

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTERESTS OF
MEDICINE AND SURGERY

VOL. XXI.

TORONTO, MAY, 1907.

NO. 5.

Original Contributions.

APPENDICITIS: SOME POINTS IN DIAGNOSIS AND TREATMENT BASED ON OVER 600 OPERATIONS.*

BY HERBERT A. BRUCE, M.D., F.R.C.S.,

Associate Professor Clinical Surgery, Toronto University; Surgeon to St. Michael's Hospital; Assistant Surgeon to the Toronto General Hospital.

My excuse for taking up such a common malady is simply that it is so common and even yet so imperfectly understood. There is, perhaps, no disease which a surgeon is so frequently called upon to see, and in which he must act with more promptness, than appendicitis. It is therefore desirable that not only the surgeon, but the general practitioner should have clear-cut views as to its treatment. I thought this a most favorable opportunity for getting the views first hand, of British and American, as well as our Canadian surgeons, and I hope that we shall have a free expression of opinion on the various points raised.

I think we are all of one opinion in regard to the important point of its treatment, namely, that the appendix should be removed. There will probably be a difference of opinion as to the best time to accomplish this. My own opinion is that in all cases of acute appendicitis the operation should be undertaken at the earliest possible moment. If this is the correct plan of treatment it is of the highest importance that the physician should make a very early diagnosis, for the responsibility of quick action rests upon him. Unfortunately, all of us have had the sad experience of being called too late, when twenty-four or thirty-six hours earlier would have saved a valuable life. It is highly important also that

* Read before meeting of the British Medical Association, Toronto, August, 1906.

the laity should be educated up to expect an operation in cases of appendicitis.

The strong opposition of friends has often improperly influenced the family attendant against suggesting an operation, knowing that it would be displeasing to them. I have many times been told by a family physician that, knowing the objection of the patient and his friends to an operation, he has hesitated about suggesting it, until the patient was so ill that it became urgently necessary to have something done. Then, unfortunately, it is often too late, and the operation becomes discredited. I remember very well a case of an only son who had an acute attack of appendicitis, and on the second visit, twelve hours after the beginning of the attack, the attending physician advised operation. The parents' objections were so very strong that he consented to treat the case in a "medical way," and was afraid to again suggest an operation until the patient was practically moribund. Then, when the friends realized that death was inevitable, they were most anxious that an operation should be done. At their earnest solicitation, although it was felt that his chances were practically *nil*, a simple incision was made, and drainage provided, for the abdomen was filled with pus. He died, and the friends were unreasonable enough to blame the operation for his death. It may not be amiss to say here (what I have frequently said to my class) that it is the duty of the medical man to tell his patient and the friends what is best to be done, even though it is displeasing to them, and leave to them the responsibility of delay. If it is clear that the patient's life is jeopardized by this, it is better that the physician should withdraw from the case than to have his advice disregarded.

A few words on diagnosis. Some of the conditions which are mistaken for appendicitis:

1. Purulent salpingitis.
2. Acute cholecystitis, empyema, or perforation of the gall bladder.
3. Tuberculous peritonitis.
4. Acute indigestion.
5. Malignant disease of the *cæcum*.
6. Perforation of the stomach or intestines, with general peritonitis.

One should note carefully the method of onset of the illness and the symptoms present. In appendicitis the illness begins suddenly, usually in a patient who has until then been in his usual health, although on close inquiry one may find that he has not felt quite himself for a day or two.

I wish to emphasize the point that the temperature and pulse are not to be relied upon, as in many severe cases there is very little elevation of temperature, and little increase in the pulse rate. In all my acute cases there has been rigidity of the right rectus

muscle; in more than one-half of the cases there has been vomiting; and in practically all there has been nausea. One should be able to distinguish between appendicitis and conditions in the pelvis, such as pyosalpinx, by a vaginal examination. In the latter condition there will be enlargement and tenderness of the tube, together with some fixity of the uterus. In acute appendicitis, where the appendix is lying to the outer side of the colon and pointing upward toward the liver—it may actually be in contact with the liver, and, if perforation occurs, an abscess may form here, closely simulating empyema of the gall bladder. However, in the latter condition the outline of the gall bladder is more clearly defined and usually pear-shaped, whereas an abscess would be more irregular and indefinite. In perforation of the stomach one would likely have symptoms of indigestion for some time preceding the perforation. There would be a history of shock and collapse at the time of the perforation, followed by pain in the epigastrium, and then all over the abdomen. In tuberculous peritonitis one might be able to make out free fluid in the peritoneal cavity and distension, with general tenderness, and a longer history, although (as in two cases quoted) the patient was practically in perfect health until suddenly taken ill. To sum up, we may briefly put the symptoms thus:

1. Pain. This is the first symptom usually complained of, at first referred to the stomach or umbilicus, but later on settling down in the right iliac region.
2. Nausea or vomiting within the first few hours.
3. Tenderness, most marked on the right side over the appendix.
4. Rigidity of the right rectus muscle.
5. After some hours some elevation of temperature and increase in pulse rate.

TREATMENT.

In regard to treatment, I cannot too strongly insist upon very early operation in all cases of acute appendicitis. If this is only a few hours after the beginning of the attack, so much the better. There is a very prevalent opinion among some members of the profession that if an operation be done within the first forty-eight hours, everything will be all right. Of course, this is an absolute fallacy, as very serious damage may be done even in twelve hours.

When a physician is called to a patient suffering from abdominal pain, and he is doubtful as to the cause, he should see him again in three or four hours, and if he then cannot make a diagnosis, he had better have a consultation.

Give no morphine until a diagnosis is made; to relieve the pain an ice-bag may be applied, or hot fomentations used; then, as soon as the diagnosis is made, call a surgeon, and let him decide as to

the time for operation. Do not give calomel and salts or any purgative, as the peristalsis thus produced will aggravate the condition.

In most cases occurring in a city or town where there is a hospital, it is best to remove the patient into the hospital, as some hours would be lost in preparing a room in the patient's house. I have frequently operated upon patients in the hospital two hours after seeing them in their homes, and in several cases as early as one hour after. I am satisfied that moving the patients carefully in an ambulance does them no harm. If perforation has occurred and pus has formed, and one is doubtful if it is walled off, the patient should be sent to the hospital in the sitting posture, as recommended by Fowler.

Now, as to the actual operation. The incision which I have found most useful is one through the sheath of the right rectus muscle, at a little distance from the outer border, with separation of the muscular fibres. This incision has two advantages: first, it is less likely than any other, unless McBurney's, to result in a hernia; secondly, if one requires more room, it can readily be extended upwards or downwards. When one opens through the peritoneum, if pus is found apparently free in the cavity, it should first be mopped out with gauze before making any further investigation. This is done so that if the pus be limited and localized, there will be no risk of spreading it. I have many times found pus lying free in the abdominal cavity around the appendix, without any limiting adhesions, and looking just as if it had been poured in, and that if the patient turned on the left side, it would gravitate in that direction. By mopping this up with pieces of gauze all the pus can be removed and drainage provided, and the general peritoneal cavity shut off by aseptic or iodoform gauze. If diffuse septic peritonitis is already present, we will open, wash out with normal saline (or not, as we think best), remove the appendix, and put in a drain; also a second drain above the pubis. The treatment of septic peritonitis will be fully discussed in a set paper, so I will not dwell upon it here.

When in doubt as to the condition of the appendix, it is well after opening the peritoneum to wall off the general peritoneal cavity with gauze sponges or pieces of gauze, so as to limit the field of operation to the region of the cæcum and appendix. Then, if there be a mass, in opening it and searching for the appendix if one suddenly comes upon pus, it will be caught in the gauze without distributing it throughout the general peritoneal cavity. This is a most important step in all operations for acute appendicitis, and I would consider any one guilty of neglect who did not take this simple precaution.

Next, the mass should be approached from the outer side, insinuating a finger down toward the situation of the appendix.

If the omentum is found surrounding it, this should be lifted up from the outer side. If an abscess be opened, it should be mopped out with strips of gauze, and then the appendix sought for and removed. If it is gangrenous, it will only be necessary to throw a ligature of chromic catgut around its base and cut beyond this. I think in all cases of appendicitis the appendix should be sought for and removed, if possible. I have seen a number of second attacks where there had been a former operation, and an appendical abscess opened, and no attempt made to remove the appendix. I would not advise an inexperienced operator, however, always to try to remove the appendix, for if he succeeds in opening the abscess, the patient is likely to recover from the attack, and the appendix can be removed at a subsequent operation. But in experienced hands it is practically always possible to remove the appendix without increasing the risk.

Another thing to which I would like to refer is the position of the patient after operation. In all cases of diffuse septic peritonitis I think the Fowler position a most valuable one, that is, to elevate the head of the bed a couple of feet, semi-sitting, so that drainage is downward toward the pelvis.

It has been clearly shown that there is more rapid absorption in the peritoneum of the diaphragm than in the pelvic peritoneum, and therefore if we drain upward we will permit of greater absorption. I have placed patients in this position a number of times with most satisfactory results.

I wish also to refer to the after-treatment of a patient with an abscess localized to the region of the appendix but not walled off. In order to prevent its becoming diffused the patient should have no nourishment by mouth for two or three days after the operation. Exclusive rectal feeding and administration of sufficient morphine to keep the patient free from pain should be the treatment. This latter has also the effect of limiting peristalsis. Formerly I gave normal saline by the bowel every two to four hours in small quantities (8 oz.), but I have lately been giving it in large quantities according to the plan recommended by Murphy, that is, by inserting a nozzle containing three or four openings into the anus, to which is attached a rubber tube leading to a bag. This bag is filled with water, and elevated but a few inches above the plane of the rectum, the idea being that the water shall just trickle into the rectum not much faster than absorption takes place. In his way from a pint to a quart of water should be allowed to trickle in during an hour, the process being a continuous one, and the flow so regulated that no accumulation of fluid takes place in the bowel. In other words, an attempt is made to run the water in as fast as it is absorbed. The object of having more than one outlet in the nozzle is that in case flatus accumulates in the rectum it will pass out through one of the openings

in the tube, while the others continue to discharge the water into the rectum. By this method large quantities of water will be absorbed within the first few hours after operation. After twelve hours the patient is given sips of hot water, and this is gradually increased until he is taking 2 oz. of hot water every hour. I am satisfied that this treatment helps to limit the disease, and to confine it to the region first involved.

Another question of great importance is the occasional development of ileus after an operation for acute appendicitis. It has been my misfortune to have had three fatal cases from this complication. The two great factors concerned in post-operative ileus are of either mechanical or septic origin. Finney, in an excellent article in the *Annals of Surgery* for June, divides post-operative ileus into three classes—mechanical, septic, and adynamic. The diagnosis of obstruction is of chief importance, and once this is established there is but one rational course to pursue. The sooner the necessary relief is accomplished the better. The main point is to differentiate between the mechanical and the septic variety, since these are the two forms most often met with, the mechanical being very amenable to treatment, the septic to a less degree. In a general way, mechanical ileus is characterized by its later onset, the presence of visible peristalsis, severe colicky pains, with slight change in temperature at first, and asymmetrical distension. Where peritonitis is present the picture is obscured, the infection masking the obstruction; the septic symptoms usually predominate. Where, following an operation, an ileus develops, unaccompanied by the above-mentioned symptoms, one has probably to deal with the adynamic variety.

As to the causation of the different forms of ileus, the early obstructions are in the vast majority of instances due directly to infection and its results. The later cases are more often due to old inflammatory adhesions which may have been drawn out into bands, and around or beneath which coils of intestine have become constricted. It will be seen, therefore, that the septic or adynamic forms of ileus occur more frequently in the early obstructions, while in the later ones the mechanical variety predominates. Just why inflammation of the peritoneum causes intestinal paresis, whether it is due to oedema or reflex action, vasomotor disturbance, or the local effect of the toxins upon the nerves of the intestines, is not known, but that all these factors are concerned is highly probable. If high enemata do not soon relieve the condition the abdomen will have to be opened again. If the cause of the obstruction can be found it should be removed, otherwise the distended loop of bowel should be opened and irrigated out. When this is done the opening may be closed. Unfortunately all of my fatal cases occurred in the country, and I was

not called again to see them, otherwise I would have opened the abdomen. In one case the wound was opened by the local physician, and an opening made in the distended loop, but no irrigation of the intestine was done. I have recently had a recovery from a case of adynamic ileus treated by enterotomy, with washing out and closure of the opening in the bowel.

An interesting fact in this connection, and as helping to explain the restlessness and, later, the great prostration noticed in ileus, is brought out in the work of Nesbitt and Ranzi. They found the constant occurrence of cholin and neurin in the intestine where the food contained a quantity of lecithin. While cholin is inert, neurin is a very active poison, very like muscarin in its effect. It has a paralytic action on the heart and upon the intestinal movements. Lavage of the stomach and intestine will mechanically lessen the amount of toxic substances absorbed.

