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CLINICAL REPORTS.*

By T. K. HOLMES, M.D., Chatham, Ont.

MR. PRESIDENT AND GENTLEMEN,—In response to your courteous invitation to present a paper to-night, I confess I had some difficulty in deciding on a subject that would be likely to interest those I should meet. I have myself often derived so much benefit from clinical reports that I have been encouraged to think that a paper of this kind might be more acceptable and more interesting on the present occasion than the consideration of a single topic only. It has seemed to me that such a paper would at least have the merit of originality and would be likely to elicit valuable comments from those who participate in the discussion. Every medical man, however careful and observant he may be, will occasionally have a case that will be obscure, and that will puzzle him beyond solution. I am free to confess that many such cases have come under my observation.

In reporting the following cases I shall omit unnecessary details and so endeavor to make the length of this paper conform to the time usually allowed on such occasions. The first case I shall mention was that of a boy, eight years old, who was sent to me by Dr. Graham, of Bothwell, in 1896. He had been ill several months, the attack beginning with pain in the abdomen, vomiting and fever. After a few days pus, or what his mother thought was pus, was discharged from his bowels. Improvement began at once, and partial recovery took place, so that he was out of bed and could take some exercise. About two months before I saw him a somewhat similar attack came on. There was great pain over the whole abdomen, vomiting, distension with gas and progressive emaciation. When I first saw him emaciation was extreme, skin sallow, tympanitis excessive, respiration accelerated and thoracic, pulse 140, temperature normal, tongue clean, urine

* Read at meeting of London Medical Association, London October 10th, 1898.

diminished in quantity, but otherwise normal. His pain had been so severe that morphine had been necessary to relieve it. His bowels had not moved for three weeks, and only imperfectly then, although various aperients had been tried. He vomited whatever he swallowed, suffered intense thirst and had been nourished wholly by enemata of peptonized milk. The great distension of the abdomen with gas obscured the condition of the viscera in that cavity. The thoracic organs were not diseased. His mind was unaffected and his family history was good. The treatment I adopted consisted of massage, especially of the abdomen, faradism, strychnine hypodermically, and the continued use of nutrient enemata. No improvement occurred, and at the end of two weeks he died. At the autopsy no evidence of a previous inflammation or of a former abscess could be detected, the small intestine was greatly distended with gas, but contained little else. The colon, which I here present, was full of curdled milk. The paralysis of the bowel seemed to be confined to the colon, as borborygmi could be heard quite distinctly during life over the small intestine.

CASE 2.—In 1895 I was consulted by a gentleman who was suffering from enlarged prostate. He was 72 years old and very healthy in appearance. He was obliged to rise five or six times during the night, and to pass urine about every hour during the daytime. The stream of urine was small, but although he had suffered for two or three years had never resorted to the use of a catheter. Thinking irrigation would be beneficial as the urine was loaded with pus and was strongly ammoniacal, I tried to pass a catheter, but to my great surprise found that no manoeuvre would enable me to get any kind of an instrument beyond the enlarged gland. I had heard the late Dr. Willard Parker say that where urine can pass, a catheter can be made to pass also, a saying that, with this single exception, I have found true. His condition became more and more distressing, and as he was unwilling to submit to castration, but was willing to have the vas deferens tied on each side, I performed the latter operation. This led to some improvement, and after six months I was able to pass a small silver catheter and to wash out the bladder with boracic acid solution. Each time this was done he had a chill and fever and I was obliged to abandon it on that account. After this the pus became very abundant so as to render the urine quite opaque, and the desire to urinate became as troublesome as ever. I now began the administration of urotropin in doses of seven grains twice a day in a tumbler of hot water. The effect was most surprising. After the fourth dose the urine began to clear, the call to urinate was less urgent and less frequent, and in less than a week there was almost no pus in the urine and he required to rise only once during the night. He now says he feels as well as ever, but he still takes one dose of the urotropin daily. I am unable to say how permanent the cure is, but the relief was so prompt and so complete that I have tried the remedy in several cases of suppurative cystitis since, and its action has been similarly beneficial. I have castrated a number of patients for enlargement of the prostate and have tied the spermatic cord several times for the same affection, but have not had as good results as some surgeons. In two cases the mental faculties became impaired some weeks after the testicles were removed. I believe the testicles like the thyroid and some other glands, influence nutrition, and that their removal may be injurious in ways not fully understood yet.

CASE 3.—Five tubal pregnancies have come under my observation within the past nine years, and I am of the opinion that these cases are more common than is generally supposed. Careful examination should generally reveal the nature of the ailment, and of course render a favorable termination

probable. Sometimes rupture of the tube may occur so early as to lead to a fatal result before any suspicion of pregnancy is entertained by either the patient or the physician. Such a case occurred in the practice of the late Dr. Shaver, of Blenheim. The patient had menstruated in a normal way a month before her death. Dr. Shaver was called in the night, a distance of four miles, to see this woman, and found her in great pain about the pelvis and lower part of the abdomen. The attack had come on very suddenly while she was in bed; she was pale and clammy, and her pulse weak and frequent. A hypodermic dose of morphine relieved the pain and the doctor left her feeling more comfortable. He was called again soon after he reached home, and recognizing the gravity of the case took Dr. Langford with him. The patient was dead when they arrived. The autopsy showed a small ruptured sac in the upper part of the tube near the uterus, and a very large quantity of blood free in the abdominal cavity. Dr. Shaver sent the specimen to me and I submitted it to Dr. A. B. MacCallum, of Toronto, who reported that examination showed what seemed to be placental tissue in the ruptured sac. In such a case it is almost certain that the most careful physical examination would prove negative, and no treatment other than opening the abdomen and securing the vessels would avail. The question of vital importance in ectopic gestation is early diagnosis, and I shall point out what has sufficed to aid me so much in this. In every case I have seen, pain has been the initial symptom, and in every case examination has revealed the following: Pain came on suddenly. In one case it seemed in the kidney and along the ureter and was like the pain of renal colic. In every case there was more or less shock, and fear of impending death. In two cases this fear was so marked as to amount to absolute terror. A menstrual period had been missed in each case, then the flow had returned at one or more irregular intervals, and had been accompanied by unusual pain of an intermittent kind. In three of the cases decidual membrane had been passed. Physical examination showed (1) The cervix softened like that of a pregnant woman, and the vagina and cervix of a bluish color. (2) Cervix not in the median line but pushed to one side. (3) A tumor in the region of the broad ligament, and, if the pregnancy be advanced two months or more, occupying Douglas' sac. (4) A history of former uterine or tubal disease is usual. (5) Irregular flow of blood from genital tract and discharge of decidual membrane. Of the five cases one died from rupture and hæmorrhage before anything could be done. One came under my care two years after the pregnancy, but she gave such a vivid account of her sickness at that time that I expressed to her my belief that it had been an ectopic pregnancy, and that the fetus had died at that time. Next day, while sitting on the chamber vessel, quite a mass of macerated fetal bones was passed, but she was unable to tell whether they came from the rectum or from the vagina. I herewith present some of the material which, as you will see, resembles cranial bones which have undergone change into adipocere. This woman recovered. One case, the first I had recognized, was operated on by Dr. Donald McLean, of Detroit, whom I called in for that purpose. Although the operation was very quickly and skilfully done, the woman died from shock fourteen hours after. The fourth case I correctly diagnosed when she was six weeks pregnant, but operation was refused and other advice sought. Seven weeks later the sac ruptured into the peritoneal cavity, and I was asked to see the woman and to operate. A very large quantity of blood was free in the abdominal cavity, but the bleeding had been arrested, apparently on account of the weak heart and the resulting low blood pressure. There were extensive adhesions, but these were easily separated and the patient got well. I

have the specimen here. You will observe that the fetus is outside of the sac, but is still attached by the cord to the placenta which remains in the distended tube. The fifth case I saw a year ago last August in consultation with Dr. Sharpe, of Tilbury Centre. She gave a history of tubal pregnancy of about two months' duration, and had nearly died from pain and shock on two occasions during that time. On opening the abdomen the tumor was seen at the right side of the uterus and firmly adherent to everything in that neighborhood. I found it impossible to separate the sac from the bowel without tearing the latter, but by carefully incising the peritoneal covering, and peeling it back I succeeded in enucleating the mass and leaving the outer covering of the tumor behind. Then by ligating the part adjacent to the uterus the whole was easily removed. This woman made a good recovery, and I here show you the specimen.

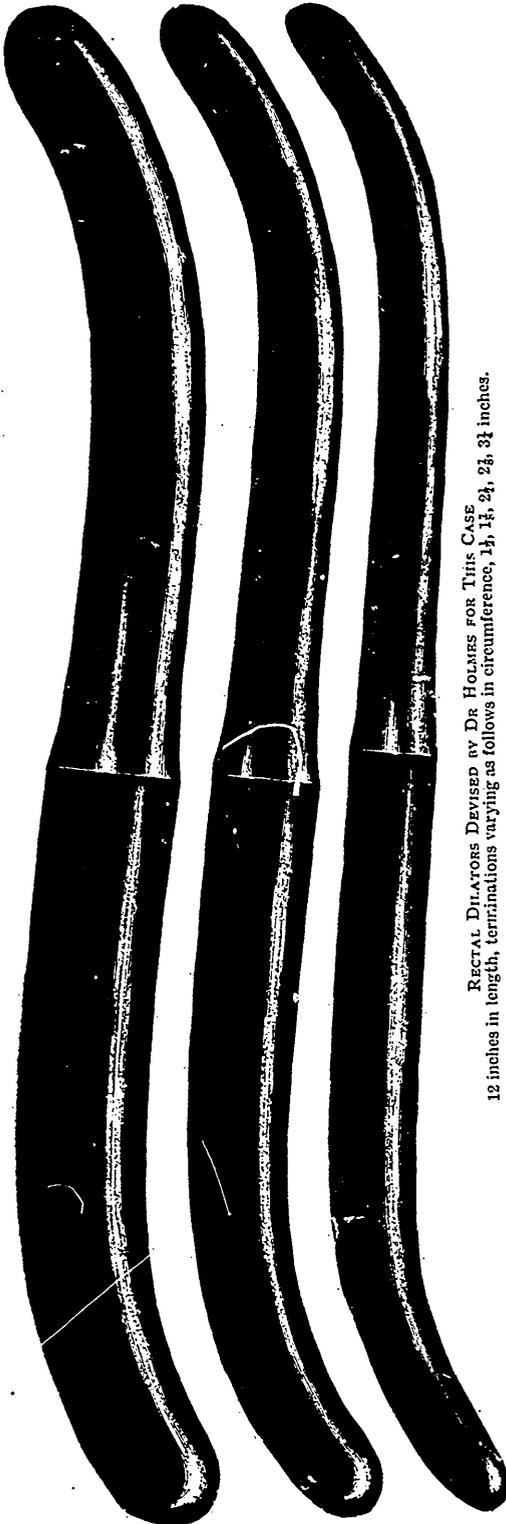
In connection with this subject the following case is of interest: Mrs. G—— was married last March, and menstruated regularly until June 26th, when it came on for the last time. In August she consulted Dr. Hanks, of Blenheim, who told her she was pregnant. On the 29th of September she was seized with a pain in the right iliac region while walking about, became very pale and faint, and was assisted to a couch by those about her. These symptoms soon passed off but returned in fifteen or twenty minutes. In a few hours she was able to return in a carriage to her home, a distance of ten miles. On October 1st a similar attack of a slighter character occurred and she then discovered a swelling in the locality of the pain. Alarmed at this she again saw Dr. Hanks, who, after a careful examination, thought it a tubal pregnancy and sent her to me. The swelling was where that of tubal pregnancy should be at about thirteen weeks and seemed about as large but harder than other cases of that kind that I had seen. The vagina and cervix were bluish in color, and the latter was pushed forwards and slightly to the left, and felt like the cervix of a pregnant uterus. Douglas' sac was filled with a mass that seemed about as hard as a sac containing clotted blood. There had been no flow since June 26th, nor had any decidua membranes passed. The probability of tubal pregnancy seemed pretty strong, and under the circumstances I advised an operation. This was last Thursday, and on Saturday morning, assisted by Drs. Hanks and McKeough, I did so. On opening the abdomen the tumor presented and proved to be a fibroid on the anterior lateral aspect of the uterus. It had crowded the fundus back into the hollow of the sacrum so as to fill Douglas' sac, and this had caused the cervix to be pushed forward and slightly to the left. The tumor was sessile, but apparently not involving the uterine wall to any depth. I therefore split the capsule and enucleated the tumor, closed the site of the growth by a continuous catgut suture and sewed the abdominal wound in the usual way, uniting peritonæum, fascia muscles and skin separately. There was almost no loss of blood, and no shock whatever. To avoid the danger of abortion I kept all pain under control by the use of opiates. At noon to-day her temperature was 99°F., her pulse 86, and her general appearance favorable.

The subject of gallstones is so fully dealt with in medical and surgical books that reference to the subject generally in this short clinical report would be undesirable. I believe, however, that many cases are not recognized as such because the most characteristic symptoms are often absent. Hepatic colic, jaundice, abnormal stools, chills and fever and hæmorrhages are generally looked for, and when not found in any given case it is usually treated as some form of dyspepsia. The symptoms of gallstones depend almost entirely on the place they occupy in the biliary passages and on the size and

shape of the stones, and in the investigation these circumstances should all receive attention. The case I wish to relate is a good illustration of the advisability of avoiding hasty conclusions.

Mrs. N. consulted me through the courtesy of Dr. Ferguson, of Tilbury Centre, in June, 1896. She was twenty-six years old, lived on a farm, had a good family history, and had always been well till eleven years ago, when she began to suffer from flatulent dyspepsia and pain in the stomach such as is so common from accumulation of gas in that organ. These attacks continued at frequent intervals, varying but little in intensity, until two years ago when they became more frequent, more severe, and always worse after eating. In the spring of 1895 she vomited a large teacupful of blood, and again in August, 1895 she did the same. During the past year she has vomited frequently, and has suffered much from headache. Her bowels have been constipated for the past four years, but her stools have been normal in appearance. Her tongue was clean, pulse and temperature normal, and her color good. She had never been jaundiced. Physical examination of the abdomen showed great tenderness over the epigastrium, and a smooth pear-shaped tumor at the right side of the navel near the inner margin of the kidney. She had been under medical care almost constantly for several years, and the case had always been considered an affection of the stomach until Dr. Ferguson discovered the tumor, the position and shape of which led me to believe it to be the gall bladder and I suggested to her and to her medical attendant that an exploratory incision be made, and if gallstones be found that a cure would be likely to follow their removal. For several weeks the patient refused operation, but finally the distress growing worse she consented. On making a vertical incision over the tumor the gall bladder was easily reached, and an incision made into it large enough to admit the finger. Only three stones could be felt, and these were removed and the wound in the gall bladder sewed to the peritonæum. A rubber drainage tube was left in for a week. On the third day, in examining the wound, a fourth stone was detected in the opening and was easily removed by a small scoop. The fistula closed in three weeks and the patient has remained well since.

Writers on rectal diseases agree that organic benign stricture of that part of the bowel is a troublesome affection to deal with. The following case gave me much anxiety and trouble and seems to me worth reporting: In 1891 a woman, aged 50 years, consulted me on account of great pain and tenderness about the lower part of the sigmoid flexure of the colon or upper part of the rectum. She had an excellent family history, had borne a large family and had always enjoyed good health until two weeks before I saw her. Her bowels had not moved for four days, and the whole abdomen was tympanitic. Her temperature was 100°F., and pulse 96. She expressed herself as feeling some obstruction of the bowel and was unusually solicitous to have something done to relieve her. Nothing could be felt in the rectum, but there was tenderness and some hardness in the left iliac region. I tried to pass a soft rubber rectal bougie, but it caused so much pain that I had to desist. She lived sixteen miles from Chatham, and on the journey home in an effort to evacuate the bowels found that three or four ounces of pus were discharged from the rectum. She had immediate relief, and in a few days considered herself well. Several months after this she noticed that there was difficulty in having the bowels moved, and that, except through the influence of some laxative causing liquid stools, they would not move at all. This difficulty caused her to consult me again when I became satisfied of the existence of a stricture at the seat of the former abscess. The finger would not reach it, and after trying a variety of rectal bougies I failed completely



RECTAL DILATORS DEVISED BY DR HOLMES FOR THIS CASE
12 inches in length, terminations varying as follows in circumference, 1 $\frac{1}{2}$, 2 $\frac{1}{4}$, 2 $\frac{3}{4}$ inches.

to find the passage through the stricture. I advised her to consult some one else and she went to Detroit and was examined by Dr. McLean and Dr. McGraw. Receiving little encouragement she returned to me and for a time I was able to relieve her by the daily administration of sulphate of magnesia. Finally this failed and she began to vomit a good deal and became greatly emaciated. I now made a final effort to find the stricture, and, if possible, to relieve it. Placing her in the knee-elbow position I introduced a Kelly's proctoscope into the rectum and by means of a head mirror and a bright incandescent lamp was enabled to examine thoroughly the whole rectum up to the obstruction, and to gently pass through the stricture a very small hard rubber œsophageal bougie, which I here exhibit, size 15 Am. scale. This showed not only the size of the stricture but also the length of it, which was about an inch and a half, situated 7 inches above the anal orifice. Each day I repeated this operation, using a size larger each time until the largest one would pass easily. Having nothing better in my possession to proceed with, I next used the largest evacuating catheter belonging to my lithotripsy case, and in the meantime had a set of hard rubber dilators made having such a curve as my experience had taught me would facilitate their introduction. By following up the treatment and by the avoidance of force I was successful finally in passing the largest size, which you will see is an inch in diameter. By this time her health had greatly improved and she felt quite well. I have since continued the treatment by passing once a month the three largest sizes in succession at the same visit, and I find I can do this

quite easily and that it keeps her in good health. Having acquired an accurate knowledge of the case, there is very little difficulty in passing these dilators without the aid of sight. I have no doubt that this treatment will have to be followed always.

