER.—Prof. H. A. Hare, in an admirably classical paper on "Some Facts Concerning the Treatment and Medical Complications of Typhoid Fever," in the initial number of the *American Medical Quarterly* delivers himself as follows: "The next point that I wish to take up deals with the question of what should be the proper treatment of the average case of typhoid fever. In the paper that I have already quoted—a paper read before the Collège of Physicians, Philadelphia, thirteen months ago—I protested against the use of the cold plunge bath in every case of typhoid fever which came into the physician's hands, first, on the ground that routine treatment was never rational; and, second, because a certain proportion of patients present contra-indications to its use which are absolute, and a still larger class can be treated by properly modified hydrotherapy with excellent results. In making this statement I am well aware that I am doing a dangerous thing, first, because a number of men, eminent in the medical profession, have given their support to the universal employment of the cold bath; and, second, because there is a possibility that my own position in this matter may be misunderstood. In other words, it may be that a careless reader may think that because I do not use the bath in every case, I do not use it in any case. This is exactly the opposite of the view which I wish to leave with my readers. As firmly as I believe that the plunge bath is not for every one, so do I believe that in some cases it is the best and only thing that can be employed with advantage. I also wish to insist upon the fact that while the disease has decreased in mortality independent of such

treatment, that hydrotherapy has saved a great number of lives, and if properly employed will continue to do so. The important points for the physician to decide when treating any case of disease are, first, the remedy which is needed; and, second, its dose. In the opinion of those who have the largest experience, hydrotherapy is needed in every case of typhoid, and with this view I most heartily concur. When it comes to the question of dosage my point of view differs from that of some others. I believe that the mode of applying cold should be varied to the needs of the individual patient, and I have yet to see a case in which I have regretted the employment of the modified plunge bath. What, then, are the modifications that I would suggest? First, the use of cold applied to the body of the patient, who is stripped and who lies upon his bed while the nurse gives him the necessary friction and massage. The water is to be varied in its temperature according to the persistency and degree of the fever. If the patient suffers from marked hyperesthesia of the skin, so that the cold and the rubbing make him actually wretched, the first so-called spongings may be made with water at 70 degrees; later, ice-water may be employed, or, if the fever is high and persistent, a piece of ice may be rubbed over the body instead of the use of water itself. In other words, the dose of cold varies with the needs of the individual. It is of vital importance that the nurse who employs this modified bath treatment should be trained to her duties. I constantly meet with nurses who conscientiously attempt to carry out my wishes without previous training, but who practically never succeed in reducing the temperature more than a degree when using the plan that I have mentioned. As soon as I place a trained nurse in charge of a case I am able almost without exception to reduce the temperature many degrees, and I can exhibit several charts which are not peculiar instances of the efficiency of this method, but are simply samples taken from a number of others. During the past three months I have had sixty-four cases of typhoid fever under my care, every one of these requiring hydrotherapy; in only two has the persistency of the fever necessitated the use of the cold plunge, and in both of these by a curious coincidence, and I do not consider it any more than a coincidence, hemorrhage from the bowel at once occurred. You will notice that almost without exception the temperature under this form of cold falls from two to four and six or even eight degrees, proving two points: first, that if this form of cold is properly applied it reduces the temperature satisfactorily and produces a good reaction; and, second, these charts illustrate the fact that if such a fall of temperature can be produced by mild means, why should we resort to labor, the exhaustion and the excessive effect of an actual plunge. I am firmly of belief that the actual rubbing which

accompanies the use of cold in the way that I have described, is of great advantage to the patient, because I believe that a gentle massage given to patients suffering from typhoid fever, and who are practically taking the rest cure, is an exceedingly useful thing for the maintenance of health ; second, because by these frictions we increase reaction ; and, third, as has been proved by Popischill, friction increases the loss of heat 80 per cent., and according to Weisroch, the loss of moisture through the skin, 50 per cent. There is only one thing that can be urged against this modified form of hydrotherapy which cannot be urged against the cold plunge, and that is unless it is given properly it does not reduce the fever in the way in which the cold plunge necessarily reduces it ; but let it be remembered that any remedy which is powerful for good is equally powerful for harm, and that the cold plunge cannot be used carelessly or without attention to detail any more than can the cold and friction which I have named. Whenever a physician tells me that he is unable to lower the temperature by friction and cold without the plunge, I am confident that it is because the method has not been properly employed, for only rarely is the fever so persistent as to fail to drop. Very great differences are to be found in different patients in respect to the persistency of high fever under the application of hydrotherapy. In some instances active bathing serves to reduce the fever but slightly, in others moderate measures produce the marked effect. As an illustration of the great fall produced by sponging with ice-water for twenty minutes, with active friction, I may make reference to one of my recent cases in which the chart showed that as great a fall as eight degrees occurred. One is tempted to inquire how low it would have fallen had the routine method of plunging every patient sick with typhoid fever been instituted. Yet the patient was an unusually heavily built, stalwart lad of twenty years, well nourished and in good condition for bathing. Further, he came under my care on the third day of his illness. Of course in the early stages of typhoid it is a well-known fact that the fever is peculiarly resistant, not only to cold frictions, but also to the plunge itself."

SUDORAL TYPHOID.—Jaccoud devotes a clinical lecture (*Journ. de Méd.*), to the diagnosis of a particular form of typhoid which is of somewhat rare occurrence, and which presents many exceptional features. The case was that of a man aged 26, admitted into the hospital on the fourth day of an acute illness which had begun suddenly, apparently, without prodroma by repeated rigors, intense headache, and general cramp. The next day the pyrexia continued, together with sore throat and diarrhea. On the third day

there was considerable cough and dyspnea ; on the fourth day the evening temperature reached 39.8° C. ; the diarrhea continued, and auscultation showed the presence of general bronchitis. On admission the appearance of the patient was that of some severe illness. There were large red patches of a uniform character over the upper part of the trunk and the sides of the neck, as well as some very small raised papules, strongly suggestive of scarlet fever, and taking into consideration the sore throat one had to consider this diagnosis. On the other hand, by the sixth day, it was quite evident from the course of the temperature that the scarlatinal element could be eliminated. The diagnosis, according to the author, lay between typhoid fever and a severe form of influenza ; but Jaccoud decided that the former was the correct diagnosis, basing his opinion on the fact that when he examined the patient he observed a clammy sweat, though at the same time the temperature was lowered. This same writer drew attention on a former occasion to this particular group of symptoms occurring in some cases of typhoid, namely, sweating. This case also showed large red livid patches, some being hemorrhagic, in the gluteal region, and it must be borne in mind that such an eruption is not unknown in influenza, especially in certain epidemics ; but in the form of typhoid under consideration the remission in the temperature was coexistent with an aggravation of the general state of the patient, and the appearance of sweats could not be attributed to influenza. This remission of temperature was a point of considerable importance in Jaccoud's opinion, as indicating typhoid. There were, however, in this particular case some anomalous symptoms wherein the case differed from others described by the author. For instance, the early appearance of bronchitis on the fourth day, a phenomenon which is usually much later and only slight in amount, while the sweats appeared late—about the fifth or sixth day instead of the first or second—and that they maintained their intensity instead of decreasing, as is usually observed. Another somewhat unusual character was the marbled appearance of the skin of the thighs and abdomen, which showed lines of a somewhat intense red, crossing one another in the form of a network. In the case under consideration the diagnosis was supported by the subsequent events, as there were intense cephalic symptoms, intestinal hemorrhage, etc. As pointed out by Jaccoud, in 1884, this particular form of typhoid is indigenous in Southern Italy. Its incubation is of about ten days' duration, and hence it is occasionally imported to Paris. The writer, however, points out that there is a Parisian imitation of the disease, which in point of fact is liable to show certain anomalies very much as is described above. In the typical form the invasion is absolutely sudden in that a single and prolonged rigor with a rapid rise in temperature, and followed by an

abundant and prolonged stage of sweating. The temperature then falls to normal, but without any amelioration in the patient's condition. There is, on the contrary, an intensely severe headache which prevents sleep, and lasts about a week. On the second day there is a similar attack of pyrexia, and the face often presents the appearance of measles, a fact which, if unknown to the medical attendant, may cause an error in diagnosis, as it so closely resembles that disease and also typhus. In this way four or five days may pass with intermittence of pyrexia followed by remittent temperature, together with intense perspiration. Later on, the bronchitic and abdominal phenomena of a more purely enteric character appear, together with the typhoid exanthem. It is a curious fact, however, that constipation rather than diarrhea is a feature in these cases. Intestinal hemorrhage is common, but as a rule not severe. The duration of these cases is as a rule long—fifty, sixty, or even ninety days—and the prognosis is, usually speaking, favorable. From this description it will be seen that the diagnosis of malaria is, perhaps, that which, of all others, may occur first to one's mind, especially in persons coming from certain parts of Italy. The administration of quinine, however, in such cases, is without the least effect, and should it have been prescribed on a mistaken assumption that the case is malarial, the fact of its being inefficacious should call for a reconsideration of the case. The author points out that the only treatment for such cases is one of general principles, as there is nothing that calls for any special method.—*B. M. J.*

SUPRA-ARTERIAL EPICARDIAL FIBROID NODULES.—As the result of a histological study of five cases presenting multiple grayish-white, fibroid nodules situated in the epicardium directly over branches of the coronary arteries of the heart, Knox (*Journal of Experimental Medicine*, vol. iv., No. 2, p. 245) reaches the conclusion that such nodules are not uncommon. They may be present in large numbers and are found most frequently upon the surface of the ventricles, although they may occur upon the auricles and even on the outer surface of the ascending aorta. They are rarely observed over the coronary veins. While often resembling in gross and superficial appearances the nodules described by various writers under the name of periarteritis nodosa, they differ from these in several essential respects. They are seated outside of the adventitial coat and lie within the epicardium. They are composed of dense, fibrous, sclerotic tissue, poor in cells. In the earlier stages of their formation they are richer in cells, both fibroblasts and lymphoid cells. These supra-arterial bodies bear no definite relation to endarteritis, although they may be associated with this

condition. There were found with great regularity in the arterial wall, immediately beneath the nodule, changes that indicated a weakening of the wall in this situation. In some instances the muscular wall coat was thinned and degenerated; but the most common and important change was reduction and often disappearance of the elastic lamellæ and fibres, the outer elastic lamella being the one most frequently and intensely affected. These lesions were often limited to the segment of the arterial wall adjacent to the epicardium, the inner or myocardial segment of the same artery being free from similar alterations, or presenting them only in a slight degree. It is suggested that the absence of the outer or epicardial segment of the firm support afforded to the artery on the inner or myocardial aspect by the surrounding tissues renders the former more liable to damage of its elastic tissue, resulting from irregularities and increase of blood-pressure, associated, perhaps, with defects of nutrition. In consequence of the weakening of the arterial wall the artery would tend to bulge at the affected spot toward the epicardium were this tendency not restrained. The formation of the dense supra-arterial nodule of fibrous tissue over the weakened area holds this tendency in check and may therefore be regarded as an adaptive or compensatory change. The question as to the immediate exciting cause of the new growth of tissue offers the same difficulties as that pertaining in general to similar growths of connective tissue. Some would doubtless attribute it to direct stimulation from the pressure and shock of the impinging artery, others to defects in the tissue, and still others to a disturbance of the neighborhood relations of the parts.—*Medical Record.*