I would like herewith to report the following cases, some typical ones, others showing conditions closely simulating appendicitis:

CASE 1.—J. O., aged 23, patient of Dr. Burgess, August 11th, 1906. Patient went to business as usual on Friday morning, August 10th. He did not feel quite right, however, and took a dose of salts in the morning. About eleven o'clock he was taken with pain in the stomach, and went home and sent for Dr. Burgess, who saw him about one o'clock, when his temperature was 98 deg., pulse 80. He complained of general pain in the abdomen, particularly about the umbilicus, and was nauseated but had not vomited. The doctor ordered *mxv* of chloranodyne, to be repeated in four hours. He saw him again at six o'clock, and found him still suffering somewhat, although his mother had given him three doses of chloranodyne an hour apart. The temperature was now 99 1-5 deg., pulse 90. Dr. Burgess telephoned me, and I saw him at 8 p.m.; temperature 99 2-5 deg., pulse 80. He was feeling more comfortable, but examination elicited tenderness on pressure over the appendix, and a slight amount of rigidity. He was quite comfortable, and felt no pain unless pressed upon over the appendix. I explained to the friends, as is my usual custom, that the safest plan was to have the appendix removed at once, and suggested that he be taken to the hospital as soon as an ambulance could be got. As he lived a little way out of the city it was not possible to get him to the hospital until midnight, and as his symptoms were not urgent the operation was arranged for nine o'clock next morning. When he arrived at the hospital an ice-bag was applied. The next morning he looked and felt well, and was free from pain, with a normal temperature and pulse 80. The operation, nevertheless, was proceeded with, and the appendix was found slightly adherent to the posterior parietal peritoneum with a perforation at its base, and some of the contents

of the intestine, together with pus, lying free in the peritoneal cavity. The appendix was removed in the usual way, and the pus and intestinal fluid mopped up with gauze, and a rubber tube with iodoform gauze put in for drainage. He made a nice recovery. This is a case in support of the statement made early in the paper—that the pulse and temperature are of no importance as a guide to the gravity of the condition.

CASE 2.—M. G., aged 10, patient of Dr. Hawke, June 26th, 1906. He felt some cramps in the evening, but said nothing about them. At eleven o'clock he awakened his mother, crying out with acute pain; later he vomited. He had a very bad night, vomiting several times. Dr. Hawke saw him in the morning, when his temperature was 102 deg., pulse 110, and diagnosed "appendicitis." I saw him at 3.15 p.m., temperature then 103 deg., pulse 122; rigidity of the whole abdomen, most marked over the appendix. His cheeks were flushed, but around the mouth and nose he was quite pale. He was very tender to the touch over the appendix, but not particularly so over the rest of the abdomen.

Diagnosis.—Acute appendicitis, with perforation or gangrene of the appendix. He was sent to the General Hospital in an ambulance, and operated upon immediately after arriving there at five o'clock, that is, eighteen hours after the beginning of the attack.

Operation.—On opening the abdomen I found the intestines around the caecum injected and covered with sticky fluid. Around the base of the appendix the caecum was very red, having very enlarged vessels upon it. The appendix was lifted out with difficulty, and the terminal 2 in. found of a greyish color, and covered with lymph. There was a small perforation at a point of constriction about 1 in. from the tip. He made a good recovery.

CASE 3.—Mrs. C., aged 45, patient of Dr. Tilley, May 5th, 1902. She was suddenly taken ill with severe pain in the abdomen, general at first, then becoming localized to the right side. There was some rigidity of the right rectus and tenderness over the appendix; she had been vomiting; temperature 103 deg., pulse 120. I saw her three days after the beginning of this illness, when the condition was as given above. She gave a history of having had some trouble in one of her knee-joints, which we thought was tuberculous.

At the operation I found general tuberculous peritonitis and a very thickened appendix with tuberculous nodules through it, and also much thickening of the caecum. Large caseous nodules covered the entire peritoneum and peritoneal surface of the intestines. Both Fallopian tubes were very much enlarged, with caseous nodules all over them. I simply flushed out the abdomen with saline, and closed it. She made a good recovery, and has been in good health since.

CASE 4.—Miss C., aged 18, patient of Dr. W. J. McCollum, November 5th, 1905. The patient had been ailing for a week; temperature 101 deg., pulse 110. On examination a mass could be felt in the lower part of the abdomen, extending across to the opposite side. The diagnosis of appendicitis was made, although I suspected pus tubes, but for special reasons did not make a vaginal examination.

On opening the abdomen in the middle line I found the right tube greatly distended, and it had made two complete turns at its uterine end. It was as large as a banana; its tip was quite black and the rest of a reddish-brown color. It was untwisted and removed, a small portion of the ovary being left behind. The other tube was examined and found to be distended about the size of a small banana, so it was removed. The appendix was also removed, although normal. She made a good recovery.

CASE 5.—Miss S. Operation, March 8th, 1906. She had been ailing with more or less pain in the abdomen for two weeks. On Monday it became worse, and she became jaundiced. Her physician saw her on Wednesday, when her temperature was 102 deg., pulse 110. A mass was felt on the right side, which he diagnosed "appendicular abscess." He advised her removal to the hospital, but consent was not given until the morning of the operation, March 8th. I saw her in consultation with her physician at 11.15, and on examination found a mass in the right hypochondrium, as low as a line between the umbilicus and anterior superior spine. The lower margin was sharply defined, and dullness extended up and continued with liver dullness; below this the rectus muscle was not rigid, and the abdomen was soft. The hardness extended forward within 1 in. of the middle line and back to the lateral side of the abdomen.

A diagnosis of acute suppurative cholecystitis was made, probably associated with gall stones. Advised immediate operation, which was preceded with at 12 o'clock. An incision was made over the gall bladder, and, as soon as the peritoneum was opened, bile was found free in the abdominal cavity. This was mopped up with sponges, and the gall bladder found to be of a reddish-brown color, having a somewhat gangrenous appearance. The omentum was adherent along the lower margin. The general peritoneal cavity was carefully walled off with sponges around the gall bladder and the latter punctured with a trocar. At first 2 oz. of opaque, glairy fluid came out, then 1 oz. of creamy pus. I then removed fifty gall stones; two or three of these were large and impacted in the cystic duct, and one in the common duct. She made a good recovery.

CASE 6.—Mr. W., aged 48, patient of Dr. A. R. Gordon, March 10th, 1906. Two or three hours after returning home from a dinner party he was taken with colicky pains in the abdomen.

Hot-water bottles were applied, and Dr. Gordon saw him at 7 o'clock in the morning. At this time the pain was diffused over the abdomen. Temperature $99\frac{1}{2}$ deg., pulse 70. Later on the pain settled down in the right iliac region.

At 8 p.m., temperature 100 deg., pulse 80, marked rigidity of the right rectus. I saw him at 9.30 p.m., when there was rigidity of the right rectus and very definite localized tenderness over the appendix. He said it pained him to move his leg up or down, but no pain was present when lying quiet and not touched. Sent him into the hospital and operated at 12.30 that night. The operation was done twenty-two hours after the beginning of the attack. Some fluid of a serous character came out immediately on opening the peritoneum. The appendix was adherent to the brim of the pelvis. When separated it was found to be club-shaped, the terminal inch being covered with lymph. On separating this lymph a patch the size of the end of one's finger was of a dark reddish color and was evidently becoming gangrenous. He made a good recovery.

CASE 7.—Mr. S., aged 35, patient of Dr. John Noble, March 10th, 1906. He was taken ill at 1.30 p.m., with acute pain in the abdomen. Dr. Noble saw him and sent him home, after giving a hypodermic injection of morphine. Dr. Noble saw him again at 8 p.m. and telephoned me about 9 p.m., telling me the condition. I advised his removal to the hospital, and said I would see him on his arrival, and, if necessary, operate at once. On arrival at the hospital his temperature was 100.8 deg., pulse 110; the abdomen was rigid all over, but particularly over the appendix. There was some slight distension.

Operation.—1 a.m., twelve and a half hours after the beginning of the attack. As soon as the peritoneum was opened pus escaped. I then searched for the appendix, and, in separating two coils of intestine below the appendix, 1 oz. of creamy pus escaped into the sponges I had placed around. The appendix was pointing towards the middle line, 5 in. in length, and very much swollen. The terminal $1\frac{1}{2}$ in. was as large as one's thumb, gangrenous and perforated. The base being healthy it was amputated in the usual way. Three strips of iodoform gauze were placed in for drainage. He made a good recovery.

CASE 8.—Miss D., aged 20, patient of Dr. Moorehouse, March 17th, 1906. She had been ailing for four days, having all the usual symptoms of acute appendicitis. Pain was the prominent symptom, with vomiting every few hours from the beginning of the attack. On examination I found tenderness and rigidity over the appendix, and some rigidity and tenderness over the whole abdomen. Temperature 101 deg. F., pulse 120. I advised operation, and she was sent into the General Hospital.

Operation 3.30 p.m.—On opening the abdomen we found

miliary tubercles over the peritoneum and intestines. There was no fluid; the appendix was inflamed in common with the rest of the intestines, but there seemed to be more inflammation about the caecum than elsewhere. The appendix was removed. The large intestine was distended and of a dark color, and, on following it down on to the pelvis, we found that the sigmoid flexure was held and constricted by a band of adhesions which prevented even gas passing. Below the distended portion, which was about 6 in. in circumference, the bowel was collapsed. The band was evidently producing complete obstruction, which accounted for the vomiting. The abdomen was flushed out with normal saline, and closed with interrupted silkworm-gut sutures. She made a nice recovery.

CASE 9.—Mrs. N., aged 35, April 23rd, 1906. Complained that eighteen months ago she had appendicitis for ten days. Before the attack was over she had severe uterine haemorrhage, and was in bed for seven weeks. Six months later she had another attack of appendicitis (?), and since has had pain in the right side, and for two months has had a yellowish discharge. Menses six days, getting more profuse.

Operation.—A curettement was first done, and a good deal of thickened endometrium removed. Then on examination we found the uterus enlarged and hard on the right side. I thought this might be due to a fibroid, and therefore made a median incision. Nothing was found wrong with the right tube, but the ovary was surrounded by inflammatory adhesions binding it down to the rectum and uterus. The right tube was involved in these adhesions, but not diseased. I separated the adhesions, and removed a fibroid about the size of a walnut from the right cornu of the uterus. The wall of the uterus was sewn with catgut. The appendix was then removed, although it seemed healthy. It was opened after removal and its lining membrane was quite healthy. It was evident that she had not had appendicitis, or if she had, the appendix had returned to normal. Recovery.

CASE 10.—Sir Wm. H., aged 96, patient of Dr. John Caven, April 25th, 1906. Patient had a typical attack two weeks ago, a mass gradually making its appearance in the region of the appendix, 3 in. long by 2½ in. wide. It was thought that this might be carcinoma, but as it was adherent to the anterior abdominal wall and made its appearance suddenly and enlarged rapidly, we diagnosed "appendicular abscess." This case is simply mentioned on account of the age of the patient. The abscess was opened under cocaine, and 3 oz. of offensive pus evacuated, and two small drainage tubes were put in. He sat up daily after the third day. May 25th: Wound healed, and patient has been out driving daily for a week.

CASE 11.—Mr. J. M., patient of Dr. J. T. Clarke. I saw the

patient, in consultation with Dr. Clarke, at 9 a.m., and got the following history: The day previous to this attack he had had a hearty meal at noon, eating a large quantity of lobster, etc. Two or three hours afterwards he had pain in his stomach. In the evening he took opening medicine, and his bowels moved between midnight and 2 o'clock, and again at 4 o'clock. He went into the bathroom and fainted while there. His parents were aroused, and found him in an agony of pain with cold perspiration standing out on his face. Dr. Clarke saw him at 6 a.m., pulse 160 and very weak, cold perspiration on face and neck, and complaining of severe abdominal pain and tenderness over the abdomen. Dr. Clarke gave him morphine, $\frac{1}{4}$ gr. When I saw him at 9 o'clock his temperature was 100.2 deg., pulse 100, respiration 18, and he was complaining of pain in the region of the appendix. Abdomen was tender and quite rigid all over. He did not seem to be more tender on one side than the other. His face was pale and pinched. The diagnosis of a perforated appendix with general septic peritonitis was made. We had great difficulty in persuading him to have an operation done, although he had had two previous attacks in which Dr. Clarke had seen him and had diagnosed appendicitis. Another doctor had seen him two weeks after one of these attacks, and had said the boy had never had appendicitis, but that his symptoms were due to acute indigestion. On account of this opinion and the fact that this attack followed a large meal we had difficulty in persuading him and his parents that operation was necessary and that it really was appendicitis.

Operation.—Immediately on opening the peritoneum some thin pus escaped. The appendix was found pointing downward towards the pelvis, $2\frac{1}{2}$ in. in length, thickened, and with a perforation $1\frac{1}{2}$ in. from its tip. There was no attempt made at walling off. After removing the appendix and mopping up the pus around it and putting in a tube surrounded with iodoform gauze, suddenly a large quantity of sero-purulent fluid came up into the wound. It was found that the pelvic cavity was filled with this. After mopping it out well with gauze, a drainage tube was passed down into the pelvis, a second one to the position of the stump, and a third up toward the liver. Gauze was placed down in similar positions, and one piece into the general peritoneal cavity. He made a good recovery.

CASE 12.—Mr. C., age 63, patient of Dr. Macdonald (Markham), May, 1906. Patient had a typical attack of appendicitis two weeks previously from which he made a good recovery, but the mass which was present on the third day remained. A mass could be felt in the right iliac region, lying 1 in. to the inner side of the anterior superior spine and running parallel with Poupart's ligament. The mass was irregular and hard, $2\frac{1}{2}$ in. in length by $1\frac{1}{4}$ in. in width, and crossing at right angles the line extending

from the anterior superior spine to the umbilicus. It did not seem to be attached to the anterior abdominal wall, and felt like a malignant growth in the caecum.