Too much care cannot be exercised in carrying out this plan of treatment. Allingham relates a case in which the gut was torn and with a quickly fatal result, and I know of a case in which a medical man attempted to dilate a stricture in the lower part of the rectum by introducing the blades of a metal dilator and forcibly opening them. The gut was torn and the patient died in a few hours.

EMPHYEMA.*

By DR. BRODIE, Wyoming.

Etiology.—The causes may be divided into local and constitutional. The local causes are traumatism, caries of a rib, rupture of abscess of the mediastinum thoracic wall, or below the diaphragm, into the pleural cavity. The constitutional causes are pneumonia, tuberculosis, acute infectious diseases (scarlet fever, typhoid fever, measles and whooping-cough) fibrinous pleurisy becoming purulent and pyæmic. Pneumonia affords four-fifths of all cases occurring before the sixteenth year. Tuberculosis is rarely followed by empyema before the beginning of adult life.

Pathology.—The fluid at first is serofibrinous with excess of pus cells which increase in number as more fluid is poured out. It is first sacculated, but as the pressure is increased the adhesions are broken down and the fluid covers the lung, not all remaining at the bottom of the cavity, but usually distributed over its whole surface. If the inflammation involved only a small portion of the pleura the fluid may remain sacculated from the strong adhesions formed. This is usually found in the posterior and lower part of the lung. The pleural membranes are thickened and present a greyish white layer. The pus has a heavy, sweetish odor, except when caused by pyæmia, wounds or gangrene when it is very fetid. The lung may be compressed to a small extent, or in neglected cases may be completely compressed. The effect on the lung depends on the quantity of the fluid, whether sacculated or diffuse, and the duration of its remaining in the cavity. The fluid may contain the pneumococcus when following pneumonia; the streptococcus pyogenes and staphylococcus from pyæmia or septic wounds, or all of these may be present. The tubercle bacilli are rarely found in the fluid.

Symptoms.—These differ somewhat, depending on the cause. When the cause is from pneumonia it may follow the original disease at once, or the symptoms may be masked by the pneumonia and delayed resolution or crisis calls our attention to the condition. Sometimes the patient improves for a week or two, when the temperature becomes elevated, the pulse rapid, pallor and sweating, and other symptoms of septic absorption. There is usually some pain and cough, but these may be absent. The forms of pneumonia most liable to be followed by empyema are those cases where

* Read at meeting of Lambton County Medical Association, Petrolia, October 12th, 1898.

the pleura is much involved, accompanied with much pain, especially after the crisis. Following scarlet fever and other acute infectious diseases it commences with cough, high temperature, rapid pulse, dyspnoea and other signs of pulmonary complications. Pus is early formed in these cases, and the cavity may be filled as early as the fifth day. From fibrinous pleurisy the physical signs are nearly the same, but the pallor is more marked accompanied by other symptoms of a septic type. If the pus has remained in the cavity for some time, the patient becomes pale, emaciated, profuse sweating, anorexia, rapid shallow breathing, hacking cough, temperature from 101 to 103 degrees and pulse rapid. The physical signs are the same as fibrinous pleurisy. The heart is displaced, the intercostal spaces bulging, and the whole side enlarged. Tactile fremitus is abolished, voice vibrations absent. There is flatness on percussion and above the fluid the note is tympanitic. The percussion sounds vary with the position of the patient. The breath sounds are distant or absent, and exaggerated above the dullness. Vocal resonance is diminished or absent and often has a bleating or nasal character.

Diagnosis.—The only diseases it may be mistaken for are fibrinous pleurisy, pneumonia and tuberculosis. The exploring needle affords the surest and best mode of determining. There is no danger from its use if done aseptically. The eighth interspace at the angle of the scapulæ, or the sixth or seventh in the mid-axillary line may be used. One puncture, if no pus is found, is not sufficient, but it should be tried in different locations until all doubt is removed. The needle may be too long or too short, or the fluid may be only a quarter of an inch in thickness or it may be sacculated. It is usually that unresolved pneumonia is mistaken for empyema. The physical signs are very different, for in pneumonia we have no change in the dullness with change of position, the vocal sounds are increased and also rales and friction sounds

Prognosis.—This depends on the cause, age of patient, duration and the treatment used. When from pneumonia the results are good. In children over three they nearly always recover. When following scarlet fever and typhoid the prognosis is less hopeful, but much better than from tubercle. From pyæmia or gangrene it is extremely bad. In children under three years the outlook is bad. The longer the fluid is allowed to remain the less chance of complete recovery on account of adhesions and changes in the lung. Spontaneous recovery may occur by (1) absorption of the fluid portion of the pus and deposit of lime salts, but only in small circumscribed abscesses. (2) By perforation of the lung through a bronchial tube. (3) Opening externally usually about the region of the nipple. (4) It may perforate neighboring organs as the œsophagus, peritoneum, stomach, and even pass down the spine, and simulate a psoas abscess.

Treatment.—The constitutional treatment consists in supporting the patient by stimulants if required. Tonics, among which tr. cinchona co. is the best, syrup of hypophosphites with iron and strychnia. Hot bathing for reducing the temperature and allaying the profuse sweating and making the air as pure as possible. As soon as convalescence begins they should be taken out of doors every day. The treatment in all cases is the same. The pus should be evacuated as soon as it is found to be present. Aspiration is only to be mentioned to be condemned. It is impossible to remove all the fluid or fibrinous masses. The operation must be frequently resorted to, and besides it is bad surgery. Incision and subsequent drainage give excellent results. We are forced in young children to use some anæsthetic, in adults or older children local anæsthesia can be used, either ethyl chloride, ether spray, or better, eucaine. The point usually chosen is the seventh interspace

in the post-axillary line on the right side, and the eighth on the left. In the mid-axillary line the skin is more sensitive, and causes more pain during the subsequent dressings. In sacculated empyema open at the lowest point that pus is found. Always use the exploring needle when operating, no matter what has been found previously. The incision through the skin should be from one to two inches in length and directly over the interspace, so that there will be no tension on the drainage tube. The wound should be held open, and any masses presenting removed. As soon as the incision is completed the pus should be allowed to escape slowly, then insert as large a drainage tube as the ribs will accommodate. The tube should be of fenestrated rubber. Introduce the tube doubled, and pass into the deepest pocket and secure it externally by a safety pin. By doubling the tube it is possible to thoroughly clean it of all fibrinous plugs, without having to remove it, by simply holding one end firmly while withdrawing the other. Do not change the tube on account of discoloration, as the new rubber is apt to increase the discharge, or unless compelled to do so by too great pressure on the ribs. Dust with iodoform and place some gauze under the pin after cutting the ends of the tubes as short as possible, add some more of the same material over the mouths of the tubes, and finish the dressing with absorbent cotton and a bandage. Change the dressing frequently for the first week or so as often as three times a day. After a week or ten days the dressing will not require attention more than once a day. The tubes must be cleaned every day and all plugs removed, at the same time gradually shorten them until at the end of a month they may be removed and gauze drainage substituted in the great majority of cases. It is best to err on the side of leaving them too long than removing too early and so have to repeat the operation. Irrigation of the cavity should never be used unless the pus is fetid, and then only once or twice at the most. This procedure is accompanied with considerable risk and must be used carefully as it has been known to cause syncope, convulsions, and beside it breaks down the adhesions being formed and is sometimes attended with much hæmorrhage. By the constant use of irrigation the contents of the cavity soon become fetid in a very short time, a condition not occurring in simple cases where no water is used. To bring about lung expansion some form of lung gymnastics must be used. The Wolff method of forcing colored water from one bottle into another by means of tubes is an excellent device. Playing of wind instruments, or even the childish sport of blowing bubbles, is very useful. If the pus has remained in the cavity too long, and lung expansion does not take place, Estlander's operation of removing parts of two or three ribs must be resorted to in order to let the chest recede.

FISTULA IN ANO.

By J. W. SHAW, M.D., Clinton, Ont.

MR. PRESIDENT AND GENTLEMEN,—My object in giving this paper is somewhat selfish, for my experience has been so unsatisfactory that what I may say in regard to treatment and results will perhaps only remind you that they have been tried and found wanting, and I hope some of the ever willing members of this Association will suggest to me a solution.

Fistula in Ano.—I will not waste your time by referring to the definitions generally given to this subject, nor to the causes, for, with the exception of tuberculosis, the causes are generally obscure and seldom alter the conditions by the time the surgeon has the case presented to him, but the formation and structure appears to me to bear a great deal upon your treatment.

Formation and Structure.—They may develop in any part of the body, but are most frequently found in the cellular membrane, and as this membrane is more thickly dispersed about the margin of the anos and perinæum it is in these localities abscesses and fistulæ are oftenest found; indeed, the cellular tissues favor the development and extension of the fistulous tracts, it being the softest and most yielding of the tissues. In structure they resemble an indolent ulcer. These fistulous passages are generally single, but they often ramify at the extremities or connect with each other, and may have one or more external openings, but usually one internal rectal aperture. A difficulty often arises in discovering the internal opening usually determined by the starting point of suppuration. It may be found superficial to the external sphincter between the sphincters or above the internal sphincter; this orifice does not always mark the highest point of suppuration. They may have contractions or dilatations in their course, and often a difficulty is found in exploring these passages with a probe unless very flexible. The discharge from these passages may be pus, gleet, seropurulent, sanguinous, serous or mucus matter, varying with the cause and locality or general health of patient and length of time the affection has subsisted. They seem to be formed at the expense of all the tissues in the immediate vicinity, taking the elements of their organization from them. The fact which seems to play the chief importance in a fistula is the adventitious tissue that lines those passages, resembling somewhat a mucous membrane. It is the same that lines all abscesses just before they spontaneously open or are lanced.

John Hunter says, "The internal surface of a fistula has an appearance similar to that of a secretory membrane, and may be compared to the urethra, also that of a deep wound, such as that from a gunshot, on proceeding to suppuration and forming a fistulous canal becomes in some degree analogous to an excretory canal having the power of producing peristaltic motion from the bottom to the external opening." But on examination of the membrane it differs from a mucous membrane by the absence of follicles or a layer of epidermis. All regularly developed anal fistulæ have this tissue lining its internal surface. It is essential to the formation of the disease, the longer it is present the more it resembles mucous membrane, and at a late period it is red, showing blood vessels. There is another difference which is often a fortunate one for the surgeon, that is, it may become obliterated or be

* Read at meeting of Huron medical Association at Clinton, October 12th, 1898.

artificially displaced, which rarely, if ever, happens with a mucous surface, for instance, the mucous membrane of the intestinal canal below an artificial anus remains normal and continues to secrete mucus, and the canal remains pervious. It is not a pseudo-membrane, for these exude a fluid of a fibrinous character, as in croup or diphtheria. It seems to be a great difficulty to know what the functions of this tissue are outside of a walling of the contents from penetrating surrounding tissues. Now, owing to the role this membrane plays in those cases, it appears to me that early treatment might in many cases avoid much of the after complications.

It is not only important to prevent an anal abscess from becoming fistulous, but it is equally important after the fistulous passages have formed to treat them radically before their parieties and internal linings become perfectly organized. In early childhood it is remarkable how fistulous tracts get well by the mildest measures, as rest, simple dressings, diet and laxatives. But in those cases of rectal fistula, when the soft parts become involved, attended with deep burrows and sinuses, and more than one external opening, the only treatment is the ligature or knife. The following method was employed in my own cases, and seemed at the time to be a perfect one and theoretically correct, but my results have not borne this out and I would be pleased to know when and why it fails.

Operation.—Empty bowels on eve of operation by an efficient cathartic, say castor oil, in the morning, a dose of Rochelle salts, followed by an enema until all the contents of the rectum are removed, and at the same time administer an astringent to insure safety at the operation. The region for operation should be rendered absolutely sterile. Give anæsthetic in all cases to relax sphincters. Patient in dorsal lithotomy position, stretch sphincters with thumb, touch lower bowel with antiseptic, and plug above extent of sinus with sponge on a string. Insert a grooved director in the sinus emerging at the inner opening; if there is none, make one; insert finger and draw end outside anus, thus having whole sinus outside, then lay open the whole course. If there be branches lay open, similarly curette and make antiseptic. Now dissect out the whole indurated tissue surrounding the sinus, or that being a cavity, if any contraction dilate, curette these, and a clean, healthy wound should result. Two methods are now adopted; one is, pack the canals and wound with sterilized gauze (iodoform I prefer), and after the first three or four days do not pack tightly but lay the dressing in loosely and let the wounds heal by granulations from bottom. The second is, close the wound with a needle threaded with catgut, begin from above the inner end and proceed outward until the excision is completely closed. Put in submucous sutures by inserting needle just below the mucous membrane on outside of cut surface, carrying round the wound opposite excluding mucous membrane, then close the rest of the wound with a continuous suture. Irrigate and powder or seal with collodion, and dress with an iodoform bandage, and keep in bed. Confine bowels for five days, give a limited fluid diet. If the sphincter requires division cut it at right angles and not obliquely; by doing this a union of the deeper sinus may be got sooner, as more complete rest can be secured; but warn the patient of the result or else you may be sent for in a hurry to tell you the effect. Often the fistula may be cured spontaneously, because the lining membrane not being mucus it may contract, the parieties come together, discharge cease, and the walls adhere, leaving nothing but a cellular cord, sooner or later disappearing. I have little confidence in escharotics as I have tried them time and again with negative results. Electricity is recommended. I have not tried it except by inserting a silver and copper probe dipped in HNO_3 , and introduced together into

sinus, but only got a result similar to using chromic acid or nitric acid alone. Even with all these methods I have two cases that appear to be incurable, still discharging a serous fluid and occasionally pus, both of which negative tuberculosis, and any hints or new methods will be hailed by my patients and myself with delight.

DIET IN LITHAEMIA. *

By P. McG. BROWN, M.D., Camlachie.

Lithaemia is a somewhat indefinite term usually employed to designate the condition indicated by such symptoms as insomnia, vertigo, tinnitus aurium, fulness of the head, general nervousness, depression of spirits, flatulent dyspepsia, sluggish bowels, irregular pulse, attacks of palpitation, etc. It is an important factor in the production of asthma, rheumatism, gout, migraine, eczema, and to some extent, also, diabetes and epilepsy, each of these bearing a certain relationship to the others. Thus it is not uncommon in following up a family history for two or three generations to find that one member has asthma, another rheumatism, a third diabetes, a fourth epilepsy, etc., etc., while all are nervous and dyspeptic. Now, while it is obvious that the dietetic as well as the medicinal treatment of each case must vary according to the factors which enter into the production of the peculiar form of manifestation of lithaemic diathesis (if such a term is allowable), with the idiosyncrasies of the patient, his surroundings and habits of life. Still there is one element which must be reckoned with in all these cases, viz.: deficient elimination of nitrogenous waste. It would seem, therefore, a natural inference that the indications are to reduce the animal foods in amount or temporarily withhold them altogether, and in the case of plethoric patients, or those of a vigorous constitution, this would to a great extent be true, but in this country the majority of cases of lithaemia are of the asthenic type, and such patients require a generous diet, with rest of mind and body.