MALT SOUP FOR INFANTS.—Gregor (*Jahrb. f. Kinderheil*) summarizes his experiences of malt soup in the feeding of infants at the clinic in Breslau during the last year and a half. The cases selected were mostly those in which former methods of treatment had failed. Chronic intestinal catarrh formed the largest proportion of cases in which malt soup was administered. Gärtner's fat milk and Backhaus's "Kindermilch" were first given a fair trial. Malt soup consists of (1) unboiled milk, derived from the first milking in the morning; (2) flour, (3) Löflund's malt extract, (4) and an 11 per cent. solution of purified carbonate of potash. The soup is made in enamelled saucepans holding from eight to ten litres, every litre of soup should have two-thirds of a litre of water at a temperature of 50° to 60° C. added to it. Malt extract, 100 grammes, and 10 c.cm. of the potassium carbonate solution should be mixed together. At the same time 50 grammes of flour should be added to one-third part of milk; this must be stirred

until the consistency equals that formed by the previous solution. This is next passed through a fine sieve, and the whole well mixed. The soup is then boiled. It takes from six to ten minutes to raise one litre of soup (the daily supply for a child) from 50° to boiling point; eight to ten litres would take twenty to thirty minutes. In order to avoid excessive boiling the soup is taken off the fire when the temperature reaches 94° C. When ready for use the soup is of a thin, watery consistence, greyish brown in color. It has a sweetish taste, and gives an alkaline reaction with litmus paper. The soup is kept in sterilised air-tight bottles; the daily allowance varies from 600 to 900 c.cm. In order to prevent the development of bacteria which may have found their way into the soup during the necessary manipulations, the bottles, immediately after being filled, are plunged into iced water. Any bacterial invasion is at once indicated by a bitter taste in the food, and the reaction becomes either neutral or faintly acid. The mothers are instructed always to test the soup with litmus paper before feeding the child. If red litmus paper does not turn blue the food is at once thrown away. The soup seldom turns sour even in the hot months of July and August. In the case of young weakly children from one and a half to three month old, it is often found necessary to reduce the amount of malt and flour. In children from three-fourths to one and one-fourth year old, instead of one-third milk to two-thirds water, equal parts of milk and malt soup can be given with excellent results. It is found necessary in these cases to reduce the flour to thirty grammes, or else the soup gets too thick. In cases where watery and frequent stools occur, but where the body weight remains unaltered, a reduction of the malt and flour is necessary for a time. Rickety children have been very successfully treated with malt soup combined with green vegetables or oatmeal.—*Brit. Med. Jour.*

THE DIAGNOSIS AND MANAGEMENT OF PLEURISY WITH EFFUSION.—At the recent meeting of the Medical Society, of New Jersey, Dr. Louis Faugeres, Bishop of New York, read a paper with this title, of which the following is an abstract: In all chest diseases it was a safe rule to make examinations at short intervals with a special view to determine, by exclusion, the presence or absence of pleuritic effusion. The cause of the effusion might be in the pleura itself, or result from other conditions giving rise to dropsy in other parts of the body. Cardiac disease did not usually cause effusion until the kidneys had become involved, either by congestion or inflammation. The pleura seemed better able than the peritoneum to take care of itself after the first attack of inflammation. The importance of a pleuritic effusion depended

primarily upon the amount. The diagnosis of fluid in the pleural cavity depended upon its physical characteristics as compared with those of the surrounding tissues. Of all the physical signs, flatness on percussion was the most constant, but the sensation of resistance conveyed to the percussion finger was also an important indication. According to his experience, bronchial breathing was as often found as the absence of breath-sounds, and the percussion note was often tympanitic instead of flat. When the breath-sounds were not absent they had a peculiar character of their own. The advantages of the exploratory puncture were those of a certain means of diagnosis; the danger was from septic infection. The pain of making the puncture was trifling if the needle was introduced with a steady thrust. The dry-diet theory of treatment the speaker likened to a tank of water placed on a bank of a stream; the stream was ready to receive the water in the tank at any time that it might be set free, but no amount of dredging of the stream or changing its volume would have any effect on the water in the tank. The first thing to insist upon was absolute rest and a moderate diet; the next thing was to sustain the heart's action. The close connection of the pleura with the nervous system was sometimes strikingly illustrated in individual cases. Owing to the mechanical conditions present in the thorax it was possible to remove the fluid, even though the puncture happened to be made above the level of the fluid. Of all the devices for aspiration he preferred the Dieulafoy instrument, and used with this a trocar about the size of a knitting-needle. The point of election for the puncture was two inches below the lower angle of the scapula. It was a good plan to explore with fine needle before introducing the larger instrument. As there was always danger of syncope a stimulant should be administered just before performing thoracentesis.

THE EARLY DIAGNOSIS OF PREGNANCY.—Richard v. Braun-Fernwald (*Wien. klin. Woch.*), after discussing the value of the different signs of pregnancy, decides that Hubl's sign is the most reliable hitherto described. This consists in an abnormal thinness, softness, and compressiveness of the lower segment of the uterus to that part above the insertion of the sacro-uterine ligaments, the bimanual examination being carried out with one finger in the rectum. Even with this sign pregnancy can rarely be diagnosed before the end of the second month. Considering the importance of being able to do so, the writer has been investigating the subject in G. Braun's clinic since 1894. He finds that the most important early sign of pregnancy is a change, not only in the consistence, but also in the shape of the body of the uterus,

one side being thicker than the other. So early as the end of the first month one side may be double as thick as the other. For descriptive purposes the writer names the two unequal divisions "horns," though this is not the usual meaning of the word. Not only is the one "horn" thicker and more prominent than the other, but it is softer, the smaller one generally having a consistence approaching that of the non-pregnant uterus. The soft prominent "horn" encroaches on the smaller beyond the middle line, and at the junction of the two there is a distinct longitudinal groove; at the same time the fundus often appears to be saddle-shaped, the shallow depression lying nearer the smaller "horn." A bimanual examination is required, and it is recommended that two fingers should be in the vagina and be held as widely separated as possible, so that one rests on the larger, the other on the smaller "horn." The most probable explanation of the inequality in the two halves of the uterus is that the ovum usually becomes fixed more on one side than on the other, in which case the sulcus would correspond to the margin of the ovum, though it may be possibly a phenomenon caused by uterine contraction. The inequality is so striking that the larger "horn" may be mistaken by the inexperienced for a small myoma. The writer has diagnosed a number of cases by this sign, and has proved that he was correct by keeping them under observation. With practice he claims that pregnancy can be diagnosed early with a great degree of certainty. The earliest time either he or his colleague, Hübl, made a correct diagnosis by this sign was three days after one period had been missed. By this sign also it is possible to make sure, when hemorrhage has occurred in the early months of pregnancy, whether abortion has taken place or not. If the sign is positive, the ovum is still there; if negative, it has escaped. Its absence, when other signs clearly point to pregnancy, would point to the probability of extrauterine fetation.—*B. M. J.*

TUBERCULOSIS OF THE MAMMARY GLAND.—Halsted and Le Count (*Annals of Surgery*) report a case of mammary tuberculosis, and give a detailed review of the literature relating to this disease, from the first description of it by Astley Cooper to a paper published by Ferguson, of Chicago, in 1898. Tuberculosis of the breast is met with in one or other of two forms—the disseminated nodular or discrete, and the confluent, form. The most characteristic features of the disseminated nodular form of the disease are the extreme chronicity of the process, and its painless and insidious development, whilst the confluent form is marked by a more acute onset, greater pain, and rapid enlargement of the breast. This latter type of the disease is more common than the dissemi-

nated nodular form. In about 75 per cent. of cases it is associated with tuberculous enlargement of the corresponding axillary glands. In many instances the mammary disease was regarded as secondary to the gland affection, but the authors hold that the primary focus in the breast often escapes notice until after the axillary glands have become considerably involved. As in other forms of tuberculosis, softening and suppuration with the formation of fistulæ is the natural and frequent termination of both types of this mammary disease. Spontaneous healing of tuberculous foci in the gland before suppuration takes place seldom, if ever, occurs; and after the cavities have discharged their contents, it is only in exceptional cases that healing follows. The diagnosis of mammary tuberculosis is usually difficult, except in cases in which the disease in the breast is far advanced, or in those in which other organs of the body are the seat of tuberculous disease. In all cases, it is pointed out, a microscopic examination should be made, and the diagnosis based only on the minute structure of the growth or upon the presence of tubercle bacilli. In disseminated nodular or confluent tuberculosis of the mammary gland, early removal of the breast and corresponding axillary glands offers the greatest hope for a speedy and permanent cure. Nothing short of this can assure an eradication of the disease, and the prognosis of such treatment, when the mammary disease is primary, the authors regard as excellent. In secondary tuberculosis of the gland the prognosis of course, depends upon the seat and extent of the primary lesion. In the discrete nodular form, where the disease is limited to a single focus, the remaining portion of the gland being apparently normal, the removal of the nodule with the adjacent gland tissue will be sufficient, provided the patient can be kept under observation for some time after the operation.—*Brit. Med. Jour.*