Operation.—Made an incision 3 inches long through the right linea semilunaris. On opening the peritoneum I found the omentum attached to the parietal peritoneum on the right side and posteriorly, this being also attached to the caecum, and a nodular mass apparently in the caecal wall. There seemed to be very little doubt on exposing it that it was malignant, and if it was malignant it was impossible to remove it, as it extended into the abdominal wall to the right and behind. A piece of omentum 2 in. square and $\frac{3}{4}$ in. thick was removed. I could then feel a hard mass behind running into the caecum and apparently extending into the peritoneum posteriorly. The appendix could not be seen. I decided to try and separate the mass from the abdominal wall, and this was done with considerable difficulty, but when got up it was found to be an enormously thickened appendix with a perforation in its middle. It was about 5 in. in length, and the size of two fingers in thickness. The mesentery was also enormously thickened. The appendix was removed by throwing a ligature of chromic gut around its base and inverting it into the caecum by a purse-string suture of catgut. About 1 drachm of pus was found around the appendix, and a few drops around the thickened omentum. Iodoform gauze was put in for drainage, and a second piece to wall off the general peritoneal cavity. The abdomen was closed except for the opening for the gauze. Patient left the hospital quite well, and with the wound closed on May 26th. Examination of the omentum showed it to be inflammatory.

CASE 13.—M. W., age 17, May 17th, 1906. Diagnosed by his physician "colitis." History of two previous attacks like this one. The present one commenced with pain over the whole abdomen, settling down in a few hours to the region of the appendix. Vomiting; temperature 100.4 deg.; some diarrhoea, with passage of mucus. When I saw him tenderness was marked over the appendix, and a diagnosis of "appendicitis" was made and an operation advised.

Operation.—Found the appendix 3 in. in length, very congested and having, about 1 in. from the base, a constriction with a good deal of thickening. A number of newly-formed vessels ran up in the form of a leash from the mesentery of the appendix to the appendix at this situation. Around the base was another leash of newly-formed vessels. On opening the appendix after its removal it was found to be filled with pus and there was an ulcer at the site of the thickening. Recovery.

CASE 14.—L. P., aged 25, patient of Drs. W. P. Caven and H. J. Hamilton, June 17th, 1906. Was taken ill Friday morning with pain in the stomach. He was given an emetic by his mother, after

which he vomited two-thirds of a cup of pure blood. The next morning his abdomen became rigid and tender all over, temperature up two degrees, pulse 100. Evening temperature 102 deg., pulse 110, abdomen rigid all over but slightly more tender in the region of the appendix. At first gastric ulcer was suspected, with perforation and general peritonitis, but on Sunday evening appendicitis with general peritonitis seemed probable. Operation Sunday evening.

Operation.—Under the anaesthetic I could find a distinct mass 1 in. above McBurney's point, and extending down to within $1\frac{1}{2}$ in. of Poupart's ligament. An incision was made through the sheath of the rectus over this, and as soon as the peritoneum was opened a quantity of thin pus poured out. I mopped this up with sponges, and then found the appendix, which was very large, lying downward, and dipping over the brim of the pelvis. I lifted it out of the abdomen, when it was found to be 4 in. in length; the terminal half gangrenous, with two or three perforations. The proximal half was distended to the size of a banana, with a large faecal concretion in it. As the base was healthy, it was removed in the usual way. There was no lymph in the abdomen, and no attempt at walling off the pus. The abdomen was washed out thoroughly with normal saline. Another opening was made above the pubis, and a rubber tube inserted down into the pelvis; another was placed in the appendical opening down to the caecum, and one up towards the liver. Gauze was placed along these tubes and into the general peritoneal cavity. Patient was placed in bed in the semi-sitting position of Fowler, with the head of the bed elevated. Salines were given every two hours by bowel, nothing by mouth but sips of water. He made a good recovery.

WATER CONDITIONS IN TORONTO—A PLEA FOR FILTRATION.

BY JOHN A. AMYOT, M.B.

Director of the Laboratory of the Provincial Board of Health, at Toronto.

TORONTO takes its water supply from Lake Ontario at a point about one-quarter of a mile out from the south shore of the Island about a quarter of a mile east of the lighthouse.

The depth of the water over the turned-up intake is fifty feet. A quarter of a mile further out the depth is probably 150 feet or over.

The intake pipe then traverses the Island and lies along the bottom of the Bay to a point at the foot of John Street, emptying there into the "pump well." The water thus reaches the well by gravity, and is pumped to the city without any change. There is no filtration of any kind.

Two-thirds of Toronto's sewage is discharged into the Don River and finally into the Bay, or directly into the Bay, without any treatment whatever. The other third is discharged directly into the lake west of the Island.

In the laboratory of the Provincial Board of Health during the last three years, 663 specimens of water on as many days were examined for colon bacilli and other sewage bacteria. One hundred and nine, or 16.4 per cent., of the specimens showed the presence of these intestinal bacteria in such small quantities of water as one cubic centimeter (severe infection). Normal Lake Ontario water does not show these. The presence of these bacteria are taken as evidence (the best) of sewage pollution of a water.

If intestinal bacteria are present it requires no stretch of the imagination to see where typhoid bacilli might go.

These infections were not usually on single days, but in groups of two or three successive days.

On referring to the meteorological reports for those years, it was seen that for twenty-four or forty-eight hours before these infections there were strong winds blowing either from the east or the west, driving the sewage either from the discharging Bay at the Eastern Gap of the harbor or from the open sewers on the shore at the west of the Island, towards the intake between these points.

Following out these findings during the past summer, Dr. Hodgetts, Secretary of the Provincial Board of Health, chartered me a small steamer to make observations and water collections off the Island shore and the Lake from Scarborough Heights to Humber Bay.

Several trips were made between August 31st and November 15th, 1906. Two hundred and ninety specimens, surface and deep, were collected.

On one occasion, optically, chemically and bacterially, pollution and infection with sewage was traced to a point three miles out into the Lake directly south from the Eastern Gap of the harbor, and along the shore a half mile and a mile, along two lines, to within one-half a mile of the intake, and I feel sure that if I had been able to go to the intake that infection would have been found over it. On another occasion infection was traced for half a mile along the south shore of the Island towards the intake, and was picked up again a half mile farther on and directly over the intake. In this case the sewage, by a strong east wind, was driven against the shore from the Eastern Gap and then deflected towards the intake. On another occasion, with the wind blowing strongly from the west, infection of the water was traced from the sewers on the lake shore over to the intake, being directed towards the south by the impact against the west shore of the Island. This same thing was observed again with the wind blowing from the north-west. Out of seven trips, infection was found at the intake four times.

On one occasion samples taken at a depth of 40 feet over the intake, showed infection as well as the surface samples taken on the same occasion. On another of the trips, the temperature of the water 40 feet down showed the same as the surface water, so that surface water can find its way to the intake mouth.

The lake water five miles out from shore can fairly be taken as normal. This did not show infection. The bacterial count showed only 8 and 10 per cubic centimetre. Whereas where the infections were found the general bacterial count showed from 125 bacteria per cubic centimetre to as high as 45,000 one time over the intake.

The deaths from typhoid fever in Toronto show the effect of these water infections. The rate for the last three years, putting the population of Toronto at a quarter of a million, for every 100,000 of the population was 21.7, practically 22.

Cities having pure water supplies like Vienna, Dresden, Frankfort, The Hague, Zurich, and our own Hamilton, Ont., show only 8 to 10 per 100,000.

Typhoid fever, of course, is not the only disease that is water borne. Cholera, but especially with us diarrheal affections, are. This last is quite sufficient to cause death in young and old subjects particularly. When the water is infected here the cases of diarrhea come into evidence prominently. The typhoid death rate, however, is the usual gauge of the purity of a water supply.

Many cities show a larger rate by a good deal than Toronto. No city with a good, wholesome water supply shows as high a rate as Toronto. Here we can safely say that during the last three

years 88 deaths from typhoid fever have occurred that could have been avoided if we had had a pure water. The rest our neighbors are accountable for. One hundred and sixty-three deaths are only 7 per cent. of the cases that have occurred. Who is there that, knowing the misery of an attack of typhoid fever and the almost certain after-effects, would not prefer a broken leg if he were given his choice? During one of the outbreaks of typhoid fever in Toronto 210 cases were members of the fraternal societies. Of these, 12 died. It cost these societies, between death losses and an average weekly sick benefit of \$3 for each of those sick, \$175,000, and these workmen with their families are the ones least able to afford this loss.

Toronto's water is at times infected. This infection is from sewage reaching the intake from the sewers, chiefly from wind conditions. There is typhoid fever in Toronto beyond the unavoidable point. Toronto is not unique in this experience.

Chicago some years ago emptied all of its sewage directly by several sewers into the lake front. At distances apart four water intakes were situated one mile out from shore. The typhoid rate during the last three years of this condition was 115 per 100,000. Without altering the sewer outlets, the water intakes were carried from three to four miles out into the lake. For the next three years the rate dropped to 40 per 100,000. Then the famous drainage canal was opened. Three-quarters of the city's sewage was carried off by this to the Mississippi River. There was still the sewage of a quarter of a million of people being discharged into the lake. The typhoid fever rate for the next three years dropped to 22 per 100,000, the same rate as Toronto is now suffering from. The quantity of sewage entering Lake Michigan is now about the same as finally reaches Lake Ontario from Toronto.

At Cleveland, Ohio, with the intake a mile from shore near one of the outlets from the harbor, into which all their sewage entered, the death rate for some two years was 165 per 100,000. When water was taken by the new intake nearly four miles out from shore and at the end of the harbor farthest from the outlets, the rate dropped to 22 per 100,000.

In Toronto, before the new steel pipe was laid across the Bay, the rate for five years was 55 per 100,000. For the five years after the use of the new pipe was begun the rate was 21 per 100,000. In Hamilton, Ont., where the intake is so situated that it is nearly impossible under the present conditions for the sewage to reach it, the rate is 10 per 100,000.

In Zurich, Switzerland, where their intake and sewage conditions were much the same as in Chicago, the death rate from typhoid fever was for five years 76 per 100,000. An efficient filter, such as is advocated for Toronto, was installed. The typhoid rate for the next five years was 8 per 100,000.

The following table will at a glance show the average rate over years where the waters supplied are unpolluted:

Mountain stream, above all possibility of pollution:

Vienna	8 per 100,000
Munich	8 "

Artesian wells in unquestioned soil:

Frankfort	8 "
Dresden	7 "

Polluted waters efficiently filtered:

The Hague	8 "
Zurich	8 "

The following table of questionable and certainly polluted waters will show what is happening:

Surface waters collected behind dams, with the gathering areas policed:

Worcester, Mass.	16 per 100,000
New York	22 "

Great Lakes, with sewage pollution of varying degrees:

Toronto	22 per 100,000
Buffalo	45 "
Chicago	22 "
Cleveland, now	32 "

Polluted river waters (since either filtered or about to be):

Philadelphia	65 per 100,000
Lawrence	115 "
Albany	55 "

The last two cities have installed filters. Their rates have dropped to 30 and 20 respectively. Both of these cities have double water supplies, Lawrence for fire purposes and Albany from a surface source, or otherwise there is every reason to suppose that their rates would compare much more favorably with Zurich and The Hague. Philadelphia is rapidly installing filters in their widely extended system.

New York last week was advised unreservedly by the commission of experts appointed to report on means to reduce their death rate from typhoid, and to increase their nearly already insufficient supply, to filter all their water, when the additional supply was got from the Catskills.

At the last meeting of the American Water Works Engineers, held in Boston, it was practically the unanimous opinion that the natural waters of this country and the United States were not hygienically safe without efficient filtration because of extensive

pollution from closeness of population. It was also their opinion that however extensively in practice the sewage of large communities was treated by the sewage disposal methods now in vogue, it was cheaper and more uniformly safe to filter the water used for drinking purposes, if the effluents from these disposal works were discharged into the water source. In the thickly populated districts it is next to impossible to protect water sources from pollution. By proper filtration even badly polluted waters can be made as pure as such unquestionable ones as those derived from the snow caps of the mountains or from artesian wells bored into the proper soil.

The disposal of Toronto's sewage by the construction of a trunk sewer, of a large receiving tank, a pump, and 300 acres of sand filter beds near Danforth road, at the east of the city, has been proposed as a method of protecting the water supply. The cost of this would run into the millions. The maintenance and management would be high. The results would be perfect in uniform weather. During extended rainy weather the treatment end of the plant would be practically put out of commission. The sewage then would necessarily be discharged untreated into the lake at great risk to the water supply. Again in practice it would be found that sections of the city would not be connected with the system, notably the Island. The shipping also would not be looked after, and this is not a visionary danger, either. Many of the outbreaks of typhoid in the north of the Province have originated from the sewage of boats carrying typhoid fever sufferers infecting water supplies. This happened undoubtedly once at Byng Inlet. In the summer months thousands daily, many of them convalescent cases, come in and out of the harbor.