It must be remembered that although one of the chief indications of the lithaemic condition is a highly acid and concentrated urine of high specific gravity, with deposits of uric acid and oxalate of lime, still the kidneys are not the organs at fault, but rather those organs that are engaged in assimilation, or in the separation of excrementitious matters from that which can be used in the economy of the body. On inquiring into the habits of these lithaemic patients it will generally be found that they consume an excess of carbonaceous food. Now sugars and starches are converted into fat by complicated chemical actions within the body. This process is effective in many of these patients, or if not defective constitutes a drain on their resources. The excess of carbon goes to make up oxalic and lithic acids, and thus the patient is injured. On making particular inquiry into the food used in each meal, which should always be done, we are apt to find something like the following: Breakfast, porridge so called, i.e., oatmeal put into boiling water and left there a few minutes. This is either with sugar and

* Read at meeting of Lambton County Medical Association, Petrolia, October 12th, 1898.

milk. After that he does not feel like eating anything substantial, and finishes up with a soda biscuit or two and two or three cakes or cookies, washed down with ridiculously weak tea or coffee sweetened, until it is really a syrup. What a mess for fermentation is there, and the majority of people would call that a light diet. Then for dinner and supper, starchy food is used, even if not excessively. In such a dietary, which is not at all uncommon, it will be seen that the carbo-hydrates are largely in excess, and also that there is a conspicuous absence of really nourishing food. In framing diet lists for such patients (and it brings reward to give thought and time to do this, and to do it always in writing), it is advisable at first to cut off the carbonaceous foods almost entirely, potatoes, rice, sago, fruit, etc., being forbidden, and even bread allowed only in moderation. We should also forbid all highly seasoned foods, sauces, rich gravies, made dishes, pastry, and sweet fruits. Red meat should not be eaten oftener than once a day. We may allow bread, stale or toasted, spinach, asparagus, celery, lettuce, green peas, string beans, eggs poached or soft-boiled, fresh fish, sweetbread, poultry, game, beef, mutton and even pork, no matter how fat, if properly cooked. By the way, it is almost always necessary to give directions about the cooking, otherwise all our care may be rendered of no effect, e.g., potatoes should be baked, or if boiled the skins should be left on while boiling, toast should be in rather thin slices, well browned and not buttered till cold, etc. Coffee and tea usually do no harm in moderation if properly made, and drunk without sugar and at the proper time. The majority of patients will say at first that they cannot drink coffee unsweetened, but taste in this regard, as in many others, is largely a matter of education, and they soon learn to do without the sugar. If not, there would be no objection to adding saccharine.

"In cases where early morning mental depression and nervous prostration are marked, a small cup of strong coffee made without boiling and taken without tea, sugar or milk, before rising, often acts like a charm. Why should it not be beneficial to these nervous, dyspeptic, worn-out subjects? We introduce into the patient's stomach so much hot water, plus a small quantity of caffeine. Now, caffeine is a cardiac tonic, an exhilarant and a diuretic, three properties which meet indications presented by these patients, viz., feeble, irregular cardiac action, nervous and mental depression, insufficient renal action" (Seguin). Lithæmic patients should take a considerable quantity of fluid—not less than three pints daily—part with meals, but the greater quantity three or four hours after meals, as it then helps to clear the stomach of the remnants of the meal, besides furnishing the liquid required for the blood and tissues. Plain water will do, but obedience can more easily be secured by ordering mineral water, or what is a very good substitute, a tablet of effervescing citrate of lithia to a glass of water. Most patients do better without alcohol in any form. Malt liquors, sweet wines and beer, had better be absolutely forbidden. Possibly the least harmful form of stimulant is a little good Scotch whisky. Lastly, we must take into consideration the idiosyncrasies of each individual patient and be guided, to some extent, by what he tells us. We should not accept his statements blindly, however, as they are open to many sources of error.

The following is a diet which the writer has found beneficial in a case of asthma in which lithæmia is an important factor:

Breakfast.—A chop or a little broiled fresh fish, or an egg poached or soft boiled, bread and milk or well cooked oatmeal porridge without sugar, coffee without sugar. The starchy food should be eaten last, if at all, while the proteid food, which is the most necessary for the nutrition of the body,

and which needs a free outpouring of gastric juice, and is digested with least chemical waste, should be eaten first and chiefly.

Dinner.—Beef or mutton—roast or boiled—not fried, bread, spinach, stewed celery, stewed or raw tomatoes, blanc mange and custard (not sweetened), fresh fruit in season, e.g., a peach or a baked apple.

Supper.—A soft-cooked egg or a little cold fowl, stale bread or toast, milk, stewed fruit.

MY EXPERIENCE WITH DIPHTHERIA DURING THE FALL OF 1897.*

By W. DOAN, M.D., Harrietsville.

From the beginning I had been opposed to the use of antitoxin in the treatment of diphtheria. During the past four years I have treated some fifty odd cases and know what it is to dread diphtheria, having seen in the summer of 1895 three children out of four, that had contracted the dread disease, pass into eternity while I stood by with my hands practically tied. There are certain characteristics of the diphtheria bacillus which should be familiar to every practitioner if he would direct intelligently the management of a case of diphtheria. All agree that the mucous membrane of the human fauces is the native home of the Klebs-Loeffler-Bacilli. The various moist follicles secreting alkaline mucus form conditions exactly suited to the life and growth of the bacillus. Outside of the throat it rarely lives for any length of time. The bacillus is never found in drinking water, and is not carried by the air circulating in the room nor in the air respired, but it may be expelled by coughing up bits of membrane, food, or drops of saliva. The most important features of the organism are its uniform tendency to secrete toxin when it takes possession of the throat, and to form pseudo-membranes by coagulation necrosis due to the toxin. An early diagnosis cannot always be made from the clinical symptoms. Quite often a tonsil may be covered with spots like a follicular tonsillitis, while one of the spots may be true diphtheria developing in a medium that will prove a regular hotbed for the development of the bacilli.

One day, in the fall of 1897, I was called to visit two houses situated on the same lot but facing different roads. In one house there were eight children, father and housekeeper. Here I found a boy, four years old, had been sick for two days, temperature 102, pulse 110, and throat patchy and experienced pain on deglutition. Rest of family examined, and all appeared well. Returned the next morning, and boy was decidedly worse, both in temperature and pulse, and was now breathing fast and loud. Also learned that a girl aged eight years was sick, and her throat sore with a rise in temperature and pulse. The depression was so marked in the little boy that I concluded that I had diphtheria to treat, and remembering my former experience with it at once telegraphed our Medical Health Officer, who I knew had a supply of antitoxin on hand, to send me some at once. He arrived at my office the same evening, and we drove to the place infected. Arriving there about midnight we found the boy much worse than when I saw him in the morning. The girl also had patches on both tonsils, with temperature 103, pulse 120. We also discovered that another of the children, a girl six years old, had been taken sick during the afternoon, and on

* Read at meeting of Ontario Medical Association, Toronto, June 1 and 2, 1898.

examination showed rise in pulse and temperature, with patches on both tonsils. Undoubtedly we had diphtheria to deal with, and administered one thousand units of antitoxin to each of the three patients. As our supply of antitoxin was limited we did not give any to the rest of the family that night as immunizing doses. We then visited the other house affected and found that two out of a family of five children and father and mother, had the disease with symptoms similar to those cases previously described. To these we also gave one thousand units each, which exhausted our supply, so we were not able to try and immunize the rest of the family exposed to the contagion of diphtheria. On the morning following I returned to the family first mentioned with a supply of antitoxin and found that two more of the family, both boys, had been stricken down with the disease during the night. To these I gave one thousand units each, and an immunizing dose of two hundred and fifty units to each of the remaining three children. Found not much change in the condition of the three treated the night before, but on my visit the same evening my three patients, the little boy and two girls, were much improved. In all these cases the temperature was normal, while the pulse did not exceed 80 per minute. The little boy was breathing quietly and able to take nourishment. The following morning I found the little fellow sitting up in bed, and wanting to get down on the floor to play. All the rest were doing nicely, and no new cases. In fact, in all these cases in this house, the depression so marked in diphtheria was replaced in one or two days by a feeling of wellbeing which was surprising. Convalescence in all these cases was very rapid. I kept the house quarantined for two weeks, and no new cases developing the house was thoroughly cleansed and disinfected. Just seven days from the time of cleaning the house I was again called and found that the father and two others of the remaining children had contracted the disease. All three of these patients had assisted in cleaning the house. To them I also gave one thousand units each, with the result that in less than twenty-four hours in all three cases the temperature and pulse became normal, convalescence uneventful. From the preceding it will be seen that all of the family suffered from the disease, except the housekeeper and the baby, a child one year old. The baby had been given an immunizing dose. The housekeeper, aged about twenty-four years, had not received any.

As to the second family mentioned, on my visit following the administration of the antitoxin, I found in both patients a normal temperature and pulse, but they did not seem to rally from the prostration caused by the diphtheria poison. I might just here remark that the frame house occupied by this family was situated in a hollow, and in a very unsanitary condition. As the bacillus of diphtheria very soon dies when exposed to sunlight I always endeavor to have my patients placed in a large airy room facing either the east or south, but in this particular instance I was unable to get such favorable surroundings. I repeated the one thousand units in the little girl, but after lingering two or three days, suffering all the time from paralysis of the throat, so that deglutition was almost impossible, she passed away. During this time two others of the family had also contracted the disease and received one thousand antitoxin units. These made a good recovery, while the little boy of the second family, who was first taken, developed a large tumor on the left side of his neck over the submaxillary gland. Symptoms did not appear dangerous as the child was eating and sleeping very well. I visited the house one evening about nine o'clock and he was apparently progressing favorably. During the night he awoke and asked for a drink, and on being raised up choked and fell back dead. Whether he died from

paralysis of heart or not I am not prepared to say. In all cases a liberal dose of calomel is to be given at once if tongue is coated and bowels constipated. Should a stimulant be indicated, either whisky or strychnine is administered, and other symptoms treated by appropriate remedies as soon as they arise.

As to the local treatment pursued I tried to follow the happy medium, neither withholding it entirely nor employing a too rigorous course. Used in some cases a solution of iron, chlorate of potash and glycerine, while in others equal parts of H_2O_2 and water or euthymol (P. D. & Co.) I prefer the euthymol, as the patient does not object to the taste of the preparation.

Without going further into detail I may say that during the fall of 1897 I treated, in different houses, over twenty cases of diphtheria, losing only the two before mentioned. I used antitoxin prepared by P. D. & Co., also H. K. Mulford & Co.'s make, and so far as I could see there was no difference in the result. The more concentrated the serum the quicker will it respond.

I invariably found that after using one thousand units that in less than twenty-four hours the temperature became normal, and remained so during rest of illness, while the effect on pulse was not quite so regular. The membrane in less than forty-eight hours also began to loosen and come away. The antitoxin also lessens the anæmia so caused by diphtheria by shortening the disease and making convalescence more rapid. Only two suffered from paralysis which affected both deglutition and sight, but on using strychnine recovered in about one month.

As the serum is innocuous the importance of the early administration of the remedy cannot be too greatly emphasized; to wait for a bacteriological examination to confirm the diagnosis is foolhardy, more especially among practitioners in the country where facilities for such examinations are not always readily at hand. To my mind, clinical diagnosis is sufficient to warrant the injection of the serum. It is better to be sure than sorry, and therefore to err on the right side. The injection can be made in any region where a fold of skin can be picked up; of course, the hands, instrument and skin having previously been disinfected.

Finally, I hold that any practitioner who fails to use antitoxin because he "does not believe in it," should not be entrusted with the management of a case of diphtheria, and the practitioner who thinks a case is mild and waits for severe symptoms before using antitoxin, utterly fails to grasp the situation and will frequently be disappointed.

METHOD OF PREPARATIONS FOR ABDOMINAL SECTION IN: ROYAL JUBILEE HOSPITAL, VICTORIA, B.C.*

THE PREPARATION OF THE ROOM AND PATIENT FOR AN OPERATION.

To Prepare the Patient.—If the operation is an abdominal section give the patient a strong purgative thirty-six hours before the operation. The following day shave over abdomen and pubes and give a hot bath. In the morning give a soap and water enema, then a soap and water douche followed by one of bi-chloride of mercury about 1-6000. Scrub abdomen and pubes with soap and water, wash off with alcohol, then bi-chloride 1-2000, cover with sterilized towels and pin securely. Put on a short aseptic jacket and wrap in a blanket. If she has very much hair it is more convenient to dress it in two braids. Remove false teeth if any. The patient should be kept on liquid

* Kindly furnished by the Matron, Miss MacMillan, Victoria, B.C.

diet for forty-eight hours, and have nothing by mouth for four hours before having the anæsthetic. Just before sending the patient to the operating room pass the catheter, so that the bladder may be empty.

To Prepare the Operating Room.—There should be in the room the operating table, four or five smaller tables, a stand for the jars of plain and iodoform gauze, bandages, safety pins, iodoform powder, drains, strapping, extra sponges, gauze pads and towels. Scrub the walls and tables with soap and water, then bi-chloride of mercury 1-2000. On the operating table there should be a rubber pillow, sterilized blanket to fold over patient's chest and arms, rubber pad, and smaller pieces of blanket for lower limbs and sterilized bandage to fasten. Place a tub under the table. Cover the smaller tables with sterilized towels. On the left side of the operating table there should be a table holding a basin with brush, soap and water; another basin containing a small piece of gauze and alcohol, two jugs of bi-chloride of mercury 1-2000 and two plain water; for scrubbing the patient. The table holding basins, hot and cold sterilized water for sponges, should also be on the left side. Put the sponges in a basin, cover them with sterilized water, and place another basin to cover it. In another put four or five sterilized towels and cover with bi-chloride of mercury 1-2000. At the head of the table have a low stool and a basin containing chloroform, ether, vaseline, split cork for chloroform bottles, inhalers and anæsthetic towels. The operator stands on right side of patient, so place the table holding the instruments at his right hand. To prepare the instruments, scrub with soap and water, put in a clean pan, with a pinch of soda and boil for half an hour. Then scrub the hands thoroughly, disinfect, dry the instruments with a sterilized towel, place on the table and cover with another sterilized towel. On another table put the needles, needle-holder, catgut, silk, silkworm gut—previously boiled in carbolic 1-20—silver wire, a pair of dressing forceps, pair of scissors. There should also be in the room basins of sterilized water to wash instruments, strychnine, brandy, hypodermis syringe, saline solution, siphon, tubing and nozzle, cautery, aspirator, tourniquet, and a blackboard to number the instruments and sponges. Before entering the room the doctors will require for scrubbing their hands, nail brushes, soap, water, carbonate of soda, chloride of lime towels, bi-chloride of mercury 1-2000, and rubber aprons.

AN INTERESTING CASE IN PRACTICE.*

By Dr. MERRITT, St. Catharines, Ont.

Through the kindness of Dr. Schooley I am enabled to report the following case which is of some interest from its rarity:

It is that of a young woman aged 25 years. Her family history is unimportant; her mother, however, being dead since the patient's early childhood. Her previous history was that, as a child, she suffered for 4 or 5 years from malaria (genuine), she married about 18 months ago and had a miscarriage which was attended with excessive hæmorrhage. Her condition on first coming under my care was that of a tall, emaciated and rather anæmic woman,

* Reported to Niagara District Medical Association.

extremely weak and "run down" looking. I gathered from her that a year ago she noticed a lump about as large as a hen's egg, immediately under the left ribs in the region of spleen. This pained her when she was very much on her feet. She stated that the lump did not seem to grow at all until three months before I saw her when it took on rapid growth. Her digestion was good, though sometimes painful. Heart's action weak and showed general atonic condition. Menses at this time regular though during the year she had missed four months. Bowels fair and urine normal. The tumor, apparent on inspection, encroached on all the abdominal regions, occupying entirely the left hypochondriac, left iliac and umbilical. Dulness on percussion very marked. Vaginal examination proved that the pelvis organs were normal. She was under my observation for about a month during which time the tumor increased almost one-third larger, showing the very rapid growth. My diagnosis from the first splenic leukæmia and strongly dissuaded her from operative interference. However, urged by her constant entreaties for a chance of relief, and assisted by my colleagues, I made an exploratory incision under careful asepsis over a prominent part of the tumor in median line just below umbilicus and exposed an immense spleen filling to a very great extent the abdominal cavity. Seeing the utility of further procedure and having verified our diagnosis and done what she wished, we began to close the abdominal wound and found that the walls of incision were bleeding in such a way that great pressure and torsion were for about an hour unavailable. However we were able to control the hæmorrhage and sent her to bed very much shocked. She never recovered from the shock, and died at 4 a.m. next morning, 16 hours after operation. I should have said that her temperature would rise to 100 or 101 almost every day. Her treatment medicinally was arsenic, iron and quinine, with pot. iodidi. While taking this and resting she felt better every day, though the tumor was increasing in size, and when she attempted any work she found herself absolutely unable to perform it. I have since learned that any small cut on hand would bleed excessively, thus showing that she was a bleeder.