THE UNTOWARD EFFECTS OF DRUGS.—George F. Butler (*Medicine*) says practitioners are too apt to refer any untoward effects produced by drugs to defects or impurities. Predictions may be made with considerable accuracy as to such effects in regard to any particular drug from a knowledge of its action, of the organs chiefly affected by the ordinary action of the drug and the methods of drug excretion. An antipyretic will have, as untoward effects, skin eruptions because it is excreted through the skin; because the skin through its pores regulates temperature, and hence is under the control of the central nervous system, regulating temperature; and finally because the skin is in close connection from an early period with the nervous system. For the same reason profuse debilitating perspiration often results. Since control of the

temperature cannot be effected without control of the vasomotor system regulating the blood supply, heart failure, collapse, and palpitation may result, together with certain eye and ear symptoms. If the drug is one which tends to cause slight brain vasomotor disturbance, such as results from what is known as a tonic action, then delirium, blindness and deafness of a temporary character are produced. Temperature in the human subject is regulated by the three systems of nerves: thermotaxic, or heat regulating, thermo-excitatory, or heat increasing, and thermo-inhibitory, or heat decreasing. As a more or less exact balance is kept by these centres, undue action of any of them constitutes a morbid state. If the thermo-inhibitory centres are too much stimulated they may lose their control; hence in certain individuals temperature rises from an antipyretic. The action on the heart may, by its influence on the kidney circulation, cause kidney and bladder symptoms, even to the extent of albumen in the urine. If the antipyretic is excreted through the kidneys, albuminuria is especially likely to present itself as an untoward result. Alteratives and purgatives produce hemorrhages from the mucous membranes, and edema of those of the organs of special sense, besides skin eruptions. Hypnotics, through their action on the central nervous system, produce excessive perspiration, skin eruptions, vertigo and heart collapse. Astringents cause diarrhea and bloody intestinal discharges. Diaphoretics cause pains at certain points from over stimulation. In classifying tonics and alteratives together the influence of the trophic nervous system, evident in the constitutional changes produced by diseases like typhoid fever, must be taken into account. Alterative drugs have much the same constitutional effect, according to the theory of their action now coming into general acceptance.—*Brit. Med. Jour.*

HYSTERICAL BLUE EDEMA.—D. C. Leon (*Thèse de Paris*, 1899, No. 173) recalls the fact that Sydenham drew attention to a peculiar character of hysterical edema, namely, that it often is hard, or, at all events, does not pit to pressure like the plastic edema of Bright's disease, etc. Charcot, in 1889, separated the blue edema from the white edema of hysterical persons. The former he regarded as a special variety of the latter, and as accompanied by a lowering of the local temperature, sometimes as much as 2 degrees to 5 degrees C. In a girl, aged 17, with hysterical contracture of the left foot, the lower part of the limb became swollen and cyanosed. This was accompanied by dryness and coldness of the skin of the affected part, and by spontaneous pains and hyperesthesia. The phenomena disappeared spontaneously after about a month, when the patient became affected with convulsive seizures. Later

on they reappeared for a time, though in a slighter form. In the case of another girl, aged 17, a surgeon, thinking that the fibula was diseased, made two long incisions; only a little blood, but no pus, came away, and afterwards undoubted hysterical phenomena manifested themselves. In a girl, aged 22, the fingers and back of one hand were affected, and there was anesthesia with some contracture. Charcot was also able to obtain an artificial "blue edema" by suggestion, and cause it to disappear in the same way. One of Charcot's typical cases was that of a sailor, and the affection undoubtedly, therefore, may occur in men though more rarely than in women. The extremity of a single limb (upper limb usually) is the part generally affected. There is, however an arthralgic form in which the region of a joint is chiefly affected. The hysterical mammary form is rarer and probably connected with an emotion or a special fixed idea. Sometimes the swelling has a sharply-defined margin above a segment of a limb, but more usually the transition from the edematous part to the unaffected part is gradual. Puncture of the affected region does not give rise to a great flow of lymph, as it usually does in cases of ordinary edema. Hysterical blue edema must be distinguished from acute inflammatory affections, and from Raynaud's disease and erythromelalgia of Weir-Mitchell. The treatment may be general (hydrotherapy) and local (massage electricity). Léon adds that, narrowly allied as the affection is to hysteria, it should be, and is in reality, benefited by suggestion. He describes the case of a girl, aged 17, where treatment by suggestion, disguised under the form of magnetism, seemed to have a decidedly beneficial action in removing the "blue edema."
—B. M. J.

"RETROPERITONEAL LYMPH CYST" OR PSOAS ABSCESS.—Strehl (*Deut. Zeit. f. Chir.*) brings forward a case of great interest in association with another published by Narath (*Langenbeck's Archiv.*, vol. 1), where a fluctuating tumor in the front of the thigh in a girl, aged 20, was termed a "retroperitoneal lymph cyst," on the strength of the facts that she was free from tubercle; that she showed no lameness and no evidence of spinal caries; that the clear fluid was like that seen in many cysts and not like pus, and that the cyst wall seemed made up of lymphatic tissue with granulation tissue and giant cells. A somewhat desperate operation was undertaken successfully. In order to reach the cyst wall the deep femoral artery and vein and the circumflexa ilii were divided and tied. The cavity reached well up under the crural arch to the lower lumbar vertebræ, and cords of soft tissues ran across it between opposite sides of the cyst. The patient recovered. Strehl's case was in a youth, aged 20. He had fallen on his right knee in February, 1896,

and it inflamed. He lay in hospital for five months with the knee extended. Notwithstanding appropriate treatment the knee never became normally movable. During this term of rest a swelling developed in the opposite thigh below the left groin. On the strength of the absence of any further evidence of spinal disease, and the belief that the inflammation of the right knee was purely traumatic, a Narath's "retroperitoneal lymph cyst" was diagnosed. Von Eiselsberg of Konigsberg made a vertical incision over the swelling. Over a pint and a half of clear fluid escaped. The inner wall of the cyst showed a cord passing across the cavity, and the operator found that the cavity passed under the crural arch high up into the pelvis. A sound could reach the level of the left kidney. The cyst was filled with iodoform glycerine, and closed. The fluid was clearly what is seen in old abscesses, and a piece of cyst wall excised was made up of granulation tissue freely mixed with the most characteristic giant cells. Microscopically it tallied with the description given by Narath, of sections of the cyst wall in his case. Neither cyst wall could be enucleated from its surroundings, though a piece was snipped off in each case for examination. In conclusion, both were simply psoas abscesses, and the cases show authorities and industrious clinical and pathological observers, may be so deceived by assumptions so as to take a well known and common malady for a new and remarkable affection.—*B. M. J.*

CASE OF DIABETES MELLITUS TREATED WITH THYROID GLAND.—Murrell (*Medical Press and Circular*) reports a case of diabetes mellitus treated with the fresh thyroid gland made into the form of pills. Each pill contained four grains, and three pills were given three times a day—thirty-six grains in the twenty-four hours. At the beginning of the treatment the patient, a young woman, averaged 5848 grains of sugar a day. The influence of the thyroid treatment on the amount of sugar passed was very marked. During the first fifteen days the sugar was estimated on seven occasions, and the average was 3,057 grains a day. During the next eleven days seven more estimations were made, and the average of these was 1,346 grains. The amount passed on the last of these days was 1,180 grains, showing a fall on the thyroid treatment without restricted diet of 4,668 grains for the twenty-four hours. The thyroid treatment was then suspended, and the patient was dieted. Nearly all starch and sugar were knocked off, and she was fed solely on milk, beef tea, fish and a very little toast. An interval of two days was allowed to elapse, and then the estimations were resumed. Seven observations were made in eight days, and the average of these gave 1,898 grains of sugar a

day. The last of these observations gave 3,440 grains in the twenty-four hours, so that on a restricted diet she passed 2,260 grains more than she did on an unrestricted diet plus thyroid feeding. These observations on the urine, although few in number, were reliable. The influence of the treatment on the quantity of urine passed was also well marked. Her normal amount before treatment was 112 ounces in the twenty-four hours. In the first set of seven observations, under the thyroid treatment with unrestricted diet, the average was 101 ounces; in the second set of observations under the same conditions it was 85 ounces. In the seven observations on limited diet without thyroid the average rose to 129 ounces. Thyroid is usually said to be a diuretic, but in this case it distinctly diminished the amount of urine secreted. The influence on the body weight was equally well marked, for on unrestricted diet and thyroid it fell from 93 pounds, first to 82 pounds, and then to 74 pounds. Her lowest weight was 69 pounds, but a week later, on the unrestricted diet and without the thyroid, it rose to 73 pounds. Her general condition on the thyroid treatment underwent a marked change for the better. She notably improved in strength, the thirst was less, and her mouth was not so dry.—*Medical Age*.

NERVE EFFECTS OF CANCER.—Klippel has investigated the effects produced by cancer on the neuro-muscular system (*Arch. Gén. de Méd.*). He finds that the toxic effects of cancer early manifest themselves on the nervous system and the muscles, producing certain well-defined symptoms. So far as the muscles are concerned there is a marked hyperexcitability accompanied by wasting, so that there is very marked contraction produced by percussing the muscles. This in itself does not differ, however, from what may be observed in every wasting disease. There is also considerable excitability of the reflexes, and galvanic and faradic response is more or less reduced, and may even entirely disappear, while reaction of degeneration may appear. Microscopically, two kinds of change may be found; the fibres may simply be thin and atrophic, the striation persisting; in others there is intrinsic degeneration, the protoplasm being swollen and granular, the nuclei being proliferated, while the connective tissue may be slightly increased in amount. Examination of the nerves generally reveals some degenerated fibres. In some instances the myelin sheath is wavy and irregular, the axis cylinder persisted. In other cases it is fragmented, leaving the sheath of Schwann empty and irregular, with disappearance of the axis, this resembling the severest forms of neuritis. The cord likewise may show very pronounced lesions; here and there degeneration of the fibres

is seen, sometimes single, sometimes in groups. The anterior cornual cells, without being actually destroyed, show very much more degeneration, their prolongations being atrophied, while granules appear both in the protoplasm and in the nucleus. The cord lesions are quite irregular in distribution, there apparently being no attempt to affect any particular column. The writer also points out that tachycardia is frequent, the pulse varying from 100 to 140. Cerebral troubles consist in either a mild form of delirium, which precedes death by a few days, but violent delirium with hallucinations is also observed, and may be followed by apathy. Coma is also an occasional symptom, and presents many analogies with the diabetic form, and acetone may even be found in the urine. The author quotes Klemperer as showing that in this condition there is a diminution of albuminoids, and that probably cancerous coma is merely a manifestation of intense auto-intoxication.—*Brit. Med. Jour.*