If filtration of Toronto's water was adopted, we would be sure of its uniform purity. Much simplified and cheaper methods for the removal of the gross suspended matter in the sewage could be introduced. A series of catch basins and septic tanks, requiring almost nothing for maintenance, would remove the 200 tons of organic and inorganic solids now reaching and filling up the Bay, and cost very little.

We could then for a cost much less than by the original plan have water filtration and a good method of sewage disposal that would meet all our requirements from a hygienic, a commercial, and an esthetic standpoint.

SCHOOL HYGIENE.*

BY PROFESSOR A. P. KNIGHT, QUEEN'S UNIVERSITY.

Ladies and Gentlemen,—Hygiene treats not merely of the health of the individual, but of everything that affects the health of individuals, whether grouped together in the home, the school, the community, or the nation.

When one member of a household falls sick the fact becomes a matter of household hygiene. If the sick member is a child attending school, and the sickness is due to a contagious or infection disease, the fact becomes a matter of importance in the school which he attends and in the community in which he lives. Hence hygiene, in its widest sense, will include the following subdivisions: Personal hygiene, household hygiene, school hygiene, municipal hygiene, and national hygiene.

No one, of course, will pretend that these subdivisions are clearly marked off from each other. On the contrary, they touch or overlap at a number of points; but, notwithstanding the cross-division, it will give clearness and precision to our discussions, if we recognize some such distinctions as these when we use the term hygiene.

Now, on looking over our school laws and regulations, it is clear that the Education Department has charged itself with the duty of giving our teachers some measure of instruction in personal hygiene, household hygiene, and school hygiene. The regulations of last July will, in a few years, produce almost a revolution in school hygiene. They fix the basis upon which a large proportion of the legislative and municipal grants shall be distributed. In these regulations the Government touches the rate-payer on his two tenderest spots—love for his children and care of his pocket—his cupidity and his affection. The increased money grants offered for improvements in school accommodation, equipment and salaries will bear fruit an hundredfold throughout the Province. The Government deserves great credit for the stand which it has taken in these matters.

But while the Department has been thus planning for hygienic improvements in the rural schools, it is becoming increasingly plain that less attention is being given to personal hygiene—that is, to teaching children the essential rules of health—than there was two years ago. The cause of this is attributable to the changes in the regulations which went into force in August, 1904.

Up to that time, a written test had been exacted in physiology and temperance at the entrance examination. In 1905 this test was abolished. Now, while I am no advocate of the teaching of physiology and temperance to Public School children, the teaching

*President's Address, School Hygiene Section, Ontario Educational Association.

of these subjects up to 1904 involved a certain amount of instruction in personal hygiene, and therefore some of the rules of health could hardly fail to have found a permanent place in the minds of most school children; but with the abolition of the written test at the entrance examination the teaching of physiology and hygiene on our new curriculum is comparatively neglected, and the time thus saved is spent upon other subjects which will "tell" at the entrance.

But not merely do teachers neglect the teaching of hygiene; they do not know the subject, and, therefore, cannot teach it. The Education Department excludes this subject from the High School curriculum, and from the subjects of the teachers' non-professional examination. Whatever excuse may be given for excluding physiology and hygiene from a Public School pupil's examination, no good excuse can be given for excluding it from a teacher's. Of course, hygiene is not completely ignored. The Model School principal is allowed to assign the subject 50 marks out of 900 at his sessional examination, and the Normal School principal is allowed to allot it 50 marks out of 3,100 marks; but the Education Department does not recognize the subject as of sufficient importance to examine upon it at any professional or non-professional examination which it directly controls.

Perhaps no one has advocated the claims of hygiene to a place on the school curriculum more ably than has Herbert Spencer, and when we find that Spencer's book on education is one of the authorized text-books for the professional training of teachers, we wonder that the Department has been so remiss in its duty as not to make thorough provision for the teaching of this subject.

A child's happiness and success in life depends largely upon good health, and for this reason hygiene should occupy a first place among the subjects of the Public School curriculum. Now, good health depends chiefly upon two things: (1) A good heredity—sound ancestry—that is, a good constitution; and (2) it depends upon an observance of the laws of health. Our Public School system cannot give to pupils a good heredity; but it should see that every child in this country receives systematic and efficient instruction in the best methods of caring for his health.

No inordinate amount of time is asked for the subject in the school time-table. Fifteen minutes per week for the two lower forms and thirty minutes per week for the two upper forms would be amply sufficient to enable a competent teacher to cover a course of instruction in the essentials of the laws of health.

The fact is that personal hygiene and school hygiene should be matters of national concern with us, and should receive vastly more attention from the Education Department than they have hitherto. In the laudable desire to develop the resources of the farm, mine and forest, "the general purpose cow," the sawlog and the silver nugget have received more attention from the Government than

the health of our boys and girls. Half an hour a day for two or three years must be spent upon the study of plants, animals and minerals by those High School pupils who intend to become teachers, but not a minute a day is compulsory for the study of personal or school hygiene. Worms and weeds are apparently far more important to the nation than the health of its future men and women.

If our Education Department would but take the initiative, it could do a vast deal towards checking the ravages of consumption. This disease has claimed 64,928 victims for itself during the past 25 years. Now, we know that malarial fever has been stamped out of many infected districts through the co-operation of teachers, school children and parents, and there is no doubt that within a few decades consumption also might be almost exterminated, if only the Education Department would exert itself in the right direction. But certainly the right direction is not to exclude the teaching of hygiene from our High Schools, or to relegate instruction in this subject to the tag-end of an overloaded professional curriculum.

What are other countries doing in this matter? A glance at the regulations and curriculum of United States schools and of British schools will show that this address does not exaggerate the importance of hygiene teaching. In the former, physiology and hygiene have always held a prominent place; in the latter, the place which hygiene holds in the public mind to-day is most striking.

Public opinion in Ontario on educational subjects is more likely to be influenced from English than from United States sources, and therefore I may be permitted to point out that hygiene receives much more attention in England than in Ontario. In a small Blue-Book issued by the National Board of Education in England in 1905 there are eight pages of suggestions to elementary school teachers regarding the school and the health of the scholars. Not merely are such subjects as heating, ventilation, lighting, equipment, posture of pupils, etc., discussed, but signs of infectious disease, signs of good health, signs of poor health, normal children, defective children, and epileptic children. Moreover, an outline scheme for teaching hygiene and temperance is given in detail, and covers no less than fifteen pages of closely printed matter.

Add to this the fact that during the coming summer Britain is convening a second International Congress of School Hygiene. The first was held only three years ago. At this congress every aspect of the hygiene of school and scholar will be considered. From the facts thus briefly referred to it is abundantly clear that public opinion in Ontario is far behind what it is in Britain on this matter. Britain looks upon hygiene, especially since the Boer War, as a subject of vital national importance. Ontario gives it less attention than she gives to the feeding of pigs and cattle.

RESPONSIBILITIES OF HOSPITAL SUPERINTENDENTS.*

BY R. W. BRUCE SMITH, M.D.,

Inspector of Hospitals and Public Charities of Ontario.

THE agreeable task of presenting a few observations at this inaugural meeting of the hospital superintendents of Ontario was accepted only as an opportunity of furnishing evidence of sincere sympathy with the formation of such an association in this Province.

It would seem needless to dwell upon the good work which such an association may accomplish. The duties and responsibilities of a hospital superintendent are such that probably no class of people can derive more benefit from occasionally meeting together and discussing the many and varied problems that so often arise to perplex those engaged in institutional management. Co-operation is the key-note to success, and with the right spirit infused in such an organization as the one you are to-day forming, beneficial results must follow. It is always an inspiration for those engaged in similar duties to meet together. The daily routine with its wearisome details tends to blight originality, alertness, motive and enthusiasm. Nothing is so deadly as getting into a rut. Who does not need inspiration and new ideas?

The honor of founding the first hospital is usually ascribed to Fabiola, a friend of Saint Jerome, a Christian lady of Rome in the fourth century. We read that this Roman daughter of consuls and dictators sold all her goods, dressed the wounds of the maimed and wretched, and carried the sufferers on her own shoulders. Lecky, the rationalist historian, says of this charity that, "planted by a woman's hand, it overspread the world, alleviating to the end of time the darkest anguish of humanity." But, before this, similar institutions had been begun in the East, by Basil in Cesarea, Saint Ephraem in Edessa, and by the Presbyter Brassianus in Ephesus. Speaking of Basil's work, Gregory of Nazianzus said: "We have no longer to witness the fearful and pitiable sight of men like corpses before death, with the greater part of their limbs dead, driven from cities, dwellings, from public places and from watercourses. Basil it was who, more than any other, persuaded those who are men not to scorn men nor to dishonor Christ, the head of all, by their inhumanity toward human beings." From the East the impulse and direction came which, in the picturesque language of Saint Jerome, "transplanted this twig from the terebinth of Abraham

*An address delivered at inaugural meeting of Canadian Hospital Association at Toronto, April 1st, 1907.

to the Austonian shore." But, whether Fabiola was the first builder of hospitals or not, her name suggests the wonderful part which woman has had in Christian charity ever since. We are told that Placilla, the wife of Theodosius, the emperor, herself the first lady of the ancient world, visited the thirty-five hospitals of Constantinople, making the beds of the poor and becoming the maid-servant of the sick-chamber. We all know the name of the angel of mercy whom the Crimean War brought to the help of the English sick and wounded, and the name of the equally worthy minister of charity whom America now honors, Clara Barton, the representative of that Red Cross Society which knows nothing of nationality, and whose standard of peace and help is now lifted by more than a score of governments over the fields of carnage and death. We have read of that later heroine of charity whom Florence Nightingale inspired, Dorothy Pattison, usually known as Sister Dora, whose hospital work and whose marvellous strength and beauty of character have inspired many women to leave the dreary dissatisfactions of a life of fashionable pleasure for the enduring rewards of a life of charity.

In the process of time a marvellous development of the hospital spirit has been made. It means more to be a hospital superintendent now than ever before. Twenty years ago the Government returns for 1886 showed that 7,035 patients had been treated during that year in the hospitals of Ontario. Ten years ago the returns indicated an increase to 17,517 as the number of patients treated in our hospitals in 1896. The increase was great during those ten years, but not nearly so remarkable as those we had to present this year. The last report shows that during the past year there were treated in the hospitals of Ontario 41,950 persons, and that the total annual expenditure for hospital maintenance, including capital account, was \$1,228,289. What do those figures mean? Do they indicate an increased public confidence, so that not only the poor, but the well-to-do class seek hospital treatment? Do those figures mean that our hospitals, by able management and greater efficiency, have justified themselves so that the rich are glad to bequeath large sums for their erection and support? With the material prosperity which Canada has been enjoying it is pleasing to note the fact that civic pride and local philanthropy have gone hand in hand in the matter of hospital progress, and we have been furnished with a manifestation of a social and humanitarian movement that is surely creditable to the people of Ontario. This growth of the hospital spirit will continue if we are able to demonstrate to the public that every dollar is used to do the most possible good. We must never forget that hospitals are established for the care of the sick poor, and in these days when

so much attention is paid to making private wards luxurious there is probably too great a temptation to favor the private patients at the expense of the deserving poor in the public wards. The resources of a hospital are a public trust, and they must be guarded and used as such. Economy consistent with good management is so evident in our hospitals that it is not necessary to dilate upon a subject which has been given an attention that has resulted in our hospitals being generously and deservedly commended for prudent management.

The remarkable increase in the number of patients admitted to our hospitals must be taken as an indication that the time has passed when the public looks upon a hospital as a chamber of horrors and considers it a misfortune for any one to be admitted thereto. This pleasing change in sentiment must be largely attributed to those in charge of our institutions.

The firm determination on the part of a hospital superintendent that everything possible shall be done for the patients will infuse much of the same spirit into all those who are employed in any capacity. Discipline is absolutely necessary, but, with a strict adherence to all the principles supporting good management, a willingness to allow every privilege consistent with proper conduct will always be appreciated. Just administration is generally found to faithfully exemplify "the art of being kind." As Canadians we are blessed with an innate love of fair play, and every one conversant with institutional life can recall instances in which the practical application of the Golden Rule has afforded a solution for many a difficulty. The supremacy of a hospital superintendent should be held by kindly influence rather than by interference. All the various departments must, if possible, be harmoniously related and be in perfect sympathy with and loyal to the head. There can be only one head to an institution. The value of ladies' auxiliary boards cannot be too highly estimated. Ontario hospitals owe a debt of gratitude for self-sacrificing devotion and zeal to such local boards, but none of the members of these should presume to dictate regarding the internal management of an institution. There is nothing to be feared from such a source if the superintendent takes and maintains a firm but dignified stand in regard to her or his responsibilities. On the other hand, a superintendent makes a mistake if the assistants in the hospital are not encouraged to go ahead and develop the different departments over which they are placed. An American hospital superintendent, whose rank is second to none, said to me not long ago, "I hope the day will never come when I shall be unwilling to learn some improved method of doing things from the employee in the most humble position in this institution." Such a remark coming from such a source

left an impression on me. Our hospitals are for the care of the sick, and the well-being of the patients must be the first consideration with every one. There is sometimes a danger that the details and necessary formalities of administration may absorb so much attention that the real object for which the institution exists may be occasionally lost sight of. Simplicity may readily be made the helpmate of accuracy in hospital management. Complexity in detail can be avoided and at the same time have such a perfect system of management that the life of the superintendent may be kept contented and serene.