Reports of Societies

THE LONDON MEDICAL ASSOCIATION.

The meeting of the London Medical Association was held on October 10th, 1898—the President, Dr. Eccles, in the chair. Among those present were, Drs. Ovens, McCallum, Arnott, Roome, Hodge, Moorhouse, Campbell, Wishart, Ferguson, Macdonald, Waugh, Laidlaw, Thomson, Graham, Weeks, Ben. Teasdale, English, Holmes, of Chatham, Beattie Nesbitt, of Toronto.

Dr. Holmes read a clinical paper dealing with a series of cases covering intestinal obstruction, tubal pregnancy and enlarged prostate (see page 185 of this issue).

The discussion was opened by Dr. Ferguson, who complimented Dr. Holmes upon his paper, and related an interesting case which he had under observation in which the difficulties of accurate diagnosis of tubal pregnancy were shown. Dr. Beattie Nesbitt congratulated the Society on the attendance, and also praised very highly the eminently practical nature of Dr. Holmes' paper. He related some details of experimental work he had been carrying out at Johns Hopkins University, and deprecated the tendency to explain death by so unscientific and unsatisfactory a word as shock.

Dr. McCallum believed that so long as a man could urinate at all comfortably he should not be catheterized, as after that there was the liability of infection and the symptoms caused by the purulent cystitis thus set up would be much more severe than before. In his experience he had found the best results as far as sterilizing the urine was concerned, by the administration of creosote 3 grs. four times a day in enteric pills.

Dr. Arnott said he was a firm believer in the beneficial effect of thorough massage of the prostate.

In the case of gallstones he had found the usual difficulty of diagnosis, but thought from his experience many cases of supposed gallstones were caused by irritant seeds, raspberry and other small fruits setting up an inflammation of the intestinal wall with ensuing duodenitis. Dr. Wishart complimented Dr. Holmes upon his paper, and mentioned a case of intussusception in a child two weeks old. Vomiting was the main symptoms operated on, on the third day found the ileus had passed into colon to extent of sixteen inches. Had great difficulty in replacing intestines, operation only occupied ten minutes; but when intestines had been replaced, with assistance of catheter passed into the rectum to relieve flatus, child had been on table forty minutes, subsequently died. Had had several cases of enlarged prostate in which he had tied vas, but results were not striking. Castration was an operation to which all patients objected strongly, even at eighty years of age. He believed that the catheter has done more for patients with enlarged prostate than all other remedial methods combined; suprapubic prosectotomy might be resorted to. He had had a few cases with good success. He considered enlarged prostate the most frequent disease in males over fifty, it was said one in five suffered; he believed that over fifty-five, one in three were affected, and every fifteenth is actually suffering therefrom. In the matter of gallstones it had been his experience that in fifty per cent. of cases he had operated on for supposed gallstones malignant disease was present.

Dr. Holmes then replied and thanked the meeting for their kind attention and discussion, as well as their flattering comments upon it.

On motion of Dr. Ferguson, sec-

oned by Dr. McCallum, a hearty vote of thanks was extended to Dr. Holmes for his excellent paper.

A notice of motion in reference to the surgical care of the insane was handed in by Dr. Arnott. It was then moved by Dr. Wishart, seconded by Dr. Campbell, that Drs. Holmes, of Chatham, and Beattie Nesbitt, of Toronto, be elected honorary members of the Association. This was heartily passed, and the gentlemen then replied expressing their appreciation of the honor conferred.

LAMBTON COUNTY MEDICAL ASSOCIATION.

The regular meeting was held at Petrolea on October 12th, 1898—Dr. Dunfield, President, in the chair. Among those present were: Drs. Scott, Courtright; Hodgins, Oil Springs; Gibson, Watford; P. McG. Brown, of Camlachie; Brodie and Harvey, Wyoming; McKee, Calder; McAlpine and Mott, Petrolea; Fisher, Brigden.

The meeting was called to order, and the various matters of business gone through.

The first paper read was a very able review on the "Brand" treatment, with original observations and suggestions by Dr. Sturgeon.* The doctor not being able to be present, the paper was read by the secretary, and very favorably commented on by the members.

The next paper was one by Dr. Brodie on "Empyema" (which see on page 191). The discussion was opened by Dr. Fisher, who said it was an old rule in surgery when pus was located, to cut down and evacuate it, and he considered this a good rule in empyema. He did not think we were ever justified in expectant treatment. As regards point of incision, he preferred to select sight as low down and as far back as possible. He

preferred a metal tube and resection. He had had good results from irrigation with weak solution of iodine.

Dr. Beattie Nesbitt said it was a pleasure to hear such a paper as Dr. Brodie's, but there was very little to be criticized in it. In reference to what Dr. Fisher had said of the metal tube, he thought, unless the ribs were very close together, a rubber tube preferable. When so close as to prevent the use of a rubber tube, resection was necessary, and in doing a resection it was just as well to be prepared for a good deal of trouble. He pointed out the difficulty of applying dressings in these cases, on account of the frequent renewals and the necessity of obtaining the assistance of another person. He explained a convenient method of applying dressings in these and similar cases, which had originally been reported by him in the *Archives of Pediatrics*. This consisted of utilizing the plan involved in lacing the upper part of a boot, by using hooks sewn on a strip of tape about an inch apart. Two strips of adhesive plaster of the necessary length and width proportionate to the dressing to be applied, were then taken, holes cut in the plaster corresponding with the hooks on the tape, about three inches from one end, the hooks were then passed through these holes and the free end of the adhesive plaster doubled back on itself from a point half an inch forward of the hooks; this left a free non-adhesive flap backing the hooks, and on account of the projecting half-inch, forward of the hooks, preventing entanglement with the dressing. It is then only necessary to place this strip carefully on each side of the wound and put your dressing in between. By doing this the discharge will not come in contact with the adhesive plaster and consequently it will remain attached for a long time, and the patient can readily renew the dressing himself in almost all positions, as he simply has to lace it and unlace it in the usual manner. It was originally used in empyema in children; where the chest

* Will appear next issue.

walls were very weak a round elastic cord serves for the lace, thus not interfering at all with expansion.

Dr. Harvey was formerly in favor of irrigation, but has since operated without irrigation, and has found no difference in the results in the last few years. He believes irrigation of no benefit. He would not advise use of metal tube; after operation he always got his patients out in the air as soon as possible. He mentioned a case where the hypodermic brought out a barrelful of pus, but on cutting down no more was found; put in drainage tube and subsequently a large quantity came away as the adhesions between the small pocket and main cavity were broken down by the manipulation of the tube. He would advise strongly not to go further down than between the sixth and seventh ribs. He would say to younger members, when you suspect pus don't be afraid to use the needle; as Dr. Brodie said, find out where the pus was before cutting. He also mentioned a recent German method by which a piece of rubber tissue was fastened over the end of the tube, spreading over the skin around the wound, and while not interfering with freedischarge acted as a valve, preventing the ingress of air into the cavity.

Dr. Hodgins wished for information on a case he had last winter. Called in to see a boy and found peritonitis, did well for a week or ten days, and then became pale and lost flesh, and found that he had developed empyema.

Dr. McKee had seen good effects from treatment with hydrogen peroxide and irrigation.

Dr. Gibson had found the rubber tube quite satisfactory. He was not in the habit of irrigating, and had had very good results.

Dr. McAlpine had had cases which were not serious, but when operated on became much worse by the introduction of pathogenic organisms, streptococci and staphylococci. He had not seen necrosis follow use of metal tube.

Dr. Brodie said in regard to the point of election, he meant that where pus was general, one should take the post axillary line at the eight interspace. He had never had to resect, but of course it might be necessary to do so; it was, however, no trifling operation. As regards irrigation, he was opposed to it and said it was impossible in the average farmhouse to have facilities for irrigation. He did not believe in aspirating, except for exploratory purposes.

The next paper was one on "Diet in Lithæmia," (see page 196), by Dr. P. McG. Brown. This was followed by an interesting discussion, and the meeting subsequently adjourned to a lunch provided by the Petrolea members.

THE HURON MEDICAL ASSOCIATION.

The regular meeting of Huron Medical Association was held in Clinton on Wednesday, October 12th, the President, Dr. Stansbury, of Bayfield, in the chair. Members present were, Drs. Bethune and Burrows, of Seaforth; Shaw, Gunn, McCallum, of Clinton; Dunsmore, of Stratford; McKenzie, of Monkton; Tait, of Blyth; Taylor and Hunter, of Goderich.

It was moved by Dr. Shaw, of Clinton, seconded by Dr. Bethune, of Seaforth, and carried unanimously, that Dr. Wood, of Mitchell, an old member of the Association, who is moving to Nashville, Tenn., be elected an honorary member of the Association, and that the Association desire to record their regret at the departure of Dr. Wood, and the assurance that his talents will be appreciated as highly in his new sphere as they have been in this Association.

A long discussion took place on the present abuse of hospital privileges, in which all the members spoke strongly of the abuses as at present existing, and at the close it was

resolved, on the motion of Drs. Bethune and McKenzie, "That in the opinion of this Association no patient should be entitled to free medical or surgical treatment in our hospitals except those who are receiving their hospital maintenance from the municipality to which they belong."

On motion of Drs. Taylor and Bethune, it was resolved that this Association support the nomination of Dr. J. A. Robertson, of Stratford, for the representation of District No. II, Ontario Medical Council.

Dr. Shaw read a paper on "Fistula in Ano," which was well received by members present, and elicited much favorable comment. Owing to early departure of train for the east the regular programme had to be curtailed and the meeting adjourned.

THE WINDSOR MEDICAL ASSOCIATION.

The regular meeting of the Windsor Medical Association took place on Thursday, October 13th, 1898—the President, Dr. Reaume, in the chair. Among those present were, Drs. Sampson, Sanderson, Hoar, Ashbaugh, Bell, Carney, Coventry, Cruickshank, Lambert, Prouse, and Drs. Mott, of Detroit, and Beattie Nesbitt, of Toronto.

The members were first entertained by Dr. Sampson presenting J. S. Fitzgerald, who has been exhibited during the last thirty years at many of the medical schools on the other side. This gentleman is a professional auto-dislocator, who produced by his own muscular actions luxations of all the main joints of the body. These were carefully examined by the members present, who passed a vote of thanks to Dr. Sampson for his kindness in bringing before them such an interesting subject.

Dr. Beattie Nesbitt then gave a paper on auto-intoxication. We may

say, however, in reference to the discussion that followed, that the members of the profession in Windsor are all Irish, and our modesty naturally would not stand the publication of their flattering comments.

The Association, after the meeting, was entertained by Dr. Bell, and it is unnecessary to state that, as Dr. Sampson was director of ceremonies, the evening passed off most delightfully.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

The eighth annual meeting of the Association took place in Buffalo, N.Y., in the rooms of the Society of the Natural Sciences on September 13th to 15th, and was well attended, and altogether successful in every respect. The Mayor of Buffalo, Dr. Conrad Diehl, delivered an address of welcome, to which Dr. F. B. Bishop, of Washington, D.C., responded. As the President, Dr. Charles R. Dickson, of Toronto, kept all strictly to the time limit, and called the meetings to order very punctually, it was possible to get through a quite lengthy programme, which was as follows:

Phlebitis: A Clinical Study. By Dr. Margaret Cleaves, New York.

The Diagnostic and Therapeutic Relations of Electricity to Diseases of the Central Nervous System. By Dr. A. D. Rockwell, New York.

New Uses of the Undulatory Current in Gynæcology. By Dr. Georges Apostoli, Paris, France.

Electricity in the Treatment of Uterine Fibromata. By Dr. Felice La Torre, Rome, Italy.

Electro-therapeutics in Gynæcology. By Drs. Georges Gautier and J. Larat, Paris, France.

The Use of Electricity in Gynæcology. By Dr. W. J. Herdman, Ann Arbor, Mich.

The Treatment of Uterine Fibroids by Small Currents Administered Per-

cutaneously. By Dr. R. J. Nunn, Savannah, Ga.

Treatment of Menorrhagia by Weak Current and Silver Electrode Internally. By Dr. Adelstan de Martigny, Montreal, Que.

The Method for Using Cataphoresis in Conjunctival Inflammation. By Dr. Lucien Howe, Buffalo, N.Y.

Electricity in Deafness and Stricture of the Eustachian Tube. By Dr. Robert Newman, New York.

Electricity in Acne Vulgaris and Acne Rosacea. By Dr. Grover W. Wende, Buffalo.

A Case of Lightning Stroke without Serious Consequences. By Dr. Wm. C. Krauss, Buffalo.

Cases of Lightning Stroke causing Diseases of the Eye. By Dr. G. S. Ryerson, Toronto, Ont.

High Tension Current in Neuritis. By Dr. F. B. Bishop, Washington, D.C.

Electricity in the Treatment of Goitre. By Dr. C. R. Dickson, Toronto.

The President's Address: Aims and Claims. By Dr. C. R. Dickson, Toronto.

Ten-minute Talks on Electrotherapy:

1. The Effect of Electricity upon Tissue Metabolism. By Dr. W. J. Herdman, Ann Arbor, Mich.

2. The Effect of Electricity upon Tissue Metabolism. By Dr. J. H. Kellogg, Battle Creek, Mich.

3. The Galvanic Current in Gynecology. By Dr. G. B. Massey, Philadelphia, Pa.

4. Some Surgical Uses of Electricity. By Dr. C. R. Dickson, Toronto.

5. Combined Use of Medicinal and Electrical Treatment in some Affections of the Eye. By Dr. G. H. Burnham, Toronto.

6. Electricity in Genito-Urinary Diseases. By Dr. R. Newman, New York.

7. Treatment of Malignant Growths by Means of Electricity. By Dr. G. B. Massey, Philadelphia, Pa.

8. Orthopædic Use of Electricity. By Dr. L. A. Wiegel, Rochester, N.Y.

9. The Functional Neuroses, with Special Reference to Neurasthenia, their Pathology and Treatment. By Dr. A. D. Rockwell, New York.

10. Electricity in Diseases of the Nervous System. By Dr. W. J. Herdman, Ann Arbor, Mich.

A High Frequency Oscillator for Electro-therapeutic Purposes. By Mr. Nicola Tesla, E.E., New York.

The Hydro-electric Bath with Sinusoidal Current in Disease. By Drs. G. Gautier and J. Larat, Paris, France.

The Use of the Hot Air and Light Bath in Disease. By Drs. G. Gautier and J. Larat, Paris, France.

The Electric Arc Bath. By Dr. Margaret A. Cleaves, New York.

The Electric Light Bath. By Dr. J. H. Kellogg, Battle Creek, Mich.

Some Suggestions on the Possibilities of Cataphoresis. By Mr. J. J. Carty, E.E., New York.

The Effect of High Tension Discharges upon Micro-organisms. By Drs. J. I. Parsons and C. Slater, London, England.

The Action of X-Rays upon Tuberculosis. By Drs. J. Bergonie, Bordeaux and — Teissier, Paris, France.

Two Years of Practice in Radiotherapy. By Drs. G. Gautier and J. Larat, Paris, France.

The officers for the following year are: President, Dr. F. B. Bishop, Washington, D.C.; 1st Vice-President, Dr. Ernest Wende, Buffalo, N.Y.; 2nd Vice-President, Dr. W. H. White, Boston, Mass.; Secretary, Dr. J. Gerin, Auburn, N.Y.; Treasurer, Dr. R. J. Nunn, Savannah, Ga.; Executive Council, for three years, Drs. R. Newman, New York, and G. B. Massey, Philadelphia, Pa.; for two years, Drs. A. D. Rockwell, New York, and Wm. J. Morton, New York; for one year, Drs. C. R. Dickson, Toronto, Ont., and F. Schavoir, Stamford, Conn. The next meeting will be at Washington, D.C., September 19th to 21st, 1899.

A resolution was passed urging colleges and medical schools to establish chairs on electro-therapeutics, or devote more time and attention to teaching this branch, and it was decided to call the attention of the Association of Medical Colleges to the necessity for such a step. The University of Buffalo was congratulated upon having a chair of electro-therapeutics in its medical department.

An excellent exhibition of electrical apparatus was held in the lecture hall next the room of meeting, and proved a very attractive feature.