OBESITY, GOUT, AND DIABETES.—Ebstein (*Deut. med. Woch.*, November) discusses the relationship of these three conditions and their exact place in the classification of disease. In all a family predisposition exists. This heredity has been most often noted in the children who most resemble their parents in external appearance. Often in families there exists through many generations a tendency to obesity, when the disease may appear quite early in life notwithstanding moderate living and sufficient exercise. It has been stated that the obese possess a much less power of tissue combustion than others, and that metabolism is diminished. Ebstein does not agree with the first view, but thinks that the second may be correct. Apparently there is a predisposition on the part of the cells in the obese to take up more fat than the cells of healthy individuals. The frequent coexistence of gout and obesity is strongly suggestive of a relationship between these affections. Duckworth drew attention to the early occurrence of obesity in gouty families. On the other hand, lean individuals suffer from gout. If both obesity and gout exist in the same individual, obesity precedes gout. Obesity is widely distributed, whereas gout is more limited as regards the regions in which it prevails. In his own investigations Ebstein discovered inflammatory and necrotic foci in gout where urates crystallised out. These necrotic areas can be experimentally brought about in birds with their uric-acid-containing urine, if their ureters are tied, or if by means of poisons which produce necrosis in the renal parenchyma the excretion of uric acid is diminished. In the ordinary attack of gout there is considerable destruction of nuclein; uric

acid is derived from this. If a stagnation occurs of the body fluids which are rich in uric acid there is an attack of gout. Diabetes stands in relation to gout, and gout may accompany obesity. Indeed, all three diseases may follow each other. Diabetes more often than gout may develop in thin individuals, and then usually in its worst forms. Ebstein looks upon these diseases as due to some defect in the protoplasm of the body. It has been shown that diabetics exhale as much carbon dioxide as healthy individuals only when the carbohydrates in the diet are limited. Even if in diabetes there is a suppression of some function of the pancreas, this in itself would exercise a damaging influence upon the protoplasm.—*Brit. Med. Jour.*

TROPHIC BLADDER AFFECTIONS AFTER GNECOLOGICAL OPERATIONS.—Mirabeau (*Centralbl. f. Gynäk.*), finds that vesical trouble, after vaginal and abdominal operations on the uterus and ovaries, may be due to another cause besides the passage of a ligature into the cavity of the bladder, or the rupture of a parametric abscess, or contraction of inflammatory deposit near the bladder. In two cases he detected, by aid of the cystoscope, a definite lesion. The mucous membrane was extremely pale, although the marked irritability had suggested acute inflammation of that layer. There was at the same time great edema of the mucosa of the trigone, with bullæ, such as have been seen already in cases of edema of the bladder from other causes. The entire mucosa was much thinner than normal, so that the trabeculæ of the muscular coat could be clearly defined. The vessels showed signs of being unusually small. The first patient was 33 years of age; she had undergone a vaginal operation six months previously for diseased appendages. For six weeks she had felt great pain whenever the bladder became moderately full, and after micturition it never felt empty. There was, it is admitted, a small mass of exudation behind the bladder and immediately above the vaginal scar. No trace of any ligature, or of the opening of any abscess cavity could be detected in the bladder. The second case, aged 35, had suffered from uterine fibroid, and panhysterectomy was performed, the appendages also being removed. Very soon after recovery the patient began to suffer from dysuria, just as in the first case, it being impossible for her to allow the bladder to get nearly full. She was carefully examined with the cystoscope five months after the operation. No trace of any foreign body or calculus around a ligature could be found, but the mucosa displayed all the appearances above noted, just as in the first case. The urine in the first patient was never bloody and only occasion-

ally turbid; in the second it seemed quite healthy. Mirabeau insists that these vesical changes are purely atrophic, and due to the ligature of vessels supplying the bladder. Physic and washing out the cavity of the bladder are useless for this troublesome result of a gynecological operation. Massage of the hypogastrium, iodoform-glycerine tampon, and warm sitz baths proved of benefit in the first case. The second refused to submit to any treatment.—*B. M. J.*

THE TREATMENT OF GONORRHEA BY HOT WATER.—What has been said above regarding the use of antiseptics in the urethra receives additional emphasis from the pen of C. S. Murrell. In a recent number of the *Massachusetts Medical Journal* he suggests the prolonged use of hot-water irrigations in a chronic gonorrhea. In his method a soft catheter is passed within about one inch of the prostatic urethra. Several quarts of water as hot as can be borne is then allowed to flow into the urethra, by which means the anterior portion of the urethra is thoroughly irrigated. He claims that under this treatment the average duration of the disease is lessened, and the character of the discharge changes almost immediately; strictures and other complications, such as involvement of the deeper urethra, which so commonly follow astringent injections, are very rare. These observances were intended to confirm the view that massive injections are largely of value from their cleansing action on the mucous membrane, and the high temperature at which they are sometimes given. The results claimed by Murrell are quite as good with simple hot water. We take this opportunity to reaffirm our previously expressed views, that if precision is to be reached in gathering statistics as to the value of a given treatment in this affection, all cases must be examined for the gonococcus. Valentine has given explicit directions as to how this is to be done: 1. Spread the discharge, filament, or sediment as thinly as possible over the cover-glass. 2. Let it dry under the bell-glass to protect it from dust or air microbes. 3. Pass it three times through a Bunsen flame, with an even motion, to "fix" it. 4. Drop eosin (saturated solution in alcohol) upon the cover-glass and hold it over the closed Bunsen jet until a slight visible evaporation results. 5. Hold it under a stream of water until all the eosin that can be washed away is carried off. If the cover-glass standing on edge over filter paper gives it ever so slight a tinge, the washing has been insufficient and must be repeated until nothing but clear water comes from the glass. 6. Drop two per cent methylene blue upon the glass and let it stand for five minutes. 7. Wash as described under No. 5 and mount for examination.—*Medicine.*

LIQUID AIR.—A. Campbell White, M.D., New York, after describing the properties and behavior of liquid air, and noticing the fact that it is not antagonistic to the lower forms of life and, therefore, is in no sense a germicide, gives results of his therapeutic experience with this agent. He has employed it in varicose ulcers, chancroids, and in some specific ulcers, and he believes, from the results of his experience, that we have nothing at our disposal that will so quickly, thoroughly and painlessly clear up the edges and stimulate the surface to granulation as does the proper application of liquid air. The applications should not be too frequent, as it is not desired to break down the new granulations. After one or two applications to a varicose ulcer, a repetition once a week is generally sufficient. A chancroid, or mixed sore, will be disposed of at one application, generously applied. A "beefsteak" chancre requires two or three applications three or four days apart. All ulcerations thus treated seem to do better with dry dressing instead of ointment. An ulcer, boil, carbuncle or bubo, in its early stage, is absolutely aborted with one thorough freezing. If more advanced, several applications, at intervals of twenty-four hours are required. When pus has formed in large quantities, it is best to open under anesthesia, with this agent. In advanced bubo or carbuncle, it is unnecessary to curette if liquid air is thoroughly applied to the base of the abscess after incision. He has also used liquid air in sciatica, herpes, intercostal and facial neuralgia, obtaining permanent relief by applying the liquid air to the spinal end of the affected nerve. He thinks the prospects of the use of liquid air in lupus are very encouraging. As regards the treatment of carcinoma, he cannot express any positive opinion for want of experience. One reason why it acts so well he credits to its being a natural application. Air that is in liquid form is the same as the air which envelops the tissues normally, the only difference being its extreme cold, and the tissue destruction from its actual application is less than from handling the glass tube containing it. He applies it with the cotton swab or with the spray.—*Journal of American Medical Association.*

LINGUAL ANTHRAX.—Rammstedt, of v. Bramann's clinic (*Munch. Med. Woch.*, May 9th, 1899), first draws attention to the great rarity of anthrax lesions in the mouth, and he relates a case in a man aged twenty-eight. The mouth could be opened only to a slight extent, and the tongue protruded, surrounded by the swollen and bluish lips. On further inspection the back of the tongue, tonsils and palate were also swollen. On the under surface of the tongue and about 1 cm. from its tip, there was a deep, almost round, blackish-brown sloughing patch of about the

size of a shilling. The glands in the neck and also the face were swollen. Pulse, 100; temperature, 39.2° C. There was cough and blood-stained expectoration. The rapid necrosis and œdematous infiltration of the face and neck at once suggested anthrax. The presence of the anthrax bacillus in the local lesion was fully proved, but none were found in the blood obtained by puncture of the tongue or in the expectoration. Ice was applied externally, morphine given internally, and mouth washes employed. Everything was held in readiness for tracheotomy, owing to the great swelling of the parts. The infiltration soon began to subside, the slough separated, and the patient made a good recovery. The patient's condition appeared very serious at first, not only on account of the swelling, but especially owing to the pulmonary symptoms. There were, however, no anthrax bacilli in the sputum, and the typical dyspnoea of pulmonary anthrax was absent. There was also the danger of intestinal anthrax, frequently seen in anthrax of the mouth. The author then refers to the treatment of anthrax as adopted in Bramann's clinic. Excision of the local lesion is not practised. Since Muller reported twelve cases from this clinic in 1895, there have been seven further, mostly severe cases. All the nineteen cases recovered. Rammstedt also refers to the difficulty of excising the local lesion in his case of lingual anthrax. He maintains that experience has taught that, in external anthrax, the local gangrene tends to limit itself in a remarkable manner without direct surgical intervention.