A hospital superintendent must always bear an important relation to the general public. The patients' friends require no little attention. I know a hospital, more than a thousand miles from here, where excellent medical and surgical work was done, and where the patients were kindly and carefully looked after, but, on account of the superintendent being boorish in manner, a totally wrong impression was given to the public, and, in consequence, the financial results at the end of each year were not what they should have been. The visitors at a hospital are so often unreasonably exacting and difficult to control that great overdrafts are often made on the patient forbearance of the superintendent, who is called upon to answer their inquiries. Three hours one day in the week should be a sufficient allowance for regular visiting days, but, of course, when a patient is very ill, it should be possible by consent of the superintendent for a patient's friends to be admitted more often.

The design of every hospital architect now is to provide a building that can be readily kept clean. The constant desire of every hospital superintendent is for immaculate cleanliness, and, to maintain that condition with too often an indifferent corps of workers, is a perplexing problem. The extent to which the responsibility for hospital housekeeping depends upon the nurses in training is a question more difficult than I would attempt to solve. While it is necessary to instil into every probationary nurse that one of the foundation stones for success consists in having a patient's surroundings clean and neat, and that it is not a menial task to keep them so, care must be taken to spare, as far as possible, and protect from physical drudgery those who have enlisted for a life work in a calling which demands mental application as much as it does muscular activity. To meet the criticism one hears in these days of the overtrained nurse is an addition to every superintendent's endless duties.

Such an association as you are forming to-day might devise a uniform method of keeping hospital accounts. Some schedule might be prepared and carefully discussed that would lead to the adoption of a method of keeping accounts that might be made

common to all institutions. A uniform hospital register is a long-felt want in the hospitals of Ontario. It should not be a difficult task for such an association as this to suggest the adoption of a form of register that would prove, not only labor-saving, but one which would provide all information that should be recorded concerning patients admitted. With a uniform system of accounting and recording, the necessary book-keeping in connection with a hospital would cease to be a labor and the compilation of returns would become an easy task. The question of finances is one which nearly every hospital superintendent must ever have in view. By adopting a simple system of accounting it may be known from week to week what expenditures are being made for every item and the cost per patient for each article enumerated in the maintenance account. Every careful superintendent should clearly understand the resources of the institution, and, knowing what the possibilities for increase or decrease are, use discretion in directing and controlling expenditure. Prudent, judicious economy must, however, be distinguished from the parsimonious spirit.

A wise superintendent will never lose sight of the fact that the mission of the hospital is not confined to allay suffering and relieve the physical distress of those cared for within its walls. The hospital should ever spread a gospel of health and right living throughout the community where it exists. Not only should the institution be a model of sanitary housekeeping, but the doctrine it inculcates should do much to demonstrate the best and truest hygienic truths. The beams of light from a hospital should shine forth and enter every home within the radius of its influence, so that the superstitious and baneful influences that shadow many lives may disappear as mist before the morning sun. The hospital in its great mission of teaching people how to live, in order that they may keep healthy, has a field of ever enlarging usefulness. The establishment of local sanatoria for consumptives in Germany has done more to educate the people in regard to the nature and prevention of tuberculosis than any other agency. Where prejudice once existed in regard to the establishment of these local sanatoria, through a misconception of the nature of the disease, it is now found that in the immediate vicinity of these institutions the disease has become practically unknown. These good results are entirely attributed to the fact that the people were taught how to live. Every hospital has its sphere of usefulness, then, in becoming an educational institution, not necessarily where its wards are visited by students, but through the potent influence which a wise superintendent may exert in aiming to make all the departments of the hospital helpful to all who come in contact therewith. I do not

know of any calling in life that requires greater versatility in talent and larger resources than are looked for in a hospital superintendent. Patience with them must never cease to be a virtue. Their mission in life unfolds for them new fields of usefulness from day to day. As heads of institutions devoted to the care and relief of suffering humanity they must rule and guide with the spirit of Him who left for us the first example of the hospital spirit. Whether at the head of a hospital large or small, your mission is to shed forth a radiance from the torch which privilege has placed in your hand. May this organization of the hospital superintendents of Ontario inspire new zeal and earnestness and be helpful to each one personally and to the institutions in this Province for whose welfare you have rendered such valuable and faithful service.

Selections, Abstracts, Etc.

WHAT CAN TREATMENT DO FOR THE PROPHYLAXIS OF THE VENEREAL DISEASES.*

BY HERMANN G. KLOTZ, M.D., NEW YORK.

Of the dual objects of this society which are indicated by its name moral prophylaxis has heretofore received by far the greater attention by the authors of the papers read, by those who took part in the discussions and by the audiences in general. And deservedly so, for the questions considered were of the utmost importance: The necessity and the practicability of spreading satisfactory knowledge of the existence and of the functions of the reproductive organs, of their care and of the consequences of their abuse. On the other side the question of the awakening and strengthening the moral sense of the community and principally of that still youthful generation which is destined to form the community of the future. However, even under the most favorable conditions we cannot expect that the progress of the moral education will be a very rapid one; we must be prepared to see many years pass, perhaps an entire generation before its real effects will become visible and measurable.

In the meantime we have to reckon with that enormous number of individuals of both sexes who at present are already affected with one or more of these so-called venereal diseases. Each one of these individuals represents a possible focus of fresh infections, a source of danger to innocent individuals as well as to those who wilfully expose themselves. Here, then, we have a large field in which moral prophylaxis must give precedence to sanitary prophylaxis.

Incidentally to the consideration of the questions of moral prophylaxis by the society, sanitary prophylaxis has quietly and almost unconsciously taken an important step in advance; heretofore those diseases which have their origin mostly in the social evil were not allowed to be mentioned at all in any but the strictest medical assemblies; outside of the profession the venereal diseases were covered with a veil of mystery; with misplaced prudry, mistaken morality and with a certain self-righteousness society and even charity refused to take notice of these diseases, although necessarily not entirely unconscious of their existence. Now at

* Read before a meeting of the American Society of Sanitary and Moral Prophylaxis, February 14, 1907.

last the names of these diseases have been brought forth before general audiences which have nobly overcome their former prejudices; the general distribution of these diseases and their widely spread injurious influences on the highest interests of human society have openly been described and discussed. Therefore we can say that the venereal diseases are at last beginning to be deprived of the long-enjoyed advantages of the unknown enemy, who could make his insidious attacks under the most various covers. We can now take another step forward in sanitary prophylaxis by putting forth the question: What can be done to lessen or remove the dangers inherent to the present prevalence of the venereal diseases? In order to do so intelligently it seems necessary to give a brief sketch of the characteristic features of the diseases themselves and to compare them with other diseases which have become the subjects of private and public sanitary prophylaxis.

In the eyes of the medical profession at present probably gonorrhoea occupies the most prominent position on account of its influence on the general welfare of the community, and particularly in regard to the frequency with which it contaminates marriage. This position gonorrhoea has attained only within the last few years. It was long considered a simple inflammation of the mucous membrane of the genito-urinary organs, principally of the urethra of men, caused by irritations of various character, infectious to a certain degree, but mostly looked upon as a mere local affection of little consequence. Not until about thirty years ago was gonorrhoea suspected of having very close and important relations to a number of diseases and diseased conditions particularly of the female reproductive organs. This was some time before 1879, when Neisser published his first report asserting that he had discovered the immediate cause of gonorrhoea in the shape of a specific microbe, which he fully described and called the gonococcus. The general confirmation of Neisser's discovery and the improved facilities of demonstrating the gonococcus by various staining methods soon proved that those suspicions were only too well founded.¹ The gonococcus has now been sufficiently studied and we know that once it has invaded some portion of the mucous membrane, it not only tenaciously sticks to it, but also, enormously multiplying, rapidly spreads over the contiguous portions of the mucous membranes, primarily on the surface, but also into the deeper tissue layers, and particularly into the glandular organs. As the mucous membrane of the entire genito-urinary canal in both sexes forms one continuous lining without any strict dividing line between the peripheral and the more remote and complicated internal organs, it is easy to understand that the gonococcus may find its way into all the more or less important organs and cause there various destructive inflammatory processes, often dangerous to life. Strictly speaking, these affections are still local ones; however, the

often unexpected discovery of the gonococcus in different joints, in tendons, bones, and other organs quite remote from the original seat, has demonstrated that the gonococcus may be transported by the way of the lymph and blood vessels, or directly through the tissues, and may cause foci of infection and various symptoms in these remote situations. In a comparatively small number of cases the gonococcus has been found in the blood and in the heart with local affections of the valves, causing a severe and usually fatal general affection. In other cases again symptoms of a general infection have been observed in which not the gonococcus itself, but its toxins or poisonous products seem to have caused the general symptoms.

The local inflammation which usually follows within a few days the infection by the gonococcus may show various degrees of intensity, depending probably upon different conditions of the infected tissues, or, if you please, upon individual predisposition. It becomes manifest principally by a more or less purulent discharge, which contains the gonococcus in large numbers. After a certain time the inflammation usually subsides, and it may cease entirely after four to six weeks without reaching any of the more important organs, with the complete elimination of the gonococcus and perfect restoration to healthy conditions. More often, however, subacute stages follow and lead to a state of chronicity: a slight discharge, principally found in the morning, may continue without any intervals of apparent cure, or all the symptoms may for the time being disappear only to reappear upon the slightest provocation in a more or less acute manner. But the gonococcus may also remain hidden for long periods of time without even the slightest signs of any disease and still retain its infectious qualities if transferred to some other individual. Gonorrhoea may, therefore, last indefinitely. It does not affect the offspring directly, except perhaps by infection of the eyes, but it greatly reduces the birth rate by destroying the functions of the important reproductive organs in both sexes.

The venereal ulcer, chancroid or soft chancre, is essentially a local trouble, at least as far as our present knowledge warrants. Under this name have been included sores or ulcers of the most different origin, course and termination; many, undoubtedly, not venereal, but due to uncleanness and other causes, and in numerous instances not infectious nor inoculable. Some of them, however, exhibit some more pronounced and characteristic features and decided virulency, and in them a specific microbe, the so-called streptobacillus of Ducrey and Unna has been found with some regularity, so that many authors are inclined to restrict the term chancroid to such ulcers, and to consider the Ducrey bacillus as the specific causative agent. Such ulcers occur singly or multiple on the cutaneous as well as on the mucous surface of the external

genital organs in both sexes, only very exceptionally on other portions of the body. They usually begin within a few days after exposure as pustules, which rapidly break down into ulcers of various form and depth, mostly showing a persistent tendency to peripheral extension, and may cause quite wide destruction of tissue; they may be very painful or may cause only very few subjective symptoms at all, but quite often are accompanied by an inflammation of the neighboring lymph glands, the so-called bubo, with a tendency to suppuration and the formation of external ulceration, the product of which may in turn become highly infectious. The chancroid often lasts for weeks and even months, but finally will heal without any impairment of the general health, usually, however, leaving a distinct scar.

Syphilis, on the other hand, is essentially a constitutional disease, affecting the entire organism and liable to produce changes in all tissue and organs of the body. Within the four hundred years within which syphilis has been rampant all over the civilized world, experience has taught us a great deal about this disease, but until quite recently all endeavors to discover its infectious agent have been unsuccessful. Only within the last two years discoveries have been made which bid fair to solve the mystery and promise much further light, and perhaps more efficient measures to fight against the disease. The virus, whatever it may be, is contained in the blood and in all tissue fluids, particularly in the discharges of any wound or even abrasion of the skin or mucous membrane, however small. It requires a similar break in the continuity of the normal protecting cover of both, on whatever locality of the human body, to enter into the system, and therefore it is by no means restricted to the genitals, but it is only too frequently accidentally inoculated on innocent individuals.

Once the virus has obtained such a hold, it immediately spreads to the neighboring tissues, without at first any outward sign until after a period of twelve days or more. Then it develops its first local symptom, the chancre, usually in the shape of an erosion or an ulcer which generally shows some very characteristic features, particularly a peculiar hardening, soon followed by an intumescence of some neighboring lymph glands. Only after another interval of quiescence, from six to eight weeks after the infection, the so-called secondary symptoms appear, mostly on the skin and mucous membranes. These lesions again often suffer a superficial breakdown with eroded surfaces furnishing highly infectious material. In the so-called secondary stage the disease remains for several years, usually not less than two, during which the symptoms may disappear, followed by occasional new eruptions and by periods of latency; sometimes the eyes and some bones become affected. The infectiousness remains the same throughout this period. Later on the disease may disappear never to return, and

leave the individual apparently fully restored to health. In a not inconsiderable number of cases new outbreaks occur later, mostly localized and principally affecting the skin and the mucous membranes and neighboring tissues in the throat and nose, but these so-called tertiary manifestations may occur in almost any organ of the human body, often causing permanent impairment and destruction, the importance of which largely depends upon the importance of the functions of the affected organs. The nervous system is considered the most vulnerable. A large number of chronic morbid conditions of the internal organs are now attributed directly or indirectly to syphilis which do not exhibit any characteristic anatomical features, among them affections of the spine and certain forms of insanity. Many of these diseases end fatally, but death is usually not officially attributed to syphilis.