The arrangements throughout were of the best; no effort seemed to have been spared to ensure the comfort and enjoyment of members and their guests. The chief fault found with the programme of entertainment was that it was simply impossible to get through it all. There were trolley excursions, visits to art gallery and various historical and other interesting collections of different societies; visit to Buffalo railroad power-house whose storage batteries, the Mayor assured, were the largest in the world, and other visits innumerable; a public reception at the University of Buffalo, where some excellent addresses, and one especially humorous were heard; a smoker at the residence of Dr. Lucien Howe to meet the Faculty of the University and the officers of various medical societies; and, to crown all, a most delightful excursion on the yacht *Huntress* down the Niagara river, with dinner at the Island Club, Grand

Island, which brought to a close an exceedingly well planned and well carried out meeting. The local arrangements were in charge of Dr. Ernest Wende, Commissioner of Public Health, Buffalo, who deserves great praise for the admirable manner in which everything was managed. Three most hearty cheers were given for him as the members stepped off the yacht and bade him good-bye on Thursday evening before leaving for Niagara Falls, N.Y., where Friday was spent in sightseeing under the direction of the president, the complete tour being made by the electric roads on both sides of the river, the wonderful power-house visited, and the *Maid of the Mist* for a farewell view of the Falls.

AMERICAN MICROSCOPICAL SOCIETY.

The American Microscopical Society, at its recent annual session, elected the following officers for the ensuing year: President, Dr. William C. Krauss, of Buffalo; 1st Vice-President, Professor A. M. Bleile, of Columbus, O.; 2nd Vice-President, Dr. G. C. Huber, of Ann Arbor, Mich.; Secretary, Professor Henry D. Ward, of Lincoln, Neb.; Treasurer, Magnus Pflaum, of Pittsburg; Executive Committee, Professor S. H. Gage, of Ithaca; Dr. A. Clifford Mercer, of Syracuse, and Dr. V. A. Moore, of Ithaca.

Special Selections

CONTRIBUTIONS TO THE HISTOLOGY, PHYSIOLOGY AND PATHOLOGY OF THE LIVER, BILE PASSAGES, AND BILE.

By GUSTAV FUTTERER, M.D., Chicago,

Professor of Medicine, Chicago Polyclinic; Fellow of the Chicago Academy of Medicine, etc.

THE ELIMINATION OF BACTERIA FROM THE GENERAL CIRCULATION BY THE LIVER AND THROUGH THE BILE PASSAGES.

Having observed in a number of post-mortem examinations of kidneys but few miliary tubercles, as compared with their number in other organs, I concluded that tubercle bacilli can pass through the normal kidneys without causing characteristic changes in the tissues. This is the only conclusion to which such findings can lead, as there is no reason to suppose that a smaller number of tubercle bacilli reached the kidneys than other organs. They must, therefore, have been eliminated by the kidneys. Considering such an elimination a very important factor in general infections, and believing that it also takes place through other organs, I was surprised by the appearance of a paper by Wyssokowitsch¹ in which he asserts that bacteria which have entered the circulation can be found in urine only when there are pathological changes in the kidneys. Considering my findings in reference to the kidneys as quite convincing, I entered upon a line of experiments which proved the same with reference to the liver, at the same time suggesting to Dr. Friedrich Schwyzer, of Zurich, to investigate by experimental work this question in reference to the kidneys. Dr. Schwyzer published the results of his investigations under the title "Ueber das Durchgehen von Bacillen Durch die Nieren." He found color granules in the contorted channels of the kidneys half an hour after they had been injected into the blood-current, and he thinks it probable that micro-organisms can pass

through the normal kidneys, but says that they appear in the urine in masses only after the glomeruli have become partly affected.

Since Schwyzer's experiments were made Posner and Lewin injected cultures of bacillus prodigiosus into the intestines, finding them again in the bile, the blood contained in the heart, the scrapings of kidney substance, and in the urine. They say: "It seems that bacteria coming from the intestinal canal in their passage through the urinary tract are excreted, without causing any lesions, if normal conditions exist. If those organs are changed pathologically, or if there is a retention of secretions, congestion, or disorder of nutrition which predispose, then bacteria may accumulate and cause purulent inflammation."

Biedel and Kraus⁴ found micro-organisms which had been injected into the blood-current, such as staphylococcus aureus, bacterium coli and anthrax, in the urine (which was free from albumen and blood) a few minutes after the injection had been made, and they came to the conclusion that the micro-organisms had been excreted by normal kidneys.

In July, 1898, I reported in *Medicine*⁵ the successful cultivation of the bacillus prodigiosus, from the pelvis of the kidney, two minutes after their injection into the jugular vein of a dog. These experiments prove that micro-organisms can pass through the normal kidneys, from the blood-current to the urinary passages, in a few minutes.

To study the question of elimination of bacteria from the blood by the liver, I selected the bacillus pyocyaneus, resected a part of two costal cartilages near the left sternal margin, opened the pericardial cavity, and injected some of the culture mixed with normal salt solution into the left ventricle of the heart. I killed the animals experimented upon at different times after the injection had been made, and then after opening the gall-bladder in the most careful way, cultured pyocyaneus from the bile an hour and a half after the injection was made. As early as 1888 I found and cultivated the typhoid bacillus in the bile of two individuals who had died of typhoid fever. This observation was published under the joint authorship of Anton⁹ and myself, I contributing the anatomical and bacteriological part, and was the first recorded observation. Finding them in pure culture, I concluded that they came by way of the blood-current, and not direct from the intestinal canal. The typhoid bacillus has since been found by a great number of observers, but only a few have studied the process of elimination through the liver.

Trambusti and Maffuci⁷ infected rabbits and guinea-pigs with anthrax and bacillus typhi, afterwards finding both in the bile. They believed that the typhoid bacilli had passed through the liver without changes of this organ having taken place. The anthrax, which they only found once in the bile, they think cannot pass through the liver without causing tissue lesions.

Blachstein injected cultures of bacterium coli commune into the ear vein of rabbits, and cultured the bacterium from the bile as early as seven hours, and as late as thirty-eight days, after injection. He also experimented with the bacillus typhi abdominalis, culturing it from the bile as early as ten days, and as late as fifteen and a half weeks. Blachstein's experiments were not made with the

view of learning how soon bacteria appear in the bile.

Corrado⁹ says: "If we consider our own results and the results of others, it has been well stated that certain bacteria, if they are found in the blood in great masses, can be eliminated with the bile without our being able to find changes of the liver or bile passages, while greater masses can only get into the bile under pathologic conditions." Corrado considers the elimination of bacteria in infectious diseases as a symptom and not as a proof of a protective process.

Pernice and Scagliosi¹⁰ injected anthrax hypodermically in guinea-pigs and found it in the bile after from four to sixty-six hours. After injecting bacillus pyocyaneus hypodermically into eight guinea-pigs and killing them at different lengths of time, the results were: After one, two and four hours, negative; after six, twelve, twenty-two and seventy-two hours, positive; after five days, positive. They injected the bacillus subtilis hypodermically, and after six hours found it in the bile. Their examinations were made immediately after the death of the animals. They found that after injection of pure cultures, the staphylococcus pyogenes aureus, the bacillus pyocyaneus, the bacillus subtilis and the micrococcus prodigiosus are eliminated in many different ways. The elimination commences in from four to six hours after they have become distributed through the circulation, and it lasts when they have been injected with pathogenic micro-organism until the death of the animal. The elimination commences in from twenty-four to forty-eight hours later, when non-pathogenic organisms are injected.

In 1893 Sherrington¹¹ injected bacteria intravenously and hypodermically and came to the conclusion that they are only eliminated after lesions of the tissues have taken place.

The investigations of Biedel and Kraus¹³ are very instructive. In their first series of experiments, after in-

jecting staphylococcus aureus intravenously, they cultured the bacteria from the gall-bladder. In the second series the bile was obtained through a glass cannula inserted into the common duct, the cystic duct having been ligated.

First Series.—Experiment No. 1, from gall-bladder, after 2 hours, negative; experiment No. 2, from gall-bladder, after 1 hour 40 minutes, positive; experiment No. 3, from gall-bladder, after 2½ hours, positive; experiment No. 4, from gall-bladder, after 2 hours, negative.

Second Series.—Experiment No. 1, from duct. chol., after 13 minutes, positive; experiment No. 2, from duct. chol., after 20 minutes, positive; experiment No. 3, from duct. chol., after 35 minutes, positive.

They also state that the elimination of staphylococcus aureus was an almost continual one for one and a half to two hours, while the experiment was carried on. If they had used large quantities of bile for inoculation they would have found the germs sooner. Their experiments show quite a difference as to results, according to the method employed, and I have therefore adopted their newer method, with good results.

F. J. Cotton¹⁴ experimented on rabbits, using bacillus anthracis, subtilis, prodigiosus, bacillus pneumoniae, staphylococcus aureus, and diplococcus pneumoniae. He injected the bacteria into the posterior ear vein; killed the animals after different lengths of time, and then took bile from the gall-bladder with all due care. The anthrax was not found in the bile by culture, but he only discovered a thread of anthrax in a bile-duct of a microscopic section, although he allowed thirty-six hours to elapse after injection. Cotton also had negative results after injecting bacillus subtilis, even after waiting for seven and a half hours. Of the pneumococcus, he found great masses two days after injection. The liver cells in those cases showed at the most a

questionable parenchymatous degeneration. The small bile-ducts appeared normal, while the larger ones showed a well developed descriptive native process. The endothelia of the blood-vessels were normal. The injection of staphylococcus aureus gave a positive result after ten minutes, while histologically only an indication of gathering leucocytes could be stated in the otherwise normal liver. His results with the staphylococcus were as follows:

Findings in the bile after 20 minutes, negative; 20 minutes, negative; 30 minutes, positive; 1½ hours, positive; 2½ hours, positive; 3½ hours, positive; 3½ hours, negative; 5 hours, negative; 5½ hours, positive; 6 hours, positive; 6 hours, positive; 7½ hours, negative; 17 hours, negative; 18 hours, negative; 20 hours, positive; 20½ hours, negative; 23 hours, positive; 23 hours, negative; 24 hours, negative; 27 hours, negative; 28 hours, large masses; 40 hours, large masses; 40 hours, positive; 44 hours, positive; 6 days, large masses; 8½ days, negative.

Bacillus Prodigiosus.—Findings in the bile after 30 minutes, positive; 4 hours 20 minutes, negative; 18 hours, negative; 20½ hours, negative; 24 (?) hours, negative.

Bacillus Pneumoniae.—Findings in the bile after 2½ hours, negative; 3 hours, negative; 4½ hours, positive; 6¾ hours, positive; 20 hours, positive.

Such irregular findings would surely indicate that the method employed (culturing from the gall-bladder) is at fault.

I have referred to some writings on elimination of bacteria through the kidneys, as they have a bearing on the same function of the liver. It seems to me impossible to prove by microscopic examination the absence of histological lesions which allow micro-organisms to pass through the organ into its secretions. As the whole organ cannot be accurately examined, there may be an opening

somewhere that escapes detection. Even in well-examined microscopic specimens there may be openings in the intercellular connections which are not recognized. As positive findings are of value, microscopic examination of the organs in such work should not be discouraged, but negative results are of no value. The examination of the urine for albumen and blood as practised by Biedel and Kraus is more important. I believe that the appearance of micro-organisms in the urine after having been injected into the blood-current, not associated with albumen and blood, proves that they are eliminated by normal kidneys. We have no similarly accurate test to apply to the secretions of the liver, but as micro-organisms pass this organ with even greater rapidity we may partly by analogy reach the same conclusions. We need not rely on this analogy altogether, as the elimination of bacteria from the liver becomes perfect when they get in the lumina of the small bile-ducts. I shall devote another chapter to the microscopical findings; thus the irregular flow of bile which has had such influence on our findings so far will become less important.

In a former paper (*Medicine*, July, 1898) I reported that bacteria injected into the portal vein had been cultured from the blood of the jugular veins within a minute's time, and now I can state that bacteria (*staphylococcus aureus* and *bacillus prodigiosus*) after being injected into a jugular vein were cultured from the common duct within two and three minutes in large masses. The experiments lasted half an hour, specimens of bile being taken before injection, to show that the bile was sterile, then every minute for five minutes, and thereafter every five minutes. The masses increased steadily, so that I am now fully convinced that the normal liver excretes large masses of micro-organisms. It appears that there is a difference in

time for the appearance of the different germs, *bacillus anthracis* appearing particularly late, and probably only after causing histological lesions. With the *bacillus tuberculosis*, which to my knowledge has not been employed by other investigators, and only in an unsatisfactory way by myself, as mentioned in my last paper (*Medicine*, July, 1898), I shall at an early date repeat the experiments. It seems to me that the great differences now existing as to time will be materially reduced if the experiments are carried on under more favorable and like conditions. The dog seems to be the proper animal to experiment with, as the common duct of a large dog will allow the introduction of a cannula of sufficient size. A small cannula does not allow the bile to pass through freely. I even do not rely on the small quantity of bile coming through a larger cannula, but introduce the needle of the syringe deep into the cannula in order to draw from one-half to a whole syringe-full of bile for inoculation.

If we intend to state how early the micro-organisms appear in this bile, this is certainly a better way to proceed than to examine the contents of the gall-bladder. It is also better to feed the dog an hour or two before the experiment is begun. It must not be forgotten that by opening the abdomen we remove one of the main factors which promote elimination of bile from the liver—I mean the pressure of the diaphragm, and the pressure of the muscular walls of the abdomen. The diaphragmatic pressure can exert its full influence on the liver only when there is sufficient counter-pressure from the abdominal walls; therefore, a general pressure exercised over the part of the thorax covering the liver, like in performing artificial respiration, becomes quite necessary and will increase the flow of bile. Like Biedel and Kraus, I considered it of the utmost importance to state how early an elimination of bacteria begins, as an early elim-

ination indicates a physiological process, and as the germs found also appeared in greater masses, I do not hesitate to state that the normal liver eliminates great masses of bacteria from the blood-current within a few minutes after infection, and that this organ therefore acts as a protector in the sense of Cohnheim. But the elimination will sometimes be incomplete and as a consequence a number of different pathological conditions can arise. Pathogenic micro-organisms on their way through the liver may cause pathological changes of the bile passages, and of the intestinal channel, from where they may again invade the general circulation by way of the lymphatics, or by the portal vein, thus again reaching the liver. Tubercle bacilli may cause a tubercular enteritis, and typhoid bacilli relapses of typhoid fever. As there is such a general typhoid infection without intestinal lesions (Chiari and Kraus²), the elimination of typhoid bacilli in such cases may cause secondarily the characteristic anatomical lesions of the intestines. All these possibilities are of very great clinical importance, as is also the presence of typhoid bacilli in the gall-bladder in relation to the formation of gall-stones.

While the kidneys and liver, according to the great amount of bile and urine excreted during twenty-four hours, eliminate the largest amount of micro-organisms, other organs—the lungs, the mucous membranes of the respiratory tract, the intestinal and the urinary tract—as also the skin, participate in this function, and clinically we should do all in our power to stimulate such physiological action. In reference to the liver a better knowledge of the action of the different cholagogues than is at present obtainable would assist us materially, while now we should rely more on well regulated massage of the region of the liver, proper exercise, and feeding. The employment of proper antiparasitic remedies, some

of which are excreted mainly by the liver, like the saicylates, which also act as cholagogues (Stadelmann³), would be indicated.

It seems hardly necessary to remark that if the liver is flooded with large masses of bacteria, or several infections occur at short intervals, this may partly close the filter by filling up the capillaries, and that obstructions of the bile passages or histological lesions in the liver will interfere with the process of elimination.

In answer to Cotton, who states that: I have not suggested any theory in connection with the results of my first experiments, I would cite the exact words in my paper of 1888, literally translated: "In the past often repeated experiments have proven to me that micro-organisms may pass through the liver easily." And also, page 13: "The bile does not seem to have any antiparasitic action which is of any account, and an elimination of micro-organisms through the liver and with the bile is certainly not (I might have said not always) to be considered as a real elimination from the body, but pathogenic germs will, under favorable conditions, be able again to exercise their pathogenic properties in the intestinal canal." That means that there may be a complete or an incomplete elimination, the latter passage naturally including my intention to indicate that relapses of typhoid fever may occur in this way. In the latter respect I would also refer to another one of my papers ("The Liver as an Organ of Elimination of Corpuscular Elements," *Medicine*, August, 1895).

It is true that while writing my first paper I believed in an elimination through normal organs, but I could not—at that time—and did not state that those micro-organisms had been excreted by the normal liver. Other theories than those mentioned could, as far as I am aware, not have been advanced, and have not been advanced since.