INJECTIONS OF NORMAL SALINE SOLUTION IN DIABETIC COMA.—Roget and Balvay (*Lyon Méd.*) report the following case: A man, aged 20, was admitted to hospital on June 3rd, 1898. He had had syphilis and ague, and was addicted to alcohol. Five years before he had remained unconscious for some time after a blow on the head. On July 2nd he had several epileptiform fits. Though anasarca was present, there was no discoverable cardiac or renal lesion. The urine contained a quantity of sugar. On July 23rd he had a fit, with deviation of the head and eyes to the left, and clonic spasms in the face, chiefly on the left side. On August 1st the edema of the legs extended to the thighs; slight left facial paralysis; knee-jerks absent. August 2nd, complete coma with epileptiform convulsions; urine scanty and had to be drawn off by a catheter. He was then treated with injections of normal saline solution, and received in all, between August 4th and 9th, nearly 14 pints, $3\frac{1}{2}$ of which were introduced directly into the veins, and the rest subcutaneously. Beside this he had three enemata containing $17\frac{1}{2}$ fluid ounces each. By these means free diuresis was established, and the kidneys being sound the poisons

were probably flushed out through them. As soon as consciousness returned he ate with avidity, and swallowed ten bottles full of alkaline water, containing in all nearly $1\frac{1}{2}$ oz. of sodium carbonate, which doubtless aided the process. On August 16th his condition was as good as it was before the coma appeared. He lived four months, and then died of empyema and phthisis. Post mortem the pancreas was found to be partially absent. Towards the end there was pus in the urine, and calculi were found in the pelvis of the kidney, whose substance was found on microscopical examination to be perfectly healthy. The condition of the brain is not noted. The authors have been able to collect nineteen cases of diabetic coma treated by saline injections, mostly published in Germany and England; of these only one, a case of Lépine's, recovered from the coma, but few or none appear to have received such copious injections.—*B. M. J.*

TREATMENT OF DIABETIC COMA.—Herzog (*Berl. klin. Woch.*), refers to the treatment by large doses of alkalis, as first recommended by Stadelmann. The alkali may be given by the mouth, by clyster, by subcutaneous infusion, or by intravenous transfusion. Administration by the rectum or by subcutaneous infusion can be readily carried into practice. The recorded cases show that the improvement produced by this treatment is mostly only a passing one. The alkaline treatment presupposes a coma due to acid intoxication. After referring to recorded cases, Herzog relates two cases which he treated by subcutaneous infusion of alkalis: (1) A woman, aged 50, was under treatment for a diffuse perityphlitis when she developed coma. The urine contained 4 per cent. sugar, and also albumen. One litre of 0.6 per cent. salt solution was infused. The pulse improved, but the patient died. (2) A man, aged 26, had suffered for two years from symptoms of diabetes, and was also the subject of granular kidney and a right pyelonephritis, as was shown by the necropsy. Twelve hours after the onset of the coma he received a camphor injection, and a litre of 0.6 salt solution was infused. Two hours later 200 c.cm. of a 5 per cent. sodic bicarbonate solution was administered by clyster. Four hours later a litre of 3 per cent. solution of sodic bicarbonate was given by subcutaneous infusion. Considerable improvement followed, but the patient ultimately died of increasing collapse. Neither of these cases were examples of uncomplicated diabetes. In the second case the improvement was certainly due to the alkaline treatment. The object is to increase the alkalis in the body upon the first threatening of coma. Herzog prefers subcutaneous infusion to intravenous transfusion. Clysters can be given in addition to the infusion. Finally, attention is

drawn to the possible dangers of the alkaline treatment in cases where large doses are given, and yet the urine does not become alkaline. Diarrhea, palpitation and even blood-stained urine may appear.—*B. M. J.*

PEPTONURIA IN SCARLET FEVER.—M. Hemser (*Vratchi*) records observations which he has made as to the occurrence of peptonuria in scarlet fever. The following are his conclusions: (1) The urine in scarlet fever very frequently contains peptones; they are usually present in a moderate degree, and are rarely abundant. (2) Hemser confirms the fact, observed by others, that peptonuria is not necessarily associated with albuminuria; both may be present at the same time, but the conditions are independent. (3) In cases complicated with pneumonia, peptones were seldom found in the urine, and, if present, their appearance was noted on the third day of illness, and they entirely disappeared as soon as the crisis ensued. On this point the author differs from other observers, since it is usually stated that peptonuria occurs in pneumonia as the temperature begins to fall. (4) The severity of the disease has no bearing whatever upon the occurrence of peptonuria. Indeed, according to the author's observations, it is more apt to develop in mild than in severe cases. Hence the prognostic value of peptonuria is doubtful. (5) In view of the statement made by several authors that peptonuria does not always imply that suppuration is taking place in some part of the body, it must be mentioned here that in all the cases referred to by Hemser there were constantly present inflammation of the inner ear and the lymphatic glands, with tendency to pus formation. (6) Ervant's test (potassic mercuric iodide) has often failed to produce the characteristic precipitation where peptones were proved to be present in the urine by other tests; on the other hand, it formed a precipitate when peptones could not be detected. (7) Lastly, the author is inclined to discredit Schuller's statement that the production of peptonuria is greatly influenced by high temperature; in his cases no such relation between high temperature and peptonuria could be made out.—*Brit. Med. Jour.*

VOLVULUS OF SIGMOID FLEXURE: THREE OPERATIONS.—Milton Foote (*Boston Med. and Surg. Jour.*) operated three times on a deaf-mute of defective intellect, aged 22. Symptoms of obstruction set in at the end of January, 1898. The abdomen was distended by two great air-spaces lying side by side in the epigastric, umbilical, and hypogastric regions. They could be easily mapped out, as their percussion notes were slightly different. Volvulus of

the sigmoid flexure was diagnosed and discovered on abdominal section. It was necessary to puncture the gut with a trocar to allow some of the air to escape before it could be drawn through the incision. After the loops had been untwisted the feces and gas were squeezed down into the rectum, at the same time that irrigation was carried on from below, until the bowel was empty. There was a partial rupture of the muscular fibres in an oblique direction, across the descending limb of the involved gut, close above the constriction. This and the trocar wound were closed with fine silk. On June 6th, 1898, this operation had to be repeated. On January 1st, 1899, subacute obstruction and high temperature being present, a third abdominal section was undertaken. The sigmoid flexure had twisted as before; it contained only a moderate amount of gas and fecal matter. The ascending and descending limbs of the bowel were adherent, by fresh fibrin, at the point of crossing. There were also old adhesions between the omentum and the cicatrices of the previous incisions. A second abdominal incision was made as for an appendicitis, and the descending portion of the sigmoid flexure was stretched smoothly across the lower part of the abdominal cavity, and stitched to the parietal peritoneum close to the anterior superior spine of the right ilium. It was hoped, in this way, to prevent a fourth recurrence of the volvulus. Recovery was rapid, and the patient was doing well two months after the third operation.—*B. M. J.*

SKIN CHANGES IN GOUT.—Pospeloff (*Vratch*) states that in addition to the nodular changes of the skin in gout observed by Garrod on the conchæ of the ear and by Eichhorst on the face, he has observed a macular form of gouty skin eruption. The latter can be seen in three different stages. The first stage consists of disseminated, rusty brown, irregular or dendroid spots, which do not disappear on pressure and are seen chiefly on the shins. Under suitable treatment, and often without it, these spots disappear, but are observed again with each fresh attack of gout. If the original disease persists owing to the patient's habits, we get the second stage of the eruption, which now consists of bluish-violet spots in addition to those of a rusty-brown color. The spots do not disappear on pressure with the finger, thus indicating an effusion of blood into the skin and cellular tissue. As the blood collects under the horny layer of the epidermis the latter gets soaked and separated and forms a series of large scales with tooth-like margins of the macerated white horny layer. A microscopic examination of an excised piece of skin by direct and by polarised light showed that the violet-colored and rusty red spots were due not only to a deposit in the corium of blood pigment, but also of

amorphous urate of soda and of crystals of uric acid. If the gout increases, its attacks become more frequent, and we then get a general erythema of the affected limb; the reddened skin becomes shiny, sloughs in places, and ulcers are formed; this constitutes the third stage of the gouty skin lesions. These appearances, more especially the rusty brown spots of commencing gout, are so characteristic that gout can be diagnosed by them alone—a circumstance deserving the attention, not only of dermatologists, but also of physicians generally.—*Brit. Med. Jour.*

GREEN STOOLS IN ENTERIC FEVER.—The occurrence of green stools in enteric fever which has recently given rise to some discussion in the *British Medical Journal*, is dealt with in an article in the *St. Bartholomew's Hospital Reports*, vol. 33, by Drs. A. E. Garrod and Drysdale, and the late Professor Kanthack. They describe the character of this kind of stool in three cases of enteric fever. The stools consisted of particles resembling chopped parsley suspended in a liquid which on filtration was turbid but almost colorless. They were acid in reaction and devoid of offensive odor. Chemical examination of the solid particles showed the absence of urobilin or its chromogen, to which the normal color of stools is due, and the presence of biliverdin; and this the authors believe to be the coloring matter present in all green typhoid stools. The biliverdin probably exists in combination, since it can only be extracted by the use of acid alcohol. This view as to the causation of the green color was held by the older writers, but lately Lesage and others have asserted that the pigment is frequently of bacterial origin. In consequence of these statements the authors made cultures of organisms from these stools, and obtained as the predominant organism the bacterium coli commune or some member of an allied group. *Proteus vulgaris* was found in two cases, but no organism capable of forming a green pigment when grown in artificial media. Presence of unchanged bile pigment in the stools may be due to hastened peristalsis associated with extensive ulceration or catarrh about the lower end of the ileum and the colon, that is, at that portion of the bowel where the normal conversion process of the bile pigment into urobilin takes place. Possibly, however, bacterial action may be concerned in some way or other with the absence of the usual processes of transformation of the biliverdin into urobilin.—*Brit. Med. Jour.*

SUFFOCATING LARYNGITIS IN CROUP.—Sevestre, who has already drawn attention to this subject, contributes a further article (*Journ. de Méd.*) pointing out the extreme importance of being prepared for this symptom in measles. He also shows that it is not in

the most severe cases of measles only that we may be confronted with this grave complication, as quite recently he has had under his care several cases of laryngitis occurring in mild cases of measles. As in his former cases, it is usually at the beginning of the attack and even before the appearance of the exanthem that the larynx is liable to become actually inflamed. Some of these cases may be mistaken for ordinary laryngismus stridulus, but an important difference is that the latter does not present the ingravescent and constant character found in measles, and even although there may be some relaxation in the severity of the symptoms, the patient will still show aphonia or marked hoarseness. Suffocating laryngitis usually occurs in young patients, mostly under 3 years of age, and a curious fact noticed by the author is that there have been certain nervous manifestations, such as convulsions or ordinary laryngismus stridulus previous to the onset of measles. A point of great importance is to examine the pharynx and soft palate for the peculiar red-pointed exanthem present in many cases of measles. The presence of oculo-nasal catarrh is also of great assistance. As to treatment, the writer suggests mustard baths and diffusive stimulants, also antipyrin and other nerve sedatives. He has found in some cases that intubation becomes necessary, and may be the means of saving the patient's life, and that it presents very many advantages over tracheotomy, the secondary complications, such as broncho-pneumonia being less likely to prove troublesome. Another point borne out by the author's recent experiences is that relapses must be guarded against.