Not satisfied with thus destroying the health and life of those who have acquired syphilis, the disease is liable to affect the offspring in the most disastrous manner. In the largest number of instances, pre-eminently so in the cases where the mother is diseased, the children perish before birth, causing miscarriage or premature birth. In others the children are born on term and alive, but with direct manifestations of syphilis. They usually succumb sooner or later to the effects of the disease itself or become an easy prey to other disease. Or they survive, to develop tertiary symptoms later on, or to remain poorly developed in body and mind for years or for life, while here and there children are born healthy and remain healthy under conditions where the contrary was to be expected.

How widely disseminated these venereal diseases really are, and how often they bring misery into married life and into the family, has been repeatedly explained and commented on before these audiences; the sketches of the diseases themselves just given. I hope, have made clear in which particular way the injurious consequences are accomplished, and what chances they offer for sanitary prophylaxis. The question therefore presents itself: What can be done towards their suppression?

Legislative and administrative measures can be dismissed from consideration in a few words: The experience in many cities and countries in Europe and elsewhere has sufficiently demonstrated the inefficiency of *réglementation* and similar measures; in this country they would hardly be supported or even tolerated by public opinion, at least certainly not at the present time or in the near future. Some relief might be obtained through legislation, if the law would make it a punishable offense to wilfully and knowingly infect another person with any of the venereal diseases, although the difficulty of finding the victims willing to testify against the offenders might render such a law but little effective.

But cannot the health authorities interfere as they do in the suppression of other diseases? Quite recently, at a meeting held in this very room, a former President of the Board of Health of this city has explained how the health authorities have taken the initiative in the fight against contagious disease whenever such an opportunity has offered itself. Why have they never touched the venereal diseases? The answer can easily be given and understood, if you will compare the latter with those diseases against which the health authorities have acted, namely, the so-called acute exanthemata, measles, scarlet fever, chicken-pox, smallpox, diphtheria, typhus fever, to a certain extent typhoid fever and pneumonia, and finally tuberculosis. All these diseases, with the exception of tuberculosis, are of comparatively short duration; they run their course in several weeks at the utmost, and after that time they leave the patients free of any danger of infecting other individuals; even if they occur in large numbers, they are usually divided into groups of small size, and therefore it is not so difficult to isolate and to segregate the patients during the entire period of their infectiousness without making too extravagant demands on the public service. Besides, these diseases mostly render the patients incapable of following their usual occupation or work, so that enforced idleness does not involve any hardship: the diseases generally become so distinctly manifest that they cannot easily be concealed, even if there existed more reason for concealment in the absence of any shame or disgrace being connected with their acquisition. On the other side, the acute exanthemata are practically not immediately affected by any treatment, but principally require nursing and hygienic surroundings; at the same time they are all more or less of grave character, liable to cause death, and therefore looked upon with sufficient fear by the public in general to make any preventive measures welcome.

All these conditions which favor the control of the health authorities in the contagious diseases just considered are absent in the venereal diseases. Only the least important one among them, the venereal ulcers, are of a comparatively short duration, and perhaps their number, probably greatly varying at different times, is not so very large. But they are easily concealed, so long, at any rate, as they allow the patient to follow his occupation, and would probably evade detection by the health officers, and thus render control ineffective. Gonorrhoea and syphilis, however, occur in such an enormous number of cases that it would be absolutely impossible to follow up each one. Another difficulty is met with in the long duration of the diseases themselves and of the period of their infectiousness, and by the intervening of more or less prolonged intervals of latency, during which it is impossible or at least extremely difficult, with our present means, to establish the proof of infectiousness. Then

infectiousness is not absolute, but is limited to certain conditions. It is naturally entirely out of the question to isolate such large number of patients on a separate island, like those affected with lepra; it is out of the question to keep all the patients under surveillance in our country with its largely migratory population, particularly so in a large city. Under such circumstances it would hardly be of any practical value, as has been proposed, to make reports of all cases of venereal diseases compulsory to physicians, although without the name of the patient. The principal effect of such a measure would be to make the patients conceal their troubles even more than now, and drive them still more into the hands of quacks and unscrupulous physicians who would avoid making any reports. Some of these difficulties, it is true, apply also to tuberculosis, principally the large number of those affected, but in tuberculosis there is not so much reason for concealment, as the disease is not degrading to the patient in the eyes of his friends and acquaintances, but rather makes him a subject of pity and sympathy. Besides, concealment is in most instances hardly possible, since the disease usually becomes sufficiently manifest by some symptoms; moreover, it soon affects the working capacity of the patient, and is known to be highly dangerous to life, while the venereal diseases, as a rule, do not incapacitate for work, except perhaps temporarily, nor immediately cause serious conditions or danger of life. So there seems to exist sufficient reasons why we cannot expect the health authorities to alter the course heretofore taken, even if public opinion was prepared to sanction, favor and assist any active procedures.

In regard to one of the contagious diseases we are fortunate enough to possess a prophylactic remedy of the greatest usefulness, namely, vaccination against smallpox. In some ways it would seem to be an ideal prophylactic measure, if a similar virus for inoculation against syphilis could be found. Indeed, experiments have at several times been made with this intention, but so far the fact that neither the causative microbe had been discovered nor any animal susceptible to inoculation of the syphilitic virus and suitable for such experiment had yet been found, has prevented success. But even if the recent discovery of the active microbe and the successful inoculation of syphilis on monkeys should in time lead to the preparation of some prophylactic serum, would it not be considered by many as a blessing of doubtful value, because it would be rather the means of affording immunity to immorality?

The question then naturally arises, whether the venereal disease cannot be influenced by treatment, either by effecting a complete effacement of the disease itself, or at least by abolishing or reducing its infectious features. Fortunately, we can answer this question largely in the affirmative. All three diseases have one

feature in common: Their virus, whether of well known or unknown nature, is a fixed one—that means it is attached to or contained in some certain tangible substances, and can only be acquired by immediate contact with such substances, either while located on the patient himself or after having been transferred to some intermediary host; in no other way can the virus be transferred. The problem, therefore, is to prevent as far as possible the formation of these substances or to destroy their infectiousness. Let us see how far this can be done.

As to the venereal ulcer, as we have seen, the disease is restricted to one or several circumscribed foci which furnish the infectious material, and these are as a rule superficially located, so that they can directly be attacked with caustics and disinfectants; in many instances it is also possible to surround them with protective dressings, largely diminishing thereby the danger of the propagation of the virus to other individuals. As a rule one or several applications of caustics and the reactive inflammation caused by the same will be sufficient to transform the infectious ulcer into a clean wound and gradually induce complete healing.

Syphilis, soon after it had made its appearance as an epidemic towards the end of the fifteenth century, was found to be amenable to treatment by mercury, and this drug, in spite of much opposition, has maintained its supremacy in the fight against syphilis throughout all this time, notwithstanding the many abuses to which it has been subjected, and which justly have been censured, and in spite of the prejudice against its use found among physicians, as well as among laymen, and largely among the general public. Indeed, perhaps with the exception of quinine as a remedy against malaria there is in medicine hardly an example of so specific an effect on the manifestations of any disease, and we may expect a favorable result from its administration almost with the certainty of a physiological experiment. It is only in regard to the method of its application that opinions differ, and the progress that has been made in all branches of medicine has also enriched us with new and more powerful means of treatment. Later on iodine had proved a powerful auxiliary. Besides, the importance of hygienic and sanitary measures and of the maintenance of the best possible conditions of general health have been duly recognized. The question whether our treatment removes only the manifestations of the disease or the latter itself is perhaps still an open one. For the purpose of sanitary prophylaxis even the removal of the symptoms is of great importance, because incidentally the opportunity for the formation of infectious material and therefore the opportunity for the infection of other individuals are thereby greatly reduced. It has been demonstrated beyond doubt that efficient treatment in the early stages largely diminishes the probability of the appearance of the late or tertiary

manifestations. Efficient treatment of the parents also undoubtedly reduces the mortality among the children.

As to the effects upon the disease itself, it seems that syphilis, like the more acute infectious diseases, has the tendency to run a certain course, and after a more or less extended duration to cease voluntarily, for we see occasionally patients exhibit some slight early symptoms, and even without any treatment remain perfectly free from any symptoms afterwards; and although this probably cannot be demonstrated by exact statistics, common experience will show that a large number of patients who receive timely and efficient treatment, and take generally good care of themselves, remain well, have healthy wives and children, and reach the same average age as nonsyphilitics. It must not be overlooked that syphilis does not convey immunity of other diseases, and that naturally, considering the large number of its victims, a large contingent are liable to succumb to diseases which also attack and often destroy the nonsyphilitics. On the other hand, only too many cases which have been neglected show the contrary conditions. We may therefore state that, while we cannot positively claim to cure syphilis by treatment, we certainly can be of great assistance in a final recovery. So far we are restricted to the old standbys, mercury and the iodides. Possibly the recent important discoveries may in time lead to the discovery of a curative serum, as is the aim of all these investigations, but for the present positive results have not yet been obtained, according to the most recent statement of Neisser, one of the most prominent workers in this field.

Coming finally to speak of the treatment of gonorrhoea, we find a much more difficult and complicated situation. Theoretically, the problem seems to be a very simple one; we know the causative agent, and we know a number of remedies which are sure to destroy the same whenever and wherever they are brought in contact with the coccus. Practically we find on the one hand that these remedies are injurious to the tissues in which the gonococcus is found, and, therefore, they must be applied with great caution. On the other hand, the gonococcus is liable to migrate to localities and to organs which we cannot directly reach. The time is not so far remote when the treatment of gonorrhoea was considered so simple a matter that many physicians considered it beneath their dignity to treat a patient for gonorrhoea, or more frequently did not think it necessary to examine him before prescribing one of the usual remedies. But since the gravity of the disease and of its consequences has been better understood, much thought, study and work has been devoted to its treatment, and many new methods of treatment have been recommended and introduced into practice. Thus we have become enabled not only to shorten the duration of gonorrhoea in many cases and also to

reach the gonococcus in situations in which we formerly seemed helpless. Many cases can be cured in a comparatively short time if taken care of in an early stage. There is still some opposition to early active treatment, although common sense seems to clearly indicate that in an early stage the disease must be still sufficiently localized to offer opportunities of preventing it from extension to deeper regions. While it must be conceded that some conditions in gonorrhoea at present have to be considered incurable, I cannot sympathize with those who, in every discussion of the treatment of gonorrhoea, solemnly rise to explain, what everybody else already knows, that the gonococcus may be hidden deeply in some gland wherefrom it cannot be dislodged, and will stay there forever, menacing future infection. It does not seem fair to throw a wet blanket over the honest efforts of those who indefatigably try to improve older methods or to introduce new and more effective ones. Much has already been accomplished in reaching the cause and the seat of the disease. What before seemed impossible, and there is no reason to give up further efforts. I only mention the recent experiments with a curative serum which seem to prove the possibility of destroying the gonococcus in distant organs and of curing conditions which heretofore seemed to resist and defy all treatment.

In giving these general outlines of the possibilities of treatment of the venereal diseases, enough, I hope, has been shown to make it plain that we are by no means powerless against those diseases, and that much can be accomplished by such treatment to reduce the dangers of infection. In the absence of other means we therefore have, for the present at least, to look to treatment in connection with hygienic education of the patients as the most important means of sanitary prophylaxis of the venereal diseases. The next question will be the practical one, how to make such treatment available to the largest number of patients.—*N. Y. Med. Jnl.*

130 West Fifty-eighth Street.

ABSTRACTS.

Nose and Ear Suppuration and Facial Erysipelas.—C. F. Welty, San Francisco, Cal. (*Journal A. M. A.*, December 22), accounts for the special frequency of erysipelas in the face by its nearness to the source of infection in the nose or ear. The pus secretion produces an abrasion of the skin or mucosa, and inoculation follows. This may also be conveyed by the handkerchief, or, more frequently, he thinks, by the finger. The reason

for the so frequent recurrence of erysipelas is, he says, because the infection is always present and is practically never eliminated without operation. When streptococci can be determined in the secretion of the ear or nose it should be considered as an established fact that the erysipelas is dependent on them. The reason why 82 per cent. of facial erysipelas starts from the angle of the nose is thus explained. The reason that erysipelas does not occur in every case in which streptococci exist in the secretions is best given by assuming immunity or modified virulence; not every case of exposure to other infections is followed by the outbreak of the disease. These opinions are supported by the results of the examination of some sixty cases of erysipelas in the City and County Hospitals at San Francisco. Idiopathic facial erysipelas, Welty says, is a misnomer.

Keratitis Obturans.—G. S. Ryerson, Toronto, Can. (*Journal A. M. A.*, December 22), reports two cases of this condition, one of long duration and accompanied with deafness, loss of memory and of the power of attention, all of which were relieved by the removal of the growth. The other was an acute case, of interest on account of the similarity of the symptoms to those of mastoiditis. He remarks on the rarity of the disease; the cases described were the only ones met by him in his private and hospital practice of over a quarter of a century. In neither case did there seem to be any connection of the growth with middle-ear disease, though there was a history of suppurative trouble in both.