I also wish to correct an erroneous opinion of Biedel and Kraus¹³, who say: "His (meaning Fütterer), as also the investigations of Pernice and Scagliosi, refer to results which were obtained from the gall-bladder after the animals had succumbed to the infection." I cannot see how such conclusions can be drawn from what I said, and will cite my own words:⁶ "In the past repeated experiments have proven to me that micro-organisms may pass through the liver easily. To gain some information on this question, I have used bacillus pyocyaneus, a germ well adapted for such experiments, as it can easily be recognized. After resecting several costal cartilages at the left sternal margin, and opening the pericardial sac, I injected bacillus pyocyaneus in pure culture, mixed with a sterilized physiological salt solution, into the left ventricle of the heart, and have always succeeded in culturing the germs from the bile when at least one and a half hours had elapsed after the injection had been made." It cannot be presumed that the infection with bacillus pyocyaneus killed those animals within the few hours used for the experiment. I proceeded exactly as Biedel and Kraus and other investigators did, namely, I killed the animals at different times after the germs had been injected; then I took samples of the bile from the gall-bladder, and used all necessary precautions.

I wish to correct an error which occurred in my paper in *Medicine* for August, 1895, that reads, "I then commenced experimenting with animals," while it should have read, "I then *again* commenced experimenting," etc., as my first experiments were made long before I stated the presence of typhoid bacilli in the bile of human gall-bladders, as reported in my first paper in 1888.

It gives me great pleasure to render my sincere thanks to Dr. Emil Ries and to Dr. Leo Loeb, who have kindly assisted me in my experimental work.

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SOME OBSERVATIONS ON BRAIN ANATOMY AND BRAIN TUMORS.

(Abstract.)

Dr. William C. Krauss, of Buffalo, read a paper at the ninety-second annual meeting of the Medical Society of the State of New York, Albany, January 25, 1898, with the above title.

He called attention (1) to the difficulty in remembering the gross anatomy of the brain, and (2) to the almost universal presence of optic neuritis in cases of brain tumor.

He attempted to overcome the difficulty in regard to the anatomy of the brain by formulating the follow-

ing rules, which are somewhat unique and original, and at the same time easily remembered.

Rule of Two.—1. The nerve centres are divided into two great divisions, (1) encephalon, (2) myelon. 2. The encephalon is divided into two subdivisions, (1) cerebrum, (2) cerebellum. 3. The cerebrum, cerebellum and myelon are divided into two hemispheres each, (1) right, (2) left. 4. The encephalon is indented by two great fissures, (1) longitudinal, (2) transverse. 5. Into these two great fissures there dip two folds of the dura, (1) falk cerebri, (2) tentorium cerebelli. 6. There are two varieties of brain matter, (1) white, (2) grey.

Rule of Three.—1. There are three layers of membranes surrounding the brain, (1) dura, (2) arachnoid, (3) pia. 2. Each hemisphere is indented by three major fissures, (1) sylvian, (2) rolandic or central, (3) parieto-occipital. 3. Three lobes, frontal, temporal and occipital, on their convex surface are divided into three convolutions each: superior, middle and inferior, or first, second and third. 4. There are three pairs of basal ganglia, (1) striata, (2) thalami, (3) quadrigemina. 5. The hemispheres of the brain are connected by three commissures, (1) anterior, (2) medi, (3) post-commissure. 6. The cerebellum consists of three portions, (1) right, (2) left hemisphere, (3) vermes. 7. There are three pairs of cerebellar peduncles, (1) superior, (2) middle, (3) inferior. 8. The number of pairs of cranial nerves, in the classifications of Willis and Sommering, can be determined by adding three to the number of letters in each name: that of Willis making nine, and that of Sommering making twelve (or the name containing the more letters has the larger number of pairs of nerves, and vice versa). 9. The cortex of the cerebellum is divided into three layers of cells, (1) granular, (2) Purkinje's cells, (3) a molecular layer.

Rule of Five.—1. Each hemisphere is divided externally into five lobes,

of which four are visible, (1) frontal, (2) parietal, (3) temporal, (4) occipital; and one invisible, (5) insula (Isle of Reil). Roughly speaking, the visible lobes correspond to the bones of the cranium; that is, the frontal lobe is underneath the frontal bone, the parietal lobe beneath the parietal bone, etc. 2. The brain contains five ventricles, of which four are visible—the right and left, or first and second, the third and the fourth; and one invisible, the fifth or pseudo-ventricle. 3. The cortex of the brain contains five distinct layers of ganglion cells.

Studying carefully one hundred cases of brain tumor in which an ophthalmoscopic examination had been made for the presence or absence of choked disc (optic neuritis) Dr. Krauss announced the following conclusions:

1. Optic neuritis is present in about ninety per cent. of all cases of brain tumor.

2. It is more often present in cerebral than in cerebellar cases.

3. The location of the tumor exerts little influence over the appearance of the papillitis.

4. The size and nature of the tumor exerts but little influence over the production of the papillitis.

5. Tumors of slow growth are less inclined to be accompanied with optic neuritis than those of rapid growth.

6. It is probable that unilateral choked disc is indicative of disease in the hemisphere corresponding to the eye involved.

7. It is doubtful whether increased intracranial pressure is solely and alone responsible for the production of an optic neuritis in cases of brain tumor.—*The Philadelphia Medical Journal.*

HAY FEVER.

Medical literature can give us no definite data as to when this peculiar affection was first regarded as a distinct and separate disease. Unmistakable cases were reported in the

sixteenth century, and since that time the disease has been becoming steadily more and more prevalent. The fact that there is a hay fever association in this country, which has records of over two hundred thousand cases, will show how extremely common the affection is in the United States. Indeed, this country and England are its principal seats, the inhabitants of Germany, France and other countries of continental Europe affording comparatively few cases. It might be stated here as a rather curious fact that hay fever is but infrequently encountered among immigrant Germans (Jacobi) and French, even in the regions where native English and Americans are particularly prone to attacks.

Since its earliest discovery the cause or causes of hay fever have been enveloped in doubt. Every conceivable reason, from the blessed sunlight of heaven to peculiar odors of animals or flowers, has been eagerly accepted and as quickly rejected. It was only when the gloom of mysticism and empiricism began to give way to the light of earnest thought and scientific study that some order came out of chaos. It was early recognized that the disease occurred in several successive generations, so that heredity was looked upon as a factor of some importance. Its annual appearance in many sufferers not only on the same day, but at a certain fixed hour, has been noted by many observers; indeed, the victims themselves often predicted accurately the hour of their first sneeze. Cases are numerous of the influence of the smelling of a rose in the production of the disease, and all are probably familiar with the case of Mackenzie in which an attack was precipitated by his giving his patient an artificial rose to smell. Mere intelligent observation of a picture representing some farming scene has been a sufficient cause to bring on an attack. These and many other instances of a similar nature have proven beyond the ques-

tion of a doubt the neurotic element of the disease. Among other predisposing causes might be mentioned the male sex and the white race, attacks being of exceeding rarity among negroes. Age does not exert much influence, all ages being susceptible; usually, however, the victim has been subject to several annual attacks before the middle period of life.

The symptoms on the part of the respiratory tract led to early explorations of the nasal cavity for possible cause. The observers were not disappointed; almost invariably the subjects of hay fever have had some pathologic condition existing in the nose; ulcer, polyp, hypertrophy or congestion of the turbinates, deviation of the septum, remains of adenoids in the nasopharynx, chronic nasopharyngitis, have all been noted by various writers. It might well be stated as an objection that the nose-and-throat man who cannot find at least one of the above conditions in every case that presents itself should give up the specialty; so that possibly a pathologic nose does not play the important part it was formerly thought to.

Among other predisposing causes the one that has gained the most support of recent years was that advanced by Bishop at the annual meeting of the American Medical Association in 1892. In his own words, "an excess of uric acid in the blood causes hay fever." He showed that many patients afflicted with hay fever have an excess of uric acid in the blood during the morning; further, that these were the ones that were attacked during the early morning hours. He thought the paroxysm of hay fever analogous to an attack of epilepsy superinduced by the irritation of some pathologic meningeal process, tumor, adhesion, or hypertrophied bone, and that an attack, itself caused by setting free of uric acid, on account of the pathological condition of the nose was determined to that area. Bishop claims that his theory does

not at all interfere with the neurotic theory, but on the other hand, seems to clear up some points previously obscure, as for instance the onset in the morning. He thought that with the correction of the possible pathologic nasal conditions present, the attacks were switched off, as it were, from involving the nose, but that the excess of uric acid in the blood would be certain to cause symptoms of uric-acidemia elsewhere in the body. Naturally, then, he directed attention both to the cure of any nasal disease present and to the prevention of an abnormal quantity of uric acid in the system.

The exciting cause of the disease is undoubtedly the pollen of plants, as proved over thirty years by the beautiful and laborious work of Blackley. He demonstrated, to the satisfaction of the entire profession, the increase of pollen in the atmosphere at the time of the greatest prevalence of hay fever, and its gradual disappearance as the season verged toward fall.—*Journal of American Medical Association.*

LEO XIII'S HEALTH.

FOR several weeks rumors have been afloat regarding the condition of Leo XIII's health; good souls were disquieted, and strange murmurs were heard in diplomatic circles; some of the ungodly chuckled and said queer things. No one seems willing to tell the truth. We declare—and courage is necessary to avow the fact—that Joachim Pecci, or Pope Leo XIII, is insane. It was just before the French elections that the eminent Pontiff showed the first signs of an agitation that, later on, became morbid. Put into enthusiasm by the first French political results that had given the alliance of the Melinists with the papacy, the head of the Church saw a complete resurrection of power of Catholicism in France. He consecrated several hours a day

to the examination of the records of the various political candidates, received delegates, and himself gave his instructions, *missi Dominici*; he passed a portion of every night leaning over a map of France, wishing to learn the most minute details of the electoral struggle. This solicitude was not long in inducing disquietude among those who surrounded the Pope, and a few of his physicians muttered among themselves the words "general paralysis." In spiritual matters popes are doubtless infallible, but when it comes down to physical matters the way-off country doctor can correctly diagnose the malady of a Pope. But Spain was the drop that overflowed the Pope's vase full of troubles. We all know what has occurred in America. Leo XIII, despite the advice of Cardinal Rampolla, and without resorting to any of the habitual forms of diplomacy, decided to intervene between the United States and Spain—an arbitration that no one had demanded, the refusal of which could only have a most disastrous effect upon the Pontiff. Let us remark, between lines, that this same Rampolla should, by all odds of merit, be the next sovereign Pontiff, while if the See of Rome is wise, Archbishop Ireland should be made a full cardinal, with plenary powers over Porto Rico and Cuba. American Catholics must have American cardinals; it is worse than useless to send Irish or German, even though American-born men, as cardinals. The future of Catholicism is in the Western Continent—mark the prophecy! But we digress. A true period of excitation followed the moral check that the sovereign Pontiff received from Washington, and no one dared approach the illustrious patient. Orders were issued to conceal the Pope's affliction. All this happened at the end of May, 1898. Since that time the Pope's agitation has diminished. To the symptoms of delirium of grandeur (if we can use such words towards a Pope) signs of general paralysis have appeared; the illustrious

patient is very weak, his speech is incoherent, his smile inert, the saliva drops from his mouth. This is the commencement of *gatasia*. Rome will soon have a conclave. Well-informed doctors all know that the Pecci family has furnished a number of insane people to the world; an uncle of Leo XIII died insane; Cardinal Joseph Pecci, of the Company of Jesus, also died of general paralysis. We do not think it fair to the Pope that his doctors should invoke heredity in the case of a man of eighty-eight years. Well-informed persons say that before his accession to the pontificate Joachim Pecci had already given signs of mental derangement in his extreme eccentricity. The physical condition of the Pope is better now than it was in the early spring. The conclave should open up by the end of the year. Meantime, the strongest, brainiest man in the church to succeed Leo XIII appears to be Rampolla. The latter would never make any diplomatic mistakes in the appointment of cardinals for America. *American Catholicism* in America grows stronger day by day, as the birth rate, east, west, north and south, will indicate. Rampolla for the next Pope, then, and Cardinal Ireland for Cuba, Porto Rico—possibly, the Philippines.—*Cor. in Cincinnati Lancet-Clinic.*

CLINICAL REPORT OF FOUR CASES OF LAVAGE OF THE STOMACH BY THE AID OF KNAPP'S DIRECTOR.

By MARK I. KNAPP, M.D.,
New York.

On August 29, 1896, appeared in the *Medical Record* the description of my "stomach-tube director." It was then largely a new device and only theoretically correct. Since then, however, I have had occasion to use

my director in four cases in which the introduction of the tube into the patient's stomach without the director proved an impossibility. Following are the cases:

Case 1.—Mrs. F. W——, forty-two years old, widow, had suffered from chronic gastric catarrh for over three years, during which time she had consulted many physicians. This malady made her very despondent and melancholy. Her friend who recommended me to her had succeeded in bringing her to me only after long and persistent persuasion. After an unsuccessful trial with medicines I advised lavage. My attempts with the tube in the ordinary way were fruitless. Neither persuasion nor coaxing availed anything. I then had recourse to my director, and the result was astonishing. It took me but a few seconds, and the tube was down in the stomach.

Case 2.—Mrs. L——, thirty years old, married, highly nervous, came to have her stomach washed, which I advised her some time before. I did not dare introduce the stomach tube without the director, and before the patient had realized anything the tube was in the stomach.

Case 3.—Mrs. C. S——, thirty-eight years old, married, had an operation for the removal of gall stones in January, 1896. In May she went to Carlsbad, and after she came back family affairs began to depress her spirits, and the diagnosis made subsequently by an eminent specialist was incipient melancholia. Her digestion was in a terrible condition. Lavage of the stomach was my advice, but for a long while I could not induce the patient to submit to it. Attempts without the director proving valueless, I used the director, when I at once succeeded.

Case 4.—Mrs. F. S——, twenty-two years of age, attempted suicide on November 7, 1897. As is usual in such cases, the patient violently objected to the introduction of the tube. I then tied her arms behind

her back, forced the mouth open with the handle of a spoon, and introduced the tube by means of the director into the stomach. Here my full expectations were realized. The patient struggled and bit, with the desired result of having the director kept in place and in apposition still better. In this case the director acted not only as such, but also as tongue depressor and mouth gag.

Now a few words in repetition as to the utility of the director. First, the physician need not introduce his finger into the mouth of the patient, thus avoiding possible danger to himself; second, the physician need not fear to go anywhere else than in the desired direction by simply pushing the director as far back as he can; and third, the patient is entirely at the mercy of the physician.

A few gentlemen contend, in derogation of the instrument, that we might introduce the tube through the nose. Well, at the very best, we can use only a small catheter; and secondly, is not one sometimes non-plussed in finding deviations there or hypertrophies?—*N. Y. Medical Record*.

CHEMICAL AND UROTOXIC INVESTIGATIONS OF FATIGUE, IN THE HUMAN SUBJECT.

During the six-day bicycle race which took place in New York City some few months ago, Dr. Bookman availed himself of the opportunity thereby afforded to investigate extreme muscular, nervous, and mental fatigue, from the chemical as well as from the urotoxic point of view (*State Hospitals Bulletin*). As may be believed, the race in question afforded an excellent occasion for making such investigations, and the conclusions arrived at should prove of much practical value. When it is stated that during the six days of racing the subject selected for the observation was off his wheel less than half a day, and

that he slept a little less than five hours in that time, it will be seen that the selection was a wise one. From a careful examination of the urine, Dr. Bookman made the following deductions: That the metabolism was greatly reduced in its production of sodium chloride, uric acid, phosphates and urea, total solids and water. This is explained as due to the perspiration, carrying off the phosphoric acid and possibly conveying with it sodium chloride and water, in addition to small amounts of urea and solids which might have been also secreted in the perspiration, thus robbing the urine of its normal amount of these constituents. The small amount of uric acid found is accounted for thus: As there is no possibility in cases of extreme muscular exertion for the metabolism to possess a low oxidizing power, it is self-evident that the uric acid, which is a less highly oxidized product than urea, cannot remain in that state, it will therefore be completely oxidized to urea. Dr. Bookman then proceeds to say:

"It will therefore be seen that the metabolism has not been impaired whatsoever in this case, the variations in the amounts of the few constituents mentioned being easily explained by natural processes occurring in the body of the person engaged in this exercise. We may thus infer that no injury has been done to any organ, since this would have manifested itself in our investigations."

Further proof, is however, afforded on this point by a series of experiments on rabbits, made by Dr. Bookman, which showed beyond doubt that the urine of man examined exhibited a lower toxicity than that of the normal subject. Finally, Dr. Bookman inquires: "Does the over-exertion in cases like this produce any effect which may be deleterious to the human system, and can the body, by careful training, not accustom itself to this, regarded by many as an almost superhuman performance?"—*Med. Record*.

Issued October 20th, 1898.
F. H. Bryce, Secretary.

MONTHLY REPORT.

Issued by the Provincial Board of Health of Ontario for September, 1898.