—B. M. J.

THE SERUM TREATMENT OF TETANUS.—F. Blumenthal and Jacob, of Leyden's clinic (*Berl. klin. Woch.*), in a preliminary communication, state that the subcutaneous and intravenous injection of tetanus antitoxin has certainly not produced very satisfactory results. Thus the introducing the remedy into the organs which are the main seat of the disease. As the tetanus poison is chiefly manufactured in the central nervous system, Roux and Borell, after trephining, injected the antitoxin directly into the nervous tissue in rabbits, mice and guinea-pigs with success. These investigators did not use large animals, and they expressed themselves very cautiously about its further application. Independently, Blumenthal and Jacob conceived the idea of introducing the antitoxin by the method of dural infusion devised by Jacob. Goats were injected with many times the lethal dose of tetanus toxin, and as soon as the first symptoms appeared the antitoxin was injected into the subarachnoid space. The goats received 1,000 to 2,500 times the dose needed to neutralize the poison in the test tube. The results were quite negative. The presence of the antitoxin was

demonstrated in the subarachnoid tissue and organs some hours after death. In a control animal the cerebro-spinal fluid contained little tetanus toxin. After these negative results the authors then trephined a goat, and a few days later injected tetanus toxin into the thigh. At the first symptom of tetanus 2,000 times the dose of antitoxin was injected into the brain. The animal died of tetanus sixteen hours after the injection. The authors do not believe that much can be expected of Roux and Borell's method when applied to man; 7 out of 8 cases so treated have died, and the eighth case was an example of the more chronic tetanus.—*B. M. J.*

A NEW AND CONVENIENT CLINICAL METHOD OF STAINING MALARIAL PARASITES—Dr. Futcher (*Maryland Medical Journal*, Nov. 5, 1898) recently reported to the Johns Hopkins Hospital Medical Society that he had found a convenient method of staining the parasites in dry specimens, which was quick and serviceable for office practice. The blood specimens are made in the usual way described by Ehrlich, making thin films on cover-slips, and then are fixed in a one per cent. solution of formalin in 90 per cent. alcohol. After immersion in this solution for only one minute, the desired stain can be immediately used without washing off the excess of fixing agent. As a staining agent, a saturated solution of thyonin in 50 per cent. alcohol is used, of which 20 cubic centimetres is added to 100 cubic centimeters of two per cent. carbolic acid solution, and this mixture is kept in stock for use as required. It is better to keep it for some time before staining specimens, as it improves with age. The ordinary smear preparation is first fixed in the formalin solution for one minute, and without washing off the excess of solution, stained with thyonin for from ten to fifteen seconds. Ten seconds generally gives the most satisfactory results. The excess stain is washed off and the specimen, mounted in balsam, is ready to be examined. The malarial parasites come out distinctly with this stain, and retain the color much better than when stained with methylene blue. The thyonin stain has also been used to bring out the flagellated processes in the estivo-autumnal infections, and some good specimens have been obtained.—*Medicine.*

THE BACILLUS OF CANCER.—After extensive investigations extending over a period of four years, Bra (*Ped.*, Mar. 15th), of Paris, believes he has discovered the parasite of cancer. This parasite belongs to the family of ascomyces. Not only was it found in the diseased tissue, but in twenty-two patients it could be demonstrated in the blood near the diseased area, and at the tip of

the finger. The culture method and morphology are carefully described and illustrated with seven excellent plates. The microbes can be stained after Gram, and grown in bouillon, sterilized milk, agar and potatoes. A characteristic of the culture is that they lose their original color and assume a faint pink. The location of the bacilli varies; they were found upon the surface, and within the diseased tissue. Inoculation of pure cultures in rabbits, guinea-pigs and dogs, was followed by characteristic symptoms and the production of tumors having the histological character of cancer. From these tumors again pure cultures could be grown, from which bacilli identical with the original bacillus of the human being could be obtained, thus completing the chain of evidence.—*American Journal of Obstetrics.*

A COMBINATION OF ICHTHYOL AND CREOSOTE.—The good effects obtained from the administration of each of these drugs in tubercular pulmonary affections, decided Hugo Goldman to use them in combination. He prescribes as follows, claiming excellent results :

℞ Creosoti
 Ichthyol āā ozs. ss.
 Glycerini oz. i.
 Aq. menth. pip. ozs. i ss.

M. Sig.—Twenty to thirty drops in wine or lemonade, three times a day, after meals. For children and weakly individuals the dose is ten to twenty drops.

VACCINE INFECTION OF THE VULVA.—Maillefert, (*Münch. med. Woch.*.) relates the following exceptional case in a woman, aged 26, who was seven months pregnant. The left labium majus and minus were much swollen, the latter projecting across the middle line and forming a swelling as large as a walnut. There were three vesicles on the inner surface of the left labium majus and one on the corresponding surface of the labium minus. Much pain was complained of, but there was no fever. The following history was obtained. Eleven days previously the patient's youngest child had been vaccinated, and had developed three large pustules. Linen rags soaked in oil were used as a dressing for the arm. The patient subsequently applied one of these rags to her vulva, as she was suffering from much vaginal discharge. This rag had only been rinsed out in water before being used. On the next day she complained of pain. The swelling did not disappear until the vesicles burst. The severe local infection was partly due to

the patient being pregnant. The vaccine used for the child also seems to have been very active. The author has not been able to find another case on record exactly like the above one.—*B. M. J.*

POISONOUS PLANTS.—The *Scientific American* has this to say of some common, yet poisonous, plants: "The berries of the yew have killed many persons, and it is not safe to eat the kernels of too many peach-pits or cherry-pits at once. Among garden plants botanists mention of poisonons nature, jonquil, white hyacinth and snowdrop, the narcissus being particularly deadly. Red poppies and the autumn crocus cause illness. The lobelias are dangerous, their juice if swallowed causing giddiness and pains in the head. Ladyslippers poison like ivy. Lilies of the valley and the leaves and flowers of the oleander are both deadly, and the bark of the catalapa tree is mischievous. The water-dropwort, when not in flower, resembles celery and is virulent."

AN ADULT MONOTREMATOUS WOMAN.—Lesser (*Centralbl. f. Gynäk.*) recently showed at the Berlin Obstetrical Society a woman with double uterus, double vagina, and a normal cloaca as in the monotremata and birds; but the bladder, urethra and meatus were normal, as well as the labia and clitoris. Immediately behind the orifice of the two vaginas, and just in front of the posterior commissure, lay the anal orifice. Neither menstruation nor defecation seemed unfavorably influenced by the abnormality. The patient was 19 years old; she lived in concubinage, and was syphilitic, but had never been pregnant.—*Brit. Med. Jour.*

FAILURE TO FIND THE APPENDIX.—Why surgeons fail to find the appendix is attributed by Scott to the previous occurrence of appendicitis obliterans totalis, rather than to any possible congenital absence of the part. He analyzes five cases, observed in the dead body, of reported congenital absence of the part, and finds that in none of them was there such thorough examination made as would absolutely confirm the opinion that the appendix never existed.—*The Chicago Journal, A. M. A.*

STERILIZATION OF INSTRUMENTS.—One per cent. of common baking soda put into the water in which instruments are boiled, in order to sterilize them, will, to a great extent, if not totally, prevent rusting.—*Massachusetts Medical Journal.*

Issued August 24, 1899.
P. H. Bryce, Secretary.

MONTHLY REPORT.

Issued by the Provincial Board of Health of Ontario for July, 1899. Showing the deaths from all causes and from Contagious Diseases in the province, as reported to the Registrar-General by the Division Registrars throughout the Province.

Year.	Month.	Total population of province	Total municipalities of province	Total deaths reported from all causes.	Rate per 1,000 per annum from all causes.	Scarlatina.	Rate per 1,000 per annum.	Diphtheria.	Rate per 1,000 per annum.	Measles.	Rate per 1,000 per annum.	Whooping cough.	Rate per 1,000 per annum.	Typhoid.	Rate per 1,000 per annum.	Tuberculosis (Consumption).	Rate per 1,000 per annum.
1899.....	July	2,283,182	777	1,643	0.6	7	0.04	20	0.1	4	0.02	6	0.03	16	0.08	173	1.0
		Total population reporting 86%	Total municipalities reporting 80%														
1899.....	June	2,103,660	675	1,521	0.9	12	0.07	22	0.1	5	0.03	4	0.02	13	0.07	167	0.9
		Total population reporting 89%	Total municipalities reporting 86%														
1899.....	May	2,218,803	790	1,767	1.0	17	0.09	18	0.09	8	0.01	7	0.03	18	0.09	230	1.2
		Total population reporting 87%	Total municipalities reporting 92%														

Year.	Month.	Total population reporting.	Total municipalities reporting.	Total deaths reported.	Rate per 1,000 per annum from all causes.	Scarlatina.	Rate per 1,000 per annum.	Diphtheria.	Rate per 1,000 per annum.	Measles.	Rate per 1,000 per annum.	Whooping cough.	Rate per 1,000 per annum.	Typhoid.	Rate per 1,000 per annum.	Tuberculosis.	Rate per 1,000 per annum.
1898.....	July	1,844,012	633	224	....	15	0.09	16	0.1	18	0.1	12	0.08	20	0.1	143	0.9
		Total population reporting 80%	Total municipalities reporting 88%														
1898.....	June	1,676,935	621	222	....	9	0.06	29	0.2	7	0.04	7	0.05	10	0.07	160	1.1
		Total population reporting 74%	Total municipalities reporting 83%														
1898.....	May	1,684,500	604	238	....	17	0.1	16	0.1	15	0.1	9	0.06	13	0.09	163	1.2
		Total population reporting 76%	Total municipalities reporting 81%														

* The months of May, June and July, 1899, include deaths from all causes, but the other months from contagious diseases only.

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No. 2:

THE SYMPOSIUM ON TUBERCULOSIS AT THE ONTARIO MEDICAL ASSOCIATION MEETING.