Tuberculosis Sanitaria.—The effect of tuberculosis sanitaria on the value of surrounding property forms the subject of a paper by W. H. Baldwin, Washington, D.C., in *The Journal A. M. A.*, December 22. He discusses the general subject of institutions in their effect on the surrounding values and gives the result of an inquiry based on a correspondence with fifty-nine of the largest sanitaria in the country. A series of questions was sent out covering the factors that might be active, such as the location, capacity, time established, nature of buildings, quantity of land, class of patients received, distance on which effect on values was appreciable, etc. From the answers received it would appear that in 58 per cent. of the instances, adjoining values had increased, accompanied in 17 per cent. by a change for the better in the purposes for which the land was used. In 35 per cent. there was no change, and in 7 per cent. a depreciation of adjoining values was admitted. In 37 of the 59 institutions reporting there had been no opposition at any time on the part of the community, in 14 there had been opposition which had disappeared,

in 5 there was still opposition to the institution. Of course the complexity of the question is recognized, and it cannot be determined whether the institution or other cause is responsible for certain effects. The most striking good effect undoubtedly due to the institution is shown by the Adirondack Cottage Sanitarium, where the increase of its popularity and of the prosperity of the surrounding population has been very markedly noticeable. Similar reports come from Liberty, N.Y., Rutland, Mass., Gravenhurst, Ont., and elsewhere. It would appear that the opposition is comparatively a recent thing, as a number of striking instances here referred to indicate. Such prejudices deserve consideration, and needless interference with values should be avoided, though experience has shown that there is absolutely no danger in a well-conducted sanatorium. A wise policy in the projectors and conductors of such will make them a recognized direct benefit to the community.

Pharmacology of Veratrim.—H. C. Wood, Jr., Philadelphia (*Journal A. M. A.*, December 22), questions the propriety of placing the two plants, *veratrum viride* and *veratrum album*, together under one head in the Pharmacopeia. He has been long impressed with the irregularity of the action of *veratrum viride*, and hence of the desirability of employing its active principle, were that possible. He reviews the facts that seem established as regards its alkaloids and their action, and concludes as follows: "1. Neither veratrin nor rubijervin are present in *veratrum viride* root in sufficient amount that they can in any degree be held responsible for the activity of the drug. 2. Protoveratrin, although an extremely poisonous substance, differs essentially in its effects from the *veratrum rhizome*, and, therefore, is not to be considered its active principle. Moreover, the proportions of it are too small to permit of its being considered the toxic ingredient. 3. Of the known proximate principles, jervin most nearly corresponds in its physiologic action to the crude drug, but is present in too small amount in proportion to its toxicity to be considered the chief active ingredient. 4. The evidence, therefore, seems to me conclusive that there is in *veratrum viride* some active substance as yet undiscovered."

The Canadian Journal of Medicine and Surgery

J. J. CASBIDY, M.D.,

EDITOR.

43 BLOOR STREET EAST, TORONTO.

W. A. YOUNG, M.D., L.R.C.P. Lond.,

MANAGING EDITOR

145 COLLEGE STREET, TORONTO.

Surgery—F. N. G. STA. R., M.D., Toronto, Associate Professor of Clinical Surgery, Toronto University; Surgeon to the Out-Door Department Toronto General Hospital and Hospital for Sick Children; N. A. POWELL, M.D., C.M., Prof. of Medical Jurisprudence, Toronto University, Surgeon Toronto General Hospital, etc.

Clinical Surgery—ALEX. PRIMROSE, M.B., C.M. Edinburgh University; Professor of Anatomy and Director of the Anatomical Department, Toronto University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University.

Orthopedic Surgery—E. E. MCKENZIE, B.A., M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Surgeon to the Out-Patient Department, Toronto General Hospital; Assistant Professor of Clinical Surgery, Ontario Medical College for Women; Ex-President of the American Orthopedic Association; and H. P. H. GALLOWAY, M.D., Winnipeg, Man.; Member of the American Orthopedic Association.

Gynecology and Obstetrics—Geo. T. MCKROUGH, M.D., M.R.C.S. Eng., Chatham, Ont.; and J. H. LOWE, M.D., Toronto.

Medical Jurisprudence and Toxicology—ARTHUR JUKES JOHNSON, M.B., M.R.C.S. Eng.; Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. YOUNG, M.D., L.R.C.P. Lond.; Associate Coroner, City of Toronto.

Physiotherapy—CHAS. R. DICKSON, M.D., C.M., Queen's University, M.D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S. Eng., Toronto.

Pediatrics—ALLEN HAINES, M.D., Toronto; A. R. GORDON, M.D., Toronto; HELEN MACMURCHY, M.D., Toronto.

Medicine—J. J. CASBIDY, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and W. J. WILSON, M.D., Toronto, Physician Toronto Western Hospital.

Oral Surgery—E. H. ADAMS, M.D., D.D.S., Toronto.
Clinical Medicine—ALEXANDER MCPHEDRAN, M.D., Professor of Medicine and Clinical Medicine Toronto University; Physician Toronto General Hospital, St. Michael's Hospital, and Victoria Hospital for Sick Children.

Mental and Nervous Diseases—N. H. BEEMER, M.D., Mimic Insane Asylum; CAMPBELL MEYERS, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Public Health and Hygiene—J. J. CASBIDY, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon Toronto General Hospital; and E. H. ADAMS, M.D., Toronto.

Physiology—A. B. RADIE, M.D., Toronto, Professor of Physiology Woman's Medical College, Toronto.

Pathology—W. H. PEPPEL, M.D., C.M., Trinity University; Pathologist Hospital for Sick Children, Toronto; Associate Demonstrator of Pathology Toronto University; Physician to Out-door Department Toronto General Hospital; Surgeon Canadian Pacific R.R., Toronto; and J. J. MACKENZIE, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology—J. M. MACCALLUM, M.D., Toronto, Professor of Materia Medica Toronto University; Assistant Physician Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear—FERRY G. GOLDSMITH, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Laryngologist, National Sanatorium Association, Gravenhurst.
Dermatology—D. KING SMITH, M.B. Tor., Toronto

Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifth of the preceding month. London, Eng. Representative, W. Hamilton Mhn, Thanet House, 231 Strand, WC. Agents for Germany, Saarbach's News Exchange, Mainz, Germany.

VOL. XXI.

TORONTO, MAY, 1907.

No. 5.

Editorials.

PROTECTION OF INFANT LIFE IN THE PROVINCE OF ONTARIO.

ACCORDING to the thirty-fifth annual report of the Registrar-General of the Province of Ontario, 50,265 births, including still births, were registered during the year 1904. This represents a birth rate of 22.8 per 1,000 of population. As an offset 4,461 infants, or 8.87 per cent., of the births died under one year of age,

of malformations and diseases of infancy. Under this head are grouped congenital malformations, still births, congenital debility, icterus, sclerema, and other diseases peculiar to infancy. As other offsets, 192 infants under one year perished of communicable diseases—typhoid fever, measles, scarlet fever, whooping cough, diphtheria, influenza, variola; 645 died of diseases of the nervous system—encephalitis, meningitis, epidemic cerebro-spinal meningitis, convulsions; 13 died of diseases of the circulatory system, including diseases of the heart and hemorrhages; 625 died of diseases of the respiratory system—croup, bronchitis, broncho-pneumonia, pneumonia, congestion and apoplexy of the lungs. The highest mortality among this class was caused by diseases of the digestive system, including diarrhea, enteritis, and cholera infantum. In all, 6,902 infants, or 22.5 per cent. of the total mortality for the year (31,292) perished. Of the 6,902 deaths, 64.64 per cent. are ascribed to malformations and diseases peculiar to infancy, 35.36 to the different diseases, most of which have been specified above.

At page 8 of the report it is stated that a high death rate in the town of Hawkesbury (28.3 per 1,000) corresponded with a high birth rate (64.3 per 1,000), and was due to increased infantile mortality. With a population of 4,198, there were 270 births and 119 deaths in Hawkesbury last year. Of the 119 deaths, 11 were still births, and of the remaining 108 deaths, 49, or 45.3 per cent., were of infants of one year and under, and 18, or 16.6 per cent. were of children under ten years of age. The following remarks are made: "It will thus be seen that in this town alone there is much to be done along the line of the education of the parents, particularly the mothers, in the care and raising of infants. for many of the 49 deaths of infants under one year, I am certain, would have been prevented if the parents had only known how to rear their babies."

Although mention is not made of the diseases which carried off the 49 infants in Hawkesbury, one is led to infer that in some instances they were communicable diseases—measles, whooping cough, scarlet fever, which might have been prevented by quarantine; in others, diphtheria, which also might have been prevented by quarantine, or cured by the prompt administration of serum. We understand, however, that particular reference was intended to be made to diarrhea, enteritis and cholera infantum—diseases

occurring in hot weather among bottle-fed babies. The death of a bottle-fed babe put out to nurse is ascribed, rightly or wrongly, to the carelessness, cruelty or ignorance of its commercial foster mother. Carelessness and ignorance were probably responsible for some of the deaths of the Hawkesbury infants, whose mothers, being in some cases mill-hands, had absented themselves from home and neglected their babies. Cruelty could not be charged, unless we inveigh against the cruelty of each and every mother who for any cause, except dire necessity, weans her babe prematurely.

With the advent of hot weather, a large death rate among children is commonly expected, and this death rate is very largely limited to the very early age periods and to children fed on cow's milk. During the last siege of Paris, in 1870, the infant mortality in that city was reduced to a half of its yearly average, although the general death rate was doubled. This unusual condition was attributed, no doubt correctly, to the fact that the mothers were obliged to nurse their infants at the breast, when they could, on account of the great scarcity of cow's milk and other foods. Breast feeding of the young infant should be continued, whenever it is possible, during not less than the first ten months of infantile life.

It would be a good thing if a woman inspector were appointed by the Ontario Government to act as an instructress of inexperienced mothers. Such an official, in lectures delivered before women's clubs, could instigate the banishment of the long-tube feeding bottle from pharmacies; could teach the mothers, or women who would bring the news to them, to boil the nursing bottles and nipples every day; to boil the milk and the water given the baby during the hot weather; to clothe the infant properly, and see that it gets plenty of fresh air.

A general diffusion of such elementary ideas among nursing mothers and nurses would help to lessen the mortality of infants under one year from diarrhoea and enteritis in Ontario. On the other hand, however, if healthy women of the working class, or any class, refuse or neglect to wet-nurse their babes, no amount of hygienic lecturing or advice will prevent a very considerable mortality of their infants, under one year, from diarrhoea and enteritis.

THE LATE DR. W. H. DRUMMOND.

J. W. BENGOUGH has composed the following appreciation of Dr. Drummond's works, written after the doctor's own style, entitled "The Habitant's Lament":

Jus' w'en de Spring she's comin',
 An' leetle bird is gay,
 An' Wierter storm an' hiee an' snow
 Has no excuse for stay;
 Jus' w'en de whole worl' lookin'
 So you can't find no fault—
 Dat's when de bad news she'll arrive,
 De bad news on Cobalt!

No; dat has nottin' 'tall for do
 Wit news of silver mine,
 De prospec' for get monee dare
 It's mebbe seem ver' fine;
 I spik' not of such subjec', me,
 But bow it down my head,
 For Poet of the Habitant
 Dat's lyin' sick on bed.

De man w'at mak' some leetle book
 Wit' verse 'bout Papineau,
 De Julie Plante de Rossignol,
 An' Jcan Baptiste Trudeau,
 An' many more—de man w'at write
 De sam' way lak' we spik';
 De bad news come on Cobalt,
 Our frien' is now ver' sick.

Some verse 'e write for mak' de fame,
 An' some for bring de tear;
 But Drummond, 'e is our good frien'
 Always for plentee year:
 'E's Protes-tant, but all de sam'
 At Mass w'en we 'av kneel,
 De Cure 'e will pray, Bon Dieu
 For sure to mak' im well.

Dr. Drummond, born at Currawn House, County Leitrim, Ireland, in 1854, entered into rest at Cobalt, Canada, April 1907. With the exception of a few of his earlier years, his life was spent in and around Montreal, but the whole of the people of America mourn as they realize that the book of his life "has closed over, for all the lessons are said"—how well said as physician, friend, compatriot and sportsman all know, but best of all as the true singer of the heart songs of a people whom he loved and whom he has taught all to look at with his brotherly eyes, and to welcome,

with him, into the big Canada we call home, little "Dieu Donne":

No, sir! I can tole you, if you never know before
W'y de kettle on the stove mak' such a fuss,
W'y de robin stop hees singin' an' come peekin' t'roo de door
For learn about de nice t'ings come to us;

An' w'en he see de baby lyin' dere upon de bed,
Lake leetle Son of Mary on de ole tam long ago,
Wit' de sunshine an' de shadder makin' ring aroun' hees head,
No wonder M'sieu Robin wissle low.

An' we can't help feelin' glad, too, so we call him Dieudonne,
An' he never cry, dat baby, w'en he chrissen by de pries';
All de sam' I'll bet you dollar he'll waken up some day
An' be as bad as leetle boy Bateese.

Who fails to smile as the poet doffs his hat to "De Nice Leetle Canadienne":

You can pass on de worl' we'rever you lak,
Tak the steamboat for go Angleterre,
Tak car on de State, an' den you come back,
An' go all the place, I don't care--
Ma fren', dat's a fack, I know you will say,
W'en you come on dis countree again,
Dere's no girl can touch w'at we say every day--
De nice leetle Canadienne."

Another inimitable bit, called "Pride":

Ma fadder he spik to me long ago:
"Alphone, it is better go leetle slow.
Don't put on de style if you can't afford,
But satisfy be wit' your bed an' board.
De Bear wit' hees head too high alway,
Know not'ing at all till de trap go smash,
An' mooshrat dat's swimmin' so proud to-day
Very often to-morrow is on de hash."