Showing the deaths from Contagious Diseases in the Province as reported to the Registrar-General by the Division Registrars throughout the Province.

Year.	Month.	Total population reported.	Total municipalities reporting.	Total deaths reported.	Scarlatina.	Diphtheria.	Measles.	Rate per 1,000.	Whooping-cough.	Rate per 1,000.	Typhoid.	Rate per 1,000.	Tuberculosis (Consumption).	Rate per 1,000.
1898..	September ..	2,163,151 95%	667 90%	250	11	33	2	0.01	13	0.07	44	0.2	147	0.8
1898 ..	August	2,183,168 97%	694 93%	230	10	16	6	0.03	12	0.06	34	0.2	152	0.8
1898..	July	2,157,337 93%	688 92%	224	15	16	18	0.1	12	0.07	20	0.1	143	0.8

Year.	Month.	Total population reported.	Total municipalities reporting.	Total deaths reported.	Scarlatina.	Diphtheria.	Measles.	Rate per 1,000.	Whooping-cough.	Rate per 1,000.	Typhoid.	Rate per 1,000.	Tuberculosis.	Rate per 1,000.
1897..	September ..	1,630,760 72%	506 68%	204	3	24	4	0.03	12	0.03	39	0.2	122	0.9
1897..	August	1,521,799 69%	405 54%	180	6	22	7	0.05	12	0.03	22	0.1	120	1.0
1897..	July	1,520,384 70%	420 57%	167	7	20	5	0.04	6	0.05	9	0.07	111	0.9

Population of Province, 2,263,402. Municipalities of Province, 745. Corrections have been made in the percentage of population reporting as based upon the population returns of the municipal assessors, by changing them to that adopted in the Registrar-General's returns, as based upon the census of 1891.

N.B.—Division Registrars will please notice that the Act requires that a return be made before the 5th of each month, whether any deaths have occurred or not.



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.. AND ..

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EDITOR:

BEATTIE NESBITT, B.A., M.D., F.C.S.

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No. 5.

ELECTIONS FOR THE SENATE OF THE TORONTO UNIVERSITY.

To quote from our friend the *Canadian Practitioner*: "We had hoped that the extreme bitterness was dying out, and that the expressions of 'loyalty to colleagues' and 'harmony in the faculty,' which have greeted us in recent years, were not a hollow mockery. We had supposed that there was a general feeling that our bickering in public would cease, and had expected that the old members, Drs. Graham, Cameron, Aikins and Wright, would be unopposed. Such, in fact, appeared to be the general opinion. Some of the extremists of a certain party, however, were determined not to allow this, and secretly organized with the result that the nomination of Dr. Jas. M. MacCallum was put in at the last moment, and at the same time letters were sent broadcast among the graduates asking them to 'plump' for Drs. Cameron and MacCallum. The friends of Drs. Graham and Wright promptly accepted this challenge, and at the same time worked for Dr. Aikins, who has always been a steadfast supporter of their party in the Senate."

We always presumed that our contemporary was the organ of the University Faculty and such would seem to be its attitude from its editorial. Yet how can it be the organ of the Faculty, when it says: "While we are pleased with the result in medicine, we have to regret that the unfortunate split in the medical faculty should again have been exposed to public view." It is not difficult to understand which half of the Faculty our contemporary represents, and we agree with them that the condition of the latter's affairs is one seriously to be deplored.

It was hoped by everyone, when the Toronto School of Medicine affiliated with the University, with the advantage of staff and splendid equipment for the primary department, we would have a strong school in Toronto, that the spirit of original research would be stimulated and the standard of training would be the highest. In fact, we would have for Toronto such a school as McGill has proved to be for Montreal. Without any lack of patriotism for local institutions, there is no doubt

that McGill to day is the best medical school in Canada, and one of the best on the continent. There are several reasons for this; first, not being a commercial institution, the policy of the school is not hampered by the desire for dividends. Second, not being a state institution, it receives the endowments of the wealthy. Third, and above all, the *esprit de corps* of its Faculty, whose single watchword is McGill, have made the name synonymous with success. We believe that both institutions in Toronto could achieve as great a success as McGill if the same method and the same standard were pursued. There is no lack of teaching ability in our schools. The gentlemen in the chairs of both Faculties deserve the high position they have attained in the profession. Unfortunately, however, it would seem, that a medical man is not happy unless he is in some clique. We hear of no trouble from divisions in the Trinity Faculty, possibly from the mutuality of its constitution. As far as the Toronto Faculty is concerned, we believe that the origin of its trouble was in politics. No sooner had it become affiliated with the University than the silken glove was found to contain the iron hand of the politician. Places had to be found for relations of the politicians. It did not matter where they had graduated or how long they had been residents of the province or city. This, in spite of the fact, that there were men, graduates both in medicine and arts of Toronto University, the affiliated school being their Alma Mater in both senses, who at the time of these appointments were undoubtedly the equal in point of ability of the friends of the politicians. Then came a toadying to the powers that be, and a division into factions, and almost the ruin of the institution. We think it is high time that some practical stand towards harmony was taken, or that in the endeavor of one faction to throw the other faction out, they

may find themselves in the unpleasant predicament of "Puddin'-head Wilson's" dog, and after they have killed one-half, be pretty safe in their prognosis for the other.

BELLADONNA PLASTERS.

A curious mistake was made by the Research Committee of the Committee of Revision of the United States Pharmacopœia on their method for assay of belladonna plasters, and incidentally attempting to establish a standard of strength. According to the text of the Pharmacopœia, emplastrum belladonna is prepared as follows:

Alcoholic extract of
belladonna 200 gm.
Resin plaster 400 gm.
Soap plaster 400 gm.
To make one thousand grammes.

Melt the plasters on a water-bath; then add the extract of belladonna and continue the heat, stirring constantly, until a homogeneous mass results.

It will therefore be seen that the proportions are 20 per cent. of extract, 80 per cent. mass. In their experiments the committee took 33 $\frac{1}{3}$ per cent. of extract and consequently got .393 and .377 per cent. of alkaloid in belladonna plasters from their own figures. If they had followed the Pharmacopœia the alkaloidal standard would have been .230 to .238 per cent. Assays of belladonna extract, and plasters made from the same, by Charles Caspari, secretary of the American Pharmaceutical Association, shows the following results:

	Plaster.	Extract.
Sample B . . . . .	.301	1.835
" C . . . . .	.240	(1.30.)
" E . . . . .	.160	.908
" A . . . . .	.173	.870
" D . . . . .	.290	.172
Mean of five samples	0.232	1.326

It will therefore be seen that the alcoholic extract of belladonna, as

supplied by five of the most reliable manufacturers, averages 1.326 per cent. and when plasters are made from these extracts, according to the Pharmacopœia, they would contain .232 per cent. alkaloid in the plaster mass. Charles Rice, chairman Committee of Revision of the United States Pharmacopœia, believes that .3 per cent. of alkaloid should be the standard in the Pharmacopœia. It is difficult to see how he can advocate this standard. This standard cannot be obtained, without difficulty, by using merely alkaloidal extracts. There is a gradually growing conviction amongst those best able to judge that you cannot obtain the same effect from the purified alkaloid that you

can from it in its natural combinations, and we cannot conceive of a more reprehensible practice than that of making up the required standard by addition of pure alkaloid to an inert mass. The whole question resolves itself to this: We must have first a thorough knowledge of our extracts and what should be their alkaloidal strength, without this no standard can be made. It appears from the best information at hand, that .3 per cent. is too high, and we consider .25 per cent. would more nearly approach correctness; we say, therefore, that it is much better to have a lower possible percentage than a high impossible one, which must necessarily lead to sophistication.

Editorial Abstracts

SERUM TREATMENT OF SYPHILIS.

JULLIEN.—Hemo-therapy and serum therapy in syphilis. (*Ann. de dermat.*, v. 9, p. 244.) Two patients were treated with the serum obtained from the ascitic fluid of a syphilitic patient—one of these improved, but the other only showed transitory improvement, analagous to the mercury treatment.

AUDITORY ORGANS IN LEUCÆMIA.

SCHWABACH.—Diseases of the auditory organs in leucæmia. (*Zeits. f. Ohrenhulk.*, v. 30.) From a study of 15 cases the author concludes that auditory troubles occur in 1 to 3 cases. It is especially the nervous apparatus of the ear which is affected. Ménières vertigo in leucæmia is not always due to alterations in the labyrinth.

CHANCROID IN ANIMALS.

SAPUPPO.—Chancroid in animals. (*Giorn. ital. d. mal. ven.*, v. 33, p. 43.) Numerous inoculations of chancroids were made in rabbits, guinea-pigs and pigeons. Inflammatory lesions were

produced but the Ducrey bacillus disappeared and only the ordinary pyogenic organisms were found. This new pus proved negative to man. The author believes the soft sore to be peculiar to man.

DECOMPOSITION OF CHLOROFORM IN THE BODY.

DESGREZ AND NICLOUX.—Decomposition of chloroform in the organism. (*Comp. Rend. Acad. d. Sci.*, 1897, p. 973.) In the test tube chloroform in alkaline solution gives rise to the formation of oxides of carbon; this seems to occur to a slight extent in the body, the carbon monoxide combining with the hæmoglobin and thus gives rise to some of the accidents which are attributed to the chloroform.

ETIOLOGY OF DIABETES INSIPIDUS.

BANDLER.—Contribution to the etiology of diabetes insipidus. (*Arch. f. Derm.*, v. 41, p. 49.) The author reports the case of a man aged 27 years—a subject of hereditary syphilis and cerebral complications, with

diabetes insipidus. The syphilitic symptoms disappeared with the polyuria under the administration of potassium iodide. He believes the diabetes due to either a cerebral gumma or a gummatous infiltration of the meninges.

CHLOROFORM FOR TAPEWORMS.

CARRATU. — Use of chloroform for tænia. (*Giorn. med.*, 1897, Nos. 8 and 9.) Carratù has used chloroform in many cases as an anthelmintic; he recommends it for its prompt action and its almost entire freedom from untoward action. He uses it as follows—

Chloroform 3—4
Syrup - 35

One teaspoonful every two hours, beginning early in the morning, and one hour after the last dose, 25—30 gm. castor oil is given, the patient being on a bland diet. He claims to have cured thus cases which had resisted the action of *felix mas*, *kosoo* etc.

TREATMENT OF TUBERCULOSIS.

GISLER. — Treatment of tuberculosis, especially tuberculosis of glands and bone, with *sapo viridis*. (*Corresp. Blatt. f. Schweiz. Ärzte.*, 1897, p. 621.) At the out clinic at Basle 115 cases of external tuberculosis were treated by the application of green soap. Of these 28.9% were cured, 39.1% improved and in 32.2% there was no improvement. Those cases which were cured were treated 102 days; those which improved, ninety-two days, while those which were not improved, 51 days. Tuberculosis of bone yielded more quickly (eighty-four days) than tuberculosis of soft parts (120). Each day the particular area was rubbed with a piece of soap the size of a chestnut, the soap being first moistened with a little water.

TREATMENT OF PSORIASIS.

HERSHEIMER. — Treatment of psoriasis. (*Berl. klin. Woch.*, 1897, No. 35.) Twenty-five cases of psoriasis were treated exclusively by the daily intravenous injection of arsenous acid. The initial dose was 1 mg. and increased up to 15 mg. a day where it was held until the disappearance of the eruption. Of these cases, 10 were cured, 6 after improving, discontinued the treatment, and the remaining 9 were still under treatment; in 3 of these 9 the cure was almost complete, while in the other 6 there was marked improvement. The cure begins about the end of the second week, and begins with a dark pigmentation of the patches and with a diminution of the desquamation. It requires about 48 days.

THE RETINA IN PHOSPHOROUS POISONING.

STEINHAUS. — Changes of the retina in phosphorous poisoning. (*Ziegler's Beiträge z. path. Anat.*, v. 22, p. 466.) Animals in which oil of phosphorous had been injected subcutaneously and which died of subacute poisoning often showed signs of diminution of visual acuteness. Ophthalmoscopically the veins were found hyperæmic leading to stasis of the papilla, small detachments of the retina occurred, and once hæmorrhagic retinitis. If the animals survive a long time there may be found atrophy and extensive hæmorrhagic retinitis. Histological examination shows transudation into the interior of the optic nerve, the papilla and retina; degeneration of the nerve fibres and of the retina and detachment of the retina.

ACTION OF THE X-RAYS ON THE TISSUES.

LOUDIN, BARTHELEMY, DARIRE. — Changes in the skin and viscera from the X-rays. (*Monats f. prak. Derm.*, v. 25, No. 9.) They consider the distance from the tube of more importance in the production of these lesions

than the duration and frequency of the exposures, and consider them as primary cutaneous changes but due to central trophneuroses, because of the late appearance of the changes, their persistency and liability to return, the occurrence of ulcers of skin in portions not exposed, but which belonged to the particular nerve area, the peripheral circulatory changes preceding the chronic dermatitis, and the nervous symptoms observed in animals, as trembling, paraplegias, etc. In guinea-pigs at times it caused alopecia, which might not appear before two months. The skin showed a considerable thickening in all the layers of the epidermis with great increase of the keratohyalin and marked atrophy of the hair follicles.

ACTION OF ALCOHOL ON THE RESPIRATORY CENTRE.

WILMANN'S.—Direct excitation of the respiratory centre by alcohol. (*Pflueger's Archiv.*, v. 66, p. 167.) Boriz's observation, that injection of moderate quantities of alcohol into the veins of rabbits increases markedly the respiratory volume, has been corroborated by Jaquet, who extended the observation and found that the same occurred after its administration per os. Jaquet believed it was due to reflex, and not a direct action upon the respiratory centre. He based this view upon the fact that the post mortem examination showed an intense gastric irritation and that by irritation of the nerves of the gastric mucous membrane the respiratory volume was increased, and after breathing alcohol vapors there was likewise an increase in respiratory volume, which did not occur if the vagus was previously cut, and finally after the administration of 0.002 g. morphine, which he believed lessened peripheral irritability, there was no increase in volume. Wilmann's questions Jaquet's results and believes it due to a central irritation, because the gastric mucous membrane of his

animals was not reddened more than normal and irritation of the gastric mucous membrane with mustard oil did not increase their volume. Contrary to Jaquet, breathing alcohol vapors after cutting the vagi still increased them, and in spite of the morphine the respiratory volume was still increased. This amount of morphine, 0.002, Wilmann holds, influences the respiratory centre, and, finally, alcohol acts quicker if injected directly into the carotid artery than when into a vein. These observations give a pharmacological basis to the clinical use of alcohol.

PRESERVATION OF THE OVARIES IN GYNÆOLOGICAL OPERATIONS.

KELLY.—Conservation of the ovary in hysterectomy and hysteromyomectomy. (*Brit. Med. Journal*, 1898, v. 1, p. 288.) The change of name from "testes muliebus" to "ovaria" or "ovaries" has hindered the conservative treatment of female pelvic disorders, for had the older name "testes" been retained operative surgery would have advanced more slowly and would not have gone so far, as the conservatism with which the male organs are treated would have been reflected upon the gynæcological field. The advantage of conservatism does not lie merely in the possibility of conception, but as Martin says, "it is probable that the ovaries, like the liver and thyroid gland, modify the blood circulating through them, and add to the blood some peculiar product of their metabolism. It may be that some of the climacteric symptoms are due to the loss of this substance from the system." Since 1895 Kelly endeavored to save the ovaries even in those cases in which it was necessary to remove the uterus and tubes; his chart shows a marked diminution and even absence of the nervous symptoms of the menopause. He thinks the operation most easily performed "by tying off the broad ligament at the uterine

corner, including the isthmus of the tube and the utero-ovarian ligament in the first tie, tying the round ligament next, and then exposing the base of the broad ligament, ligating the uterine vessels, amputating the uterus at the vaginal junction, clamping the uterine vessels of the opposite side, and then pulling the uterus up and out, and ligating the round ligament, the tube, and the ovary at the opposite corner."

BICYCLE RIDING AND THE KIDNEYS.