That the discussion on tuberculosis at the recent meeting of the Ontario Medical Association will be provocative of much good there is no doubt, provided, of course, active propaganda be continued towards the desired end, the prevention of the malady, as in this lies the sequel to the whole eradication of the disease. There were one or two points, however, which were entirely overlooked, different forms or aspects of the disease and different methods of prevention, vitally important, looking towards the total suppression and abolition of the whole spitting nuisance. It being generally conceded that in the great majority of instances, infection arises through the inhalation of dried particles of sputa, the great problem presents itself: How are we going to prohibit what might almost be denominated the murderous practice of hawking up and casting into the public streets the poisonous offal of the tuberculous lungs? It is a question if placarding street cars and the halls of public buildings prohibiting the subjects of phthisis pulmonalis expectorating in these places is just and right. Spitting in the gutter is equally dangerous with expectorating on

the sidewalks. No one would have the unfortunates swallow their sputum, though this would probably be the safest and wisest method of all—to the non-infected. To have the tubercular carry spit-cups is abominable and filthy. Picture to yourself a consumptive extracting a patented spit-cup from an inside pocket while, for instance, sitting in an ordinary street car, and after several attempts to cough up the sometimes tenacious sputum, deposit that in a spit-cup, “forerst” a whole car-full of people, the great majority of whom would be ladies. Cuspidores in public places would be equally offensive. Would the advocates of these unsightly implements have a passenger arise, and after walking the whole length of the car, eject his mouthful before a privileged few. We imagine there would be a good deal of seat-space around wherever that article was located. This is a matter which must be dealt with in the country as well as the city, in the town as well as the village. There appears to the writer to be only one elegant method for the disposal of expectoration. This is by spitting into a handkerchief and the employment of what we will call a “sanitary” pocket. The handkerchief may be of any light material, large enough that when grasped in the hand it will conceal the act. Of these the patient should carry a supply either for a half or for a whole day. The “sanitary” pocket should be preferably of rubber, made to fit into the inside breast pocket of the coat, with a flap and button. This, of course, is designed to prevent the sputum from coming in contact with the clothing. It could be easily withdrawn from its position and plunged into a disinfectant solution. These pockets are especially indicated in “first stages,” as those in an advanced condition stay more in-doors.

A form of tuberculosis which was entirely omitted by the participants in the discussion, and one which ought to demand serious and very careful consideration was Tubercular Meningitis. In this horribly fatal malady, for a case of cure of which you search the literature in vain, and considering the juvenile class of the community more susceptible to its ravages, some suggestions might have been thrown out that would have stimulated research in this direction. We all know how hard it is to stand by the bedside of some little afflicted one and to pronounce the death sentence, to give the black prognosis in every case: “Recovery is impossible.” Surely some of our surgeons, having in mind the beneficial results accruing from laparotomy in one form of abdominal tuberculosis, might have essayed something in the way of trephining, incising the dura mater, admitting the air to the sub-dural space and watching the results. In a disease so desperate any attempt towards a cure would surely be justifiable. At present what we look for most in this form of tuberculosis in order to effect a cure is that we have made a mistake in our diagnosis.

The question of the formation of a National Society for the propagation of information concerning tuberculosis was totally forgotten. When the essayist on "Home Treatment and Prevention," Dr. T. F. MacMahon, Toronto, stated that a newspaper propaganda should be carried on, we do not know whether in active advocacy in that direction he included the formation of a great National Society with provincial branches. It is now one year since Sir William Broadbent, in England, invited a number of eminent gentlemen to his own residence to discuss the advisability and the opportunity of forming such a society in the home country; and seizing that opportunity the Prince of Wales placed himself at the head of the anti-tuberculous crusade, convening a public meeting at Marlborough House, amongst others attending and favoring the laudable undertaking being Lord Salisbury and Lord Rosebery. With this earnest example of Sir W. Broadbent before them, why should the profession in Canada be so dilatory and backward in launching a movement in the same direction? It would almost seem as though the profession here lacked originality and were afraid to take the initiative in any new enterprise. Here, we think, is the chance for the lodge doctor. Our country is swarming with benevolent societies, many of them holding meetings bi-monthly. Our lodge confreres should go to work at once, begin the education of their "brothers," so that at the death-knell of that practice, which is soon to be rung, they will have at least some virtue of which to boast.

THE CASE OF DR. A. H. GARRATT, ET AL.

It is most gratifying to know, and the trio of medical men concerned therein are to be congratulated on the fact that their appeal in this case from the judgment of Justice Meredith, in the Assize Court, has been allowed in the High Court (Divisional) with costs, and the action ultimately dismissed with costs. The appeal was taken in the Divisional Court by the defendant, Dr. Garratt, to set aside verdict and judgment for plaintiff for \$600 damages in an action of trespass tried before Meredith, J., and a jury at Toronto, and to dismiss the action, or for a new trial. The plaintiff, one James Davidson, of York Street, Toronto, kept a restaurant at No. 112, where his wife died suddenly on the 8th of February, 1898. Dr. Garratt was called to attend the woman in a supposed fainting fit, but on his arrival at the house he found her dead. In the customary manner he notified Coroner Johnson, and subsequently received a telephonic communication from that offi-

cial to perform a *post-mortem* examination. Taking with him Prof. H. B. Anderson, of Trinity Medical College, and Dr. W. H. Harris, he proceeded to the house of the plaintiff to perform this duty. In the absence of the plaintiff himself, the three medical men were admitted to the house by members of the family, and had partially completed their task when the plaintiff arrived on the scene and demanded their authority. According to the defendants' evidence, the plaintiff gave them permission to proceed with their examination, but the plaintiff swore that he only gave them permission to sew up the body. The action was, in fact, for trespass to land by entering the house without license, and what was done to the body was shown in aggravation of the damages. The defendants contended that they were entitled to notice of action, as having acted in discharge of a public duty; also, that there was no trespass, as they entered by permission of the plaintiff's son; also, that no action lay for what was done to the body, and no damages could be assessed therefor; also, that the defendants were justified in what they did by the verbal instructions of the coroner. The position held by Mr. Robinette, acting for the plaintiff, at the first trial in the Assize Court, was that a coroner has no right to ask a doctor to hold a *post-mortem* examination without authority in writing from the crown attorney. This, however, was not upheld in the Divisional Court. Counsel for the plaintiff held that the coroner was not acting in his jurisdiction when he asked Dr. Garratt to do the *post-mortem* examination. At the Divisional Court it was held that he was acting in his jurisdiction, and that they had, therefore, the right to enter the house of the plaintiff, where the dead body lay, for the purpose of making the *post-mortem*. The trial judge asked the jury whether the defendants honestly believed that all things that were necessary had taken place to authorize them to do as they did. The jury answered: "We have no means of knowing from the evidence what the defendants believed; but, in our opinion, we answer to the question, No!" The defendants contended that the finding was perverse, and the damages excessive. Held that the action of the plaintiff could not be maintained unless the defendants' acts were unlawful. That a coroner's court is a court of record, and the coroner is a judge of a court of record; that it is not necessary to the exercise of his judicial functions that he should issue his warrant for the summoning of a jury for the purpose of the inquest; that the coroner having had authority to hold an inquest, and having determined that one should be held, and having begun his proceedings, had power to summon medical witnesses and to direct them to hold a *post-mortem*, and it was not necessary that the direction should be in writing, nor was it necessary that the jury should be empanelled before the *post-mortem*—that was in the

discretion of the coroner—that the provision of R.S.O., ch. 97, sec. 12, sub-sec. 2, that “in no case shall any coroner direct a *post-mortem* examination to be made without the consent in writing of the county crown attorney unless an inquest is actually held,” is directory and does not render an act done by a surgeon in good faith, under the direction of a coroner, unlawful because the coroner has neglected to obtain the prescribed consent, where those acts would be lawful had the consent been obtained; and that, therefore, the coroner was acting within his jurisdiction in directing the defendants to hold the *post-mortem*, and they had, therefore, the right to enter the house of the plaintiff, where the dead body lay, for the purpose of making the *post-mortem*. *Semble*, also, that the damages were excessive. And *quære*, Whether there was any trespass on the facts disclosed.

In the Divisional Court trial, when the appeal came up before Chief Justice Sir William Meredith and Justice Rose, Mr. Robinette made the same plea that he made at the Assize Court, that the coroner had no right to order a *post-mortem* without written authority from the crown attorney, and that the doctor should have satisfied himself that the written authority passed from the crown attorney to the coroner before he proceeded to do a *post mortem*. Judge Rose said: “That is nonsense! perfectly ridiculous!” and continued, “I am a judge, and I never knew until to-day that it was necessary for a coroner to have authority from the crown attorney; and it is not reasonable to expect a doctor to go hunting around to look up all the technicalities in a case of this kind.”

THE DEATH OF LAWSON TAIT.

The passing away of this really great man and wonderful surgeon leaves a gap in the medical profession which will not soon be filled. A study of his countenance from a recent photograph bears a striking resemblance to the leader of the Conservative party in the Dominion of Canada; and the perusal of obituaries of this illustrious exponent of abdominal surgery seems to bear out the similarity between himself and Sir Charles Tupper, Bart. At an early day in his great career—at the age of only twenty-three—in 1868, he performed his first ovariectomy, and, by the time he had reached thirty-nine, his name and fame were assured throughout the whole commonwealth of the profession in the civilized world. In the zenith of his renown he dies; and no obituary notice, however long, can do justice to the man and his acknowledged achievements in the paths of surgery. His name will

live and long remain green in the memory of his contemporaries, inseparably associated with original work in abdominal surgery. In summarizing his life-work, Mr. Christopher Martin, in the *British Medical Journal*, mentions amongst others the following:

1. "He reduced the mortality of ovariectomy almost to the vanishing point.

2. "He introduced numerous new operations, such as removal of the uterine appendages for myoma and for tubal disease, removal of a ruptured tubal pregnancy, drainage of a pelvic abscess by abdominal section, cholecystectomy, hepatotomy, and the flap-splitting method of repairing the perineum.

3. "He introduced the plan of cleansing the peritoneum by flushing it with hot water, and of treating peritonitis consecutive to abdominal section with purgatives instead of opium.

4. "He demonstrated to the profession most of what is known of the pathology of tubal inflammation and of ectopic gestation.