Edward de Seven of Angleterre
An' few oder place beside,
He's got de horse an' de carriage dere
W'enever he want to ride.
Wit' sojer in front to clear the way,
Sojer behin' all dress so gay,
Ev'ry wan makin' de grand salaam,
An' plaintee of ban' playin' all de tam.

An' dere's de boss of United State,
An' w'at de call Philippine,
De Yankee t'ink he was somet'ing great
An' big as de king or queen.
So dey geev' heem a house near touch de sky,
An' paint it so w'ite it was blin' de eye,
An' long as he's dere beginnin' to en'
Don't cos' heem not 'ing for treat hees frien'.

So dere's two feller, Edouard de king
 An' Teddy Roos-vel' also,
 No wonder dey're proud or dey got few t'ing
 Was helpin' dem mak' de show.
 But, oh, ma Gosh, w'en you talk of pride,
 An' w'at dey call style an' puttin' on side,
 W'ere is de man can go before
 De pig-sticker champion of Ste. Flore ?

In the "Habitant's Jubilee Ode" he touches the patriotic chord:

An, onder de flag of Angleterre, so long as dat flag was fly,
 Wit' deir Englis' brother, des Canayens is satisfy leev an' die,
 Dat's de message our fader geev us w'en dey've fallin' on Chateauguay,
 An' de flag was kipin' dem safe der, dat's de wan we will kip alway !"

A beautiful little poem is "The Last Portage":

I'm sleepin' las' night w'en I dream a dream.
 An' a wonderful wan it seem,
 For I'm off on de road I was never see
 Too long an' hard for a man lak me,
 So ole he can only wait de call,
 Is sooner or later come to all.

An' off in front of me as I go,
 Light as a dreef of de fallin' snow.
 Who is dat leetle boy dancin' dere?
 Can see hees w'ite dress an' curly hair.
 An' almos' touch heem so near to me,
 In an' out dere among de tree.

An' den I'm hearin' a voice is say,
 "Come along, fader, don't mind de way,
 De boss on de camp he sen' for you,
 So your leetle boy's going to guide you troo,
 It's easy for me, for the road I know,
 'Cos I travel it many long year ago."

An' I foller it on, an' wance in a w'ile
 He turn again wid de baby smile,
 An' say, "Dear fader, I'm here, you see,
 We're both togedder, jes' you an' me ;
 Very dark to you, but to me it's light;
 De road we travel so far to-night."

And so he sings on, and so we listen 'mid smiles and perhaps a tear, and cherish the gift he has left us. Nothing remarkable, almost commonplace, many say. Something less than a genius, perhaps, but as the years roll on, something more than a stringer of rhymes; perchance the man who saw visions and dreamed dreams, who pictured to himself a great future and a great nation of one people and one tongue—Canada—and so he sang of the common lot of all, the everyday joys and sorrows drawing together

the stepchildren by a clearer understanding of the lives of each, and uniting them by the sympathy of a heart-beat.

He rests—and nothing more fitting could have been chosen to engrave upon his casket than one of his favorite quotations:

“And falling, fling to the hosts behind;
Play up, play up, and play the game.”

W. A. Y.

PROFESSOR FRIEDRICH MULLER'S VIEWS ON NEPHRITIS.

In an address delivered before the Toronto Medical Society, April 5, 1907, at the new Medical Building, Prof. Friedrich Müller, Munich, Germany, expressed his views on the subject of nephritis, a brief abstract of which is here presented:

The Professor held that the lesions which produced functional and organic breakdown of the kidneys were brought about by toxins of different kinds—lead, alcohol, oxalic acid, in the chemical group; tuberculin, diphtheritic toxin, toxin of scarlet fever, in the organic group. The prognosis of nephritis depended on the etiology; in many cases being favorable, in others not so favorable. It was of great importance to know the exact history of an attack of nephritis when deciding as to what class it may belong—acute or chronic. The beginning of the attack is the main thing to know; if it begins acutely, it belongs to the acute category.

Chronic nephritis is generally divided into two classes: the interstitial and the parenchymatous. The lecturer contended that it was easy to diagnose these pathological conditions post-mortem; but that a clinical diagnosis was by no means an easy task. He thought that true interstitial nephritis was not confined to the tubuli uriniferi; but that it extended to the parenchyma as well, after a lapse of time.

In true parenchymatous nephritis from infection, v.g. typhoid fever, the kidneys undergo restoration after the disease has reached a favorable termination. If a poison, such as gout, acts on the canaliculi for a series of years, inflammation of the interstitial tissue of the kidneys follows. Scars are formed in the kidneys as the result of inflammation in them, and the kidneys become contracted ultimately, but never as the direct outcome of a primary interstitial inflammation.

The large white kidney is due to the constant action of some toxin which continues to act for a long period of time.

Chronic granular kidney is the result of an acute nephritis, starting from, v.g., scarlet fever, the renal tissues being spoiled and remaining so, just as, after pneumonia, the lung tissues may remain damaged for life.

The proper function of the kidney is to eliminate water from the body. In this respect elimination of water from the kidneys differs from perspiration, the chief object of which is to lower temperature. An individual does not perspire because he has drunk too much water; the kidneys discharge water freely when a large quantity of water has been drunk.

Edema ensues when the kidneys have lost the power of eliminating water. Urinary salts, such as the chlorides, remain in the body when the kidneys are unable to excrete them. When a toxin is acting on a renal blood vessel, polyuria may ensue. A clinician cannot say whether a certain anatomical condition of the kidney will produce polyuria or oliguria.

The toxin which produces eclampsia in a pregnant woman proceeds from the infant. The toxins of gout will produce gouty nephritis, and diabetes may result from such a condition of the kidneys.

Toxins of all kinds are specially discharged from the body through the kidneys. A sound condition of the kidneys is of great importance in the treatment of any diseased condition in a patient: pneumonia becomes grave if it is complicated with nephritis.

In uremia, the blood pressure becomes enormous, as revealed by the sphygmograph; this change shows increased work of the heart.

Blood pressure is not increased in typhoid nephritis; in tubercular nephritis it is in most cases not increased; in gouty kidney blood pressure is not notably increased, and this last condition does not tend to uremia. If, however, blood pressure should rise in gouty nephritis, the condition of the patient becomes one of danger.

Continued high blood pressure and toxemia are responsible for arteritis.

The lecturer thought that the question of nephritis should be approached from the clinical rather than the anatomical standpoint.

J. J. C.

DR. EADIE'S ILLNESS.

DR. ANDREW EADIE, of 855 Queen Street West, has the united sympathy of the entire profession in Toronto and hosts of outside friends in his prolonged illness due to an unmerciful and entirely unjustifiable assault made upon him a couple of weeks ago while wheeling along Queen Street West. The man who assaulted him was a patient of his, whose child had recently died in the Western Hospital, and without just cause or reason the man became embittered toward Dr. Eadie. As a result of the attack the doctor remained in a semi-conscious condition for over ten days, and though recovering slowly at time of writing, is still in a critical condition. May he speedily recover.

EDITORIAL NOTES.

Treatment of Bronchitis.—Common subacute bronchitis causes the desquamation of the bronchial epithelium, which is the best shield the bronchial mucous membrane has against infections, particularly the infection of tuberculosis. Hence the necessity of carefully treating even slight attacks of bronchitis, particularly if they occur in patients exposed to contamination in hospitals, workshops, schools, crowded buildings and cities. In a case of bronchitis, when there is an abundant or a muco-purulent expectoration, when the temperature rises above the normal, particularly at night, when the general condition of the patient is unfavorable, when there is some lack of clearness in the respiratory murmur, particularly at the apices, with disseminated rales and friction sounds at the bases of the lungs, an energetic treatment is called for. Creosote, administered in a suitable vehicle, rapidly dries up the bronchial secretions, brings about the repair of the damaged bronchial epithelium, lowers the fever, and restores appetite. Creosote does not coagulate albumin. It is antiseptic, styptic, anesthetic and escharotic. Chemically pure beechwood creosote is extensively used in pulmonary tuberculosis. The phosphite of creosote is recommended by Dr. Bertheim, editor of the *International Review of Tuberculosis*.

The Bromides in Therapeutics.—Dr. P. Hartenberg, in an article recently published in *La Presse Medicale*, says that practitioners should be cautious in prescribing the bromides for some patients. The state of the nutrition of the patient should be the physician's guide in this respect, for the bromides exercise a depressing effect on the organism and lessen the elimination of urea and phosphoric acid. They should not be ordered for neurasthenic or hysterical patients, who are already suffering from depression and in whom nutritive processes are slow. On the other hand, the bromides act most effectively when administered to patients suffering from agitation, over-excitement, palpitation, spasms, precordial distress, etc, if the nutrition of the nervous system and the general nutrition be satisfactory. The combination of the bromides of ammonium, sodium and potassium, known as triple bromides, appears to be the most efficacious.

Experiments Proving Infection from Tableware.—In *Rev. d. Hyg. et de Police Smit.*, 1907, Vol. XXIX., No. 1, p. 60, Dr. Cristiani, Professor of Hygiene in the University of Geneva, has reported the results of some experiments, showing how infection may be communicated from glasses, forks, spoons and other articles of tableware. A drop of one-tenth dilution of a bouillon culture of bacillus prodigiosus was placed on the experimenter's tongue, and then, by movements of the tongue, diffused through the buccal cavity. The experimenter then going through the motions of drinking, carried to his mouth sterilized glasses, which were afterwards used to infect Petri dishes, by simple contact of the edge of the glass with the jelly. Under these conditions the result of the sowing of the bacillus prodigiosus was always positive. If, however, after the infectious contact the glass was washed with a large quantity of cold water and carefully wiped, as is done in laboratories, the sowing remained negative, or only a few isolated colonies developed. Even if the glass was only rinsed in a basin containing cold water, and then wiped, as is generally done in kitchens, that is to say, very lightly, the sowing yielded, most frequently, only discrete and thinly-sown colonies. Professor Cristiani, therefore, expresses the opinion that washing glasses and dishes in lukewarm or cold water, followed by careful wiping, reduces considerably the number of germs on them, so that dishes and glassware cleaned in this manner would not, practically, cause the possible transmission of infectious diseases.

Local Treatment of Syphilitic Gummata by Injections of Iodide of Potassium.—In a recent thesis, (*Thèse*, Paris, 1906, Steinheil, editeur), Dr. J. Boisseau shows the indications, technique, and advantages of the local treatment of gummata by hypodermic injections of iodide of potassium. He contends that in the treatment of tertiary syphilis iodide of potassium exercises its greatest power when it is injected into or near the gumma, instead of being taken as a medicine by the mouth. These injections may be used simultaneously with mercurials in cases in which the iodide cannot be taken by the mouth. They may be substituted for general mercurial or general iodide treatment, when the patient cannot endure either the one or the other, owing to bad teeth or renal insufficiency. They ought also to be tried in cases of syphilides or gummata which resist general treatment. The local method of using iodide of potassium can, of course, only be used in cases of cutaneous gummata. A weak solution (3 per cent.) is sufficient, and causes very little pain. The injection may be made painlessly by adding guaiacyl calcium to the iodide of potassium solution. An ordinary hypodermic syringe, capable of holding 2 cubic centimetres (33 4-5 m.) will answer. The platinum needle should be 2½ centimetres (1 inch) long. The skin over the gumma and the neighboring parts having been asepticized, the needle is thrust into the healthy skin a short distance from the gumma. Drs. Besnier and Radcliffe-Crocker push the iodide injection into the gumma. Dr. Boisseau and others advise that the solution be pushed into the cellular tissues around the gumma. The syringe at first is empty, and the operator uses it as an aspirator to see if a blood vessel may have been punctured. The same syringe, after being detached from the needle, is filled with two cubic centimetres of the iodide of potassium solution, which are then slowly injected. The injections may be given every day or every second day. By pricking a different part each time the needle is used, the gumma may be circumscribed, little by little. These injections never cause iodism. They are efficacious, and act rapidly. In doubtful cases they may be used for diagnostic purposes, especially when mercurials are contra-indicated.

The Optional Disease.—Smallpox has been dubbed by Dr. W. F. Reilly, Chicago, "The Optional Disease," meaning thereby that no one need have it if he does not want it. A good many people in Canada who should know better, protest that they want

to be protected against smallpox, but still refuse to accept the gift of Jenner. They disclaim any notion of wanting to wriggle with smallpox; would not take it if escaping it depended on good moral behavior; but when it comes to a little sore on the arm they think that the price of protection is too high, and refuse to accept it. Experience gained by physicians the world over proves that, if people have been successfully vaccinated and revaccinated until the susceptibility to vaccine is exhausted, they need not fear exposure to a case of smallpox. In some individuals susceptibility to smallpox itself is hard to eradicate. The writer of this note saw, in 1866, a man who had discrete smallpox at the Toronto General Hospital, and the man's face was pockmarked from smallpox contracted by him ten years before at Alexandria, in Egypt. If he had not had smallpox in Egypt and had only been vaccinated while living there, he might have denied the efficacy of vaccination when attacked with smallpox at Toronto. Such an experience as his is, however, exceptional, and one attack of smallpox usually confers a life-long immunity to that disease. Is it reasonable to ask that Jenner's protection should exercise more immunizing