MUELLER. — Influence of bicycle riding upon the kidneys. A contribution to the knowledge of physiological albuminuria. (*Muench. med. Woch.* 1896, No. 48.) The urine of twelve healthy young bicyclists, between the ages of nineteen and thirty-two, was examined. Eight of these were in training, and of these eight one had traces of albumen in his urine before training, while the urine of the remaining seven was normal. After the race albumen was present in seven out of the eight, in one there was only a trace and in the remaining it was present in considerable quantity. Two cases, in one of which there was only a trace of albumen, contained a few hyaline casts, while the other six, including the one which had no albumen, contained as many casts as one usually meets in acute and chronic-parenchymatous nephritis. Most of the casts were hyaline, but there were also numerous granular and epithelial casts and some covered with renal cells. There was regularly present renal epithelium and a few leucocytes, but red corpuscles were absent. The albumen and casts disappeared in a few days. The urine of those not in training before the race contained no albumen, and after it albumen and casts were absent in two, in the third there was marked albuminuria, but no morphological elements, while in the fourth there was marked albuminuria with numerous casts. Leaving out of considera-

tion the case in which albumen was present before the race, there was albuminuria in 72%, a large number of casts in 58%, a few hyaline in 15%, and only 16% remained unchanged. This form of albuminuria due to bicycling is distinguished from the physiological albuminuria by its severity and the character of the casts. The author, however, believes that a persistent irritation of the kidneys is not to be feared. Nucleo-albumen, which is present in the urine after muscular exertion could not be proved.

IODINE TREATMENT OF SYPHILIS.

ZUELZER. — New propositions for the iodine treatment of syphilis. (*Arch. f. Derm. u. Syph. Festsch. gewid. F. J. Pick*, 1898, p. 421.) The current view has been that after the administration of organic or inorganic iodine preparations, iodine is split off in the body and then combines with albumens forming loose combinations. Blum has, however, shown that the halogens by acting upon albumen can form firm substitution products with elimination of hydriotic acid, and that this action can be proven in the thyroid after the administration of alkaline iodides, as here a storing up of these bodies occurs, while according to Zuelzer, proportionately little is found outside of the thyroid and as in a short time outside of the thyroid no iodine is found and as it is only eliminated in inorganic combination, therefore this organic compound must again be decomposed. Zuelzer studied the behaviour of an iodine albumen compound in the organism, using iodalbumic acid, a preparation which contains 8% iodine. This, unlike potassium iodide, is only oxidized in the test tube by the strongest oxidizing agents, as sulphuric acid and potassium bichromate, yet the body oxidizes it, for after its administration alkaline iodides are found in the urine. It never causes iodism as does the potas-

sium iodide which the author believes due to the easy oxidizability of the latter. It is slowly absorbed and slowly eliminates, for while the potassium iodide may be eliminated in from three to four days owing to its slow elimination by the same amount of iodine in organic combination, the kidneys is only completely eliminated in four or five. In cases where the iodine salts could not be borne, the iodobacid was taken with good results and gastro-intestinal irritation, which is so common after the long use of the ordinary iodides, was entirely absent. In syphilis there has been a great variability in the use of the iodides; some use from 0.5—2 gm. *pro die*, while others run from 5.20 times the daily dose, and good results

have been obtained with iodothylin which contains only a few milligrammes of iodine; at present one uses from 1—3 gm. and even this causes an oversaturation. The therapeutic value of this iodobacid in syphilis is due to its slow, protracted action. In the secondary stage it is valuable. He proposes in the treatment of syphilis that during the first three or four years each mercury treatment (Herscheimer's method) should be followed by a three weeks' treatment with iodobacid 3—4 gr. *pro die*, and if slight secondaries appear in the intervening period, iodobacid should be given. During the tertiaries he recommends potassium potassium iodide followed by a six weeks' treatment of iodobacid.

Physician's Library

A Text-Book of Materia Medica, Therapeutics and Pharmacology. By GEORGE FRANK BUTLER, Ph. G., M.D., Professor of Materia Medica and Clinical Medicine in the College of Physicians and Surgeons, Medical Department of the University of Illinois; Professor of General Medicine and Diseases of the Digestive System, Chicago Clinical School; Attending Physician to Cook County Hospital, Chicago, etc. Second edition, revised. Philadelphia: W. B. Saunders, publisher. Price, cloth, \$4.00; sheep, or half morocco, \$5.00.

Another edition of this well-known work, the previous one scarce cool from the press, shows that the author in dedicating a work to the student did not leave his task with the title-page, but has given him a work so thoroughly adapted to his needs, and so comprehensive in its scope, that it will no doubt remain with him, not only as a companion in the class room, but as an old and tried friend when he goes out to the broader field of clinical work.

A Clinical Text-Book of Medical Diagnosis. For Physicians and Students. Based on the most recent methods of examination. By OSWALD VIERARDT, M.D., Professor of Medicine at the University of Heidelberg; formerly Privatdocent at the University of Leipzig; later, Professor of Medicine, and Director of the Medical Polyclinic at the University of Jena. Authorized translation, with additions by FRANCIS H. STUART, A.M., M.D., member of the Medical Society of the County of Kings, N.Y., etc. Fourth American edition, from the Fifth German, revised and enlarged. With 104 illustrations. Philadelphia: W. B. Saunders, publisher. Price, cloth, \$4.00; sheep or half morocco, \$5.00.

This work, which has been thoroughly brought up to date, is undoubtedly one of the best on clinical diagnosis that we possess. A work so well known and so highly thought of in Germany as to command a fourth edition, is one of which there can be no doubt as to its merit. We have carefully examined it and find

that in every department of diagnosis the details are full and complete. Special attention has been paid to the chemical examination of all fluids, and the whole question of bacteriology in relation to diagnosis has been fully gone into. The colored plates in connection with this book are the equal of any in any work on bacteriology. We cannot too strongly recommend the profession, if they are desirous of having the best work on clinical diagnosis, purchase this book.

An American Text-Book of Gynecology, Medical and Surgical. For Practitioners and Students. By HENRY T. BYFORD, M.D., J. M. BALDY, M.D., EDWIN B. CRAGIN, M.D., J. H. ETHERIDGE, M.D., WILLIAM GOODELL, M.D., HOWARD A. KELLY, M.D., FLORIAN KRUG, M.D., E. E. MONTGOMERY, M.D., WILLIAM A. PRYOR, M.D., GEO. M. TUTTLE, M.D. Edited by J. M. BALDY, M.D. Second edition, revised, with 341 illustrations in the text, and thirty-eight colored and half-tone plates. Philadelphia: W. B. Saunders, publisher. Price, cloth, \$7.00; sheep or half morocco, \$8.00. Sold only by subscription.

No class of medical works has attained more deserving success than Mr. Saunders' American text-books. The new edition of this work has much new material added to it, and more than forty of the old illustrations have been replaced by new ones. The names of the authors of the different sections are a sufficient guarantee of the practical nature of all subjects treated. Those who have the older edition will be certain to purchase the new one, and this is the best recommendation it can receive.

A Text-Book Upon the Pathogenic Bacteria, for Students of Medicine and Physicians. By JOSEPH MCFARLAND, M.D., Professor of

Pathology in the Medico-Chirurgical College, Philadelphia, etc. With 134 illustrations. Second edition, revised and enlarged. Philadelphia: W. B. Saunders, publisher. Price, \$2.50.

Professor McFarland has added considerable matter to this new edition of his work, and more especially has devoted great care to all the improvements in technique which are constantly occurring in this newer branch of science, so that this book is not only a systematic work on bacteriology, but a thorough laboratory guide. Among the new chapters added are those on bacteriology of whooping-cough, mumps, yellow fever, hog cholera and swine plague. This makes it to-day as complete a text-book as can be placed in the hands of practitioner or student.

An American Text-Book of the Diseases of Children. Including special chapters on Essential Surgical Subjects; Orthopedics; Diseases of the Eye, Ear, Nose and Throat; Diseases of the Skin; and on the Diet, Hygiene and General Management of Children. By American teachers. Edited by LOUIS STARR, M.D., Consulting Pediatricist to the Maternity Hospital, Philadelphia; late Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, etc. Assisted by THOMPSON S. WESCOTT, M.D., Instructor in Diseases of Children, University of Pennsylvania, etc. Second edition, revised. Philadelphia: W. B. Saunders, publisher. Price, cloth, \$8.00; sheep or half morocco, \$9.00. Sold only by subscription.

There possibly has been no section of medicine in which the advancement has been so great as in the field of pediatrics, and it is a pleasure to receive a work like the above, edited by that eminent pediatricist, Starr, with a corps of well-known writers. There have been a number of new

additions, among which we find "Modified Milk and Percentage Milk Mixtures," "Lithemia," and a section on Orthopedics; those re-written are "Typhoid Fever," "Rubella," "Chicken-Pox," "Tuberculous Meningitis," "Hydrocephalus," and "Scurvy," while more or less extensive revision has been made in the chapters on "Infant Feeding," "Measles," "Diphtheria," and "Cretinism." The volume has been considerably increased in size and is one that we can heartily recommend.

price, made necessary by the limited sale and the enormous expense of production. Now, however, by reason of their projected universal translation and reproduction, affording international distribution, the publishers have been enabled to secure for these atlases the best artistic and professional talent, to produce them in the most elegant style, and yet to offer them at a price heretofore unapproached in cheapness. Their very low price will place them within the reach of even the novice in practice.

Hand Atlases.

We desire to draw special attention to the series of Hand Atlases now being published by Mr. Saunders. We have reviewed a couple of these works already, but the work is of such importance, owing to the extreme elegance of the production and the moderate price, that we feel that a few additional words of explanation might induce many practitioners to procure this valuable work. One of the chief and most valuable features of these atlases is that they offer a ready and satisfactory substitute for clinical observation. Such observation, of course, is available only to the residents in large medical centres; even then the requisite variety is seen only after long years of routine hospital work. To those unable to attend important clinics these books will be absolutely indispensable, as presenting in a complete and convenient form the most accurate reproductions of clinical work, interpreted by the most competent of clinical teachers.

The great advantage of natural pictorial representation is indisputable. For lasting and practical knowledge, one accurate illustration is better than several pages of dry description. While appreciating the value of such colored plates, the profession has heretofore been practically debarred from purchasing similar works because of their extremely high

Price List, Parke, Davis & Co.

We have always had the highest opinion of Canada as a business field, but have not had it so forcibly brought home to us as recently on the latest edition of Messrs. Parke, Davis & Company's price catalogue. This work has been prepared and printed in Canada, and embracing, as it does, over 5,000 preparations, all manufactured by the Walkerville laboratory of this famous house, is undoubtedly the finest catalogue ever produced here. There is only one way in which their great growth can be explained, and that is that they have obtained and retained the confidence of the profession in the most marked degree. They are always the first to be thoroughly in touch with the scientific progress of medicine, and no where has this been shown to such an extent as by their establishment of a department for the physiological standardizing of drugs. Their biological department is so well and favorably known that it needs no comment. This list, despite its size, is compact and handsomely printed, and is sent without charge to every physician who asks for a copy. We cannot recommend the profession too strongly to make this request, because it is the most complete embodiment of the pharmacopea, both as regards actions and dosage, that has come to our notice.

BOOKS RECEIVED.

Practical Urinalysis and Urinary Diagnosis. (Purdy.) Fourth revised edition. Publishers, F. A. Davis & Company, Detroit.

Primer of Psychology and Mental Disease. (Burr.) Second, revised edition. Publishers, F. A. Davis & Company, Detroit.

Cyclic Law, Its Influence over Man in both Health and Disease, Determining the Sex. Its influence upon births, deaths, etc. By THOMAS E. REED, M.D., Middletown, O. Published by the author. Price, \$1.25.

The Change of Life in Women and the Ills and Ailings Incident Thereto. By J. COMPTON BURNETT, M.D., author of "Tumors of the Breast," "Organ Diseases of Women," "Curability of Tumors by Medicine," etc. Philadelphia: Boericke & Tafel, publishers. Price, \$1.00.

The Care of the Baby. A manual for mothers and nurses, containing practical directions for the management of infancy and childhood in health and in disease. By J. P. CROZER GRIFFITH. Second edition, revised. Price, \$1.50. Publisher, W. B. Saunders, Philadelphia. J. A. Carveth & Company, Toronto.

Essentials of Materia Medica and Therapeutics, and Prescription Writing. Arranged in the form of questions and answers. Prepared specially for students of medicine. By HENRY MORRIS, M.D. Fifth edition, revised and enlarged. Price, \$1.00. Publishers, W. B. Saunders, Philadelphia; J. A. Carveth & Co., Toronto.

PAMPHLETS RECEIVED.

"The Derman Coverings of Animals and Plants." A short resumé of various authors. By MERRILL RICKETTS, PH.B., M.D., Cincinnati, Ohio. Reprinted from the *Cincinnati Lancet-Clinic*, August 20th, 1898.

"Practical Treatment of Skin Affections." By WALTER P. ELLIS, M.D., Livermore, Ky. With report of five cases.

"Deaths (Ten) Surgical and Causes." By MERRILL RICKETTS, PH.B., M.D., Cincinnati, Ohio. Reprinted from the *Cincinnati Lancet-Clinic*, June 4th, 1898.

"Questions Covering the Important Points on Diphtheria Antitoxin." With clinical lecture on the treatment of diphtheria. By JOHN HERALD, A.M., M.D., Kingston, Ont.

"The Aseptic Animal Suture; Its Place in Surgery." By HENRY O. MARCY, A.M., M.D., LL.D., Boston, Mass. Reprinted from the *Journal of the American Medical Association*, August 20th, 1898.

THERE has been on the market for some years, a preparation which was very favorably received by the profession, but owing to changes in management, and some internal difficulties, the supply was irregular. Although all those who prescribed it had formed a high opinion of it, and kept repeating their prescriptions, a regular supply was not obtainable. This was a permanent emulsion of iron and cod liver oil, known as Ferrol. The method of combination that produced such brilliant results was due to the pharmaceutical ability of Dr. Fiecheller, the originator of the preparation, and must needs have been one of great merit to have kept its place with the profession in spite of the difficulties it has encountered. This preparation, as will be seen by our advertising pages, has been taken hold of in a thorough and ethical manner, and now physicians will be able to obtain the article demanded on their prescriptions. We can certainly recommend it to the profession as an emulsion of iron and cod liver oil that they can absolutely depend upon.

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Miscellaneous

ALCOHOL AND THE RUSSIAN DEATH RATE.—An official inquiry into the comparatively larger increase in the Tartar population of the city and government of Kazan has, according to the *Kamsko Voishki kraï*, brought out some remarkable facts as to the effect of alcoholic indulgence on the death rate. The Kazan Tartars, numbering about 640,000, have a rate of mortality of only 21 in 1,000, while the mortality among the Russians is 40 in 1,000. The general conditions among orthodox Russians and Mohammedan Tartars are practically the same, except in so far as personal habits are concerned. The medical investigation leaves no room for doubt that the lesser mortality of the Mohammedan Tartars is directly due to their abstinence from spiritous liquors, in which the Russians indulge freely.—*Med. Record.*

PREDISPOSITION TO HERNIA.—Kocher, of Berne (*Correspond. Bl. f. Schweiz. Aerzte*) says that in practically all cases of the sudden appearance of a hernia one of the following anatomical predisposing causes is present: (1) A congenital hernial sac formed from imperfect closure of the processus vaginalis, which accounts for a third of all cases according to Wood. (2) An adipocele arising from the subserous fatty tissue may stretch the rings and prepare the way for a peritoneal pouch. (3) A conical sac of peritoneum formed in the way described below, and which is of congenital origin only in so far as it may depend on a congenital weakness of the abdominal walls. The intestine at the moment of rupture, therefore, enters an already formed sac in any case. Nevertheless, the existence of any of these predisposing causes does not necessarily produce a hernia

proper. When performing a radical cure for a hernia on one side, if there has been any clinical evidence of a predisposition on the other, Kocher has often taken advantage of the narcosis to operate on it also as a prophylactic measure. He has thus had frequent opportunities of studying pre-hernial conditions. The conical sac of peritoneum mentioned above is formed by the repeated pressure of the intestines, by which the parietal peritoneum is driven forwards over Poupart's ligament as a cone with its base posteriorly. In this process the fascia transversalis yields first, then the internal ring is enlarged, and the ascending fibres of the transversalis fascia (Henle's ligamentum inguinale internum mediale) are stretched and pushed towards the middle line, together with the epigastric vessels (in indirect hernia). Further, the anterior wall of the inguinal canal must be relaxed also, and even at this early stage the pillars of this external ring are abnormally separated whereby the inter-columnar fibres are stretched, and lose their power of resistance. Kocher states that almost all direct inguinal herniæ are produced by a similar mechanism, while as regards indirect herniæ, he believes more arise in this way than through the presence of a patent processus vaginalis. Clinically the presence of such a peritoneal cone is recognized by the fact that on coughing the inguinal region is driven forwards as a circumscribed, mostly oval, swelling which subsides as soon as the cough is finished without it being necessary to reduce any escaped intestine. This bulging is often accompanied by pain or discomfort. When, however, there is an unclosed processus vaginalis there is always a narrow neck, and its presence gives the patient no inconvenience whatever until intestine is suddenly forced into it.—*Brit. Med. Journal.*