5. "He invented many new, and perfected and simplified many old, surgical instruments. As examples, I may mention his hysterectomy clamp, his ovariectomy trocar, his pressure forceps, his myoma screw, his gall-stone forceps, his uterine dilators, his repositors for reducing inversion of the uterus, and his glass drainage tube and sucker."

It is stated that, like other great leaders, he was kind to the poor and unfortunate ones, doing many operations upon women for absolutely no compensation. In his latter days he became afflicted with chronic nephritis; and, on the morning of June 3rd, he was seized with a sudden severe illness. Uræmic symptoms set in, and he died just ten days later, on the 13th of June, 1899. He had reached the age of fifty-four years.

THE WELLCOME CLUB AND INSTITUTE.

We are in receipt of a copy of the *West Kent Advertiser* containing an account of the opening of the above institution at Dartford.

It appears that when the well-known and highly reputable firm of Burroughs, Wellcome & Co., opened their manufacturing works at Dartford there was enough room on their grounds to give their employees fair facilities for recreation; but, owing to the enormous increase in their business, this room had to be utilized for new factories. With the interests of their employees still at heart they purchased an old manor house and grounds, the latter extending for half a mile along the Derwent, and, as the *Advertiser*

says, no expense has been spared in any direction, and it is questionable if there is any other set of employees in the kingdom can boast such a beautiful club and pleasure grounds.

We have always been of the opinion that much more could be done by all large employers to benefit and help those whose labor gives them fortune. We are confident that this liberality on the part of Mr. Wellcome, the now senior member of the firm, will be appreciated by the profession they have so long and ably aided. There is no other class of men who take such active and intelligent interest in everything that tends to the betterment of the masses of the people as the men who are constantly in their midst in sickness, sorrow and death.

DAWSON CITY.

We are just in receipt of a letter from Dr. J. N. E. Brown, who says that there has been practically no typhoid in Dawson City, and the general health-sheet of the town is good.

News Items.

THE Ontario Medical Library is closed until the 19th of August.

DR. J. D. TRIPP, Cleveland, is recuperating in his native city after a very severe attack of typhoid fever.

ON his return from Europe next month, Prof. H. B. Anderson, Trinity Medical College, will become editor of the *Canada Lancet*.

IT has been decided to close up the affairs of the Montreal Clinical Society. The last meeting took place in the month of May.

DR. ERNEST HALL, Victoria, B.C., has purchased a house on Spadina Avenue, near Wilcox Street, and will hereafter practise in this city.

A LETTER from Dr. J. N. E. Brown, formerly secretary of the Ontario Medical Association and now private secretary to Governor Ogilvie, Yukon, states that he is spending his holidays 450 miles north of Dawson City.

DR. G. P. SYLVESTER, *Canada Lancet*, is spending a month's holidays with the Press excursion in the North-West and British Columbia.

By the sudden death of Detective Wasson the Ontario Medical Council loses a valued and energetic officer, one whose place will be hard to fill.

ST. MICHAEL'S house staff is represented for the current year by Drs. Charles McKenna and William Wells, both graduates of the Toronto School of Medicine.

THE appointees to the Victoria Hospital for Sick Children are Drs. James Gow, Ambrose Stanton and T. G. Archibald, to commence duty on the 1st of October.

THE newly-appointed Professor of Gynecology in the University of Chicago, Dr. J. C. Webster, formerly of Montreal, was recently married in New York to Miss Alice Lusk.

DR. R. O. SNIDER has entered an action for unstated damages against a patent medicine firm of this city for unlawfully using his name in connection with advertising one of their nostrums.

ANTHRAX is prevalent among cattle near Listowel, Ont., and several cases of small pox are reported from Windsor. There are two or three cases of the latter in the small pox hospital in this city.

DR. ADAM A. BEATTY, Berkeley Street, Toronto, was married in Omeme, on the 9th inst., to Ethel Maud, daughter of the late Dr. George A. Norris, of that town, who was a class-mate with Dean Geikie. Congratulations.

DR. GEORGE A. BINGHAM, Professor of Applied Anatomy, Trinity Medical College, was married in Kingston, Ont., to Miss Emma Wilson, niece of Mrs. J. Newlands, of that city. We beg to tender our heartiest congratulations.

THE house staff of the Toronto General Hospital for 1899-1900 is as follows: From Trinity Medical College, Dr. G. W. Alexander, Carlton Place, Ont.; Dr. C. A. Page, Toronto; Dr. E. Baker, Simcoe, Ont.; Dr. Colin Campbell, Toronto; Dr. G. A. Schmidt, Stratford, Ont., and Dr. R. S. Broad, alternate. From the Toronto School of Medicine: Dr. H. W. Spence, Toronto; Dr. A. D. Stewart, Toronto; Dr. F. Turnbull, Milverton, Ont.;

Dr. A. A. Sheppard, of Toronto, and Dr. J. A. Roberts as alternate.

DEAN GEIKIE is spending the summer in England. On his return he will cease active practice and hereafter engage in consultation work alone. With his ripened experience, both as a teacher and practitioner, the Dean's assistance will be indeed valuable to his many pupils and others, not only in the city but also in the province.

DR. T. G. RODDICK has returned to Montreal after an extensive tour of the provinces, addressing medical societies on the subject of Dominion registration. Some slight opposition may be expected from British Columbia, but all the provinces are pledged to send representatives to the coming meeting of the Canadian Medical Association in this city.

A NEW research scholarship has been founded by the British Medical Association of the value of \$1,000, to be known as the Ernest Hart Memorial Scholarship, in memory of the late editor of the *British Medical Journal*. The appointee must devote himself to the study of some subject connected with State Medicine. Dr. John W. H. Ayre has been appointed the first scholar.

AS a purely homeopathic institution, Grace Hospital is now defunct. The trustees have converted it into a general hospital, and the following regulars have received appointments on its staff: Medicine, Dr. W. Nattress, Dr. R. A. Pyne, Dr. R. A. Stevenson and Dr. A. Lynd; Surgery, Dr. G. P. Sylvester, Dr. J. H. Cotton and Dr. Holford Walker; Eye, Ear, Throat and Nose, Dr. Palmer; Obstetrics, Dr. J. H. Cotton; Bacteriology, Dr. Westman; Outdoor Department, Dr. J. T. Clark (secretary), Dr. D. W. McPherson, Dr. W. H. Harris, Dr. T. Coleman, Dr. W. J. O. Malloch and Dr. J. H. McConnell.

AT the recent meeting of the Ontario Medical Council these examiners were appointed: Theory and Practice of Medicine, Dr. D. E. Mundell, Kingston; Midwifery and Kindred Subjects, Dr. Henry Howitt, Guelph; Surgery, Dr. J. W. Edgar, Hamilton; Anatomy, Descriptive, Dr. H. B. Anderson, Toronto; Physiology and Histology, Dr. A. Primrose, Toronto; Medical and Surgical Anatomy, Dr. William Gunn, Clinton; Chemistry and Toxicology, Dr. Graham Chambers, Toronto; Materia Medica and Pharmacy, Dr. Schooley, Welland; Medical Jurisprudence, Dr. J. H. McLennan, Hamilton; from the Western (London) Hospital a doctor to be appointed assistant in Surgery and Diseases of

Women ; First Assistant in Medicine, Dr. James Third, Kingston General Hospital ; Second Assistant in Medicine, Dr. George H. Field, Cobourg ; Homeopathy, Dr. E. T. Adams, Toronto.

THE list of successful candidates (final examination) College of Physicians and Surgeons, Ontario, is as follows : C. C. Armstrong, Kingston ; M. B. Alexander, London ; G. W. Alexander, Carlton Place ; E. C. Ashton, Brantford ; J. A. Bauer, Hamilton ; E. Baker, Springfield ; R. S. Broad, Wellington ; C. L. Begg, Orillia ; W. Bremner, Mincing ; M. D. Baker, Simcoe ; W. H. Bennett, Tilsonburg ; J. A. Baker, Byron ; W. B. Crowe, Trenton ; E. G. Cooper, Lanark ; R. Crosby, Campbellford ; W. N. Connell, Ventnor ; F. Cahoon, Picton ; J. W. Crane, St. Thomas ; J. E. Charlesworth, Hespeler ; Colin Campbell, Toronto ; J. C. Colville, Leskard ; Jean Cruikshank, Weston ; W. Chapel, St. Mary's ; M. M. Crawford, Toronto ; M. B. Dean, Brighton ; H. H. Elliott, Frankville ; W. S. Fadden, Denbigh ; W. T. Frizell, Kemble ; W. D. Ferris, Horning's Mills ; C. C. Fissette, Brantford ; E. L. Garner, St. Catharines ; A. W. Hothan, Staffa ; R. Hanley, Kingston ; J. G. Hossack, Walsingham ; J. S. Hogg, Seaforth ; R. Howey, Owen Sound ; W. Henderson, Sarnia ; H. G. Kemp, Brighton ; C. B. Keenan, Ottawa ; C. A. Lang, Granton ; J. S. Labelle, Windsor ; A. Laidlaw, Wilton ; T. H. Lawrence, Sheridan ; A. S. Lovett, Ayr ; J. C. Lindsay, Clinton ; J. E. Lundy, Prescott ; G. S. Munro, Glanworth ; R. D. Menzies, Lanark ; C. A. Morrison, Kingston ; J. P. Mitchell, Toronto ; F. Moore, Clarksburg ; J. W. Messecar, Waterford ; J. McGuire, Gananoque ; C. W. McLeay, Watford ; R. G. McDonald, Sarnia ; T. B. McDonald, Ripley ; J. R. Nixon, Ashgrove ; E. B. Oliver, Ingersoll ; J. W. Orme, London ; T. D. Orme, London ; C. E. O'Connor, Kingston ; W. H. Piersol, Toronto ; Frank Porter, Toronto ; C. A. Page, Toronto ; S. Paulin, Chesley ; G. A. Russell, Seaforth ; J. A. Roberts, Jarvis ; G. A. Schmidt, Stratford ; W. Stephens, Trafalgar ; H. W. Spence, Toronto ; A. D. Stewart, Toronto ; W. Taylor, Dunnville ; F. D. Turnbull, Milverton ; J. F. Ten Eyck, Grimsby ; W. J. Tilman, London ; A. R. B. Williamson, Kingston ; E. C. Watson, Kingston ; J. D. Webster, Toronto ; W. H. Woods, Watford.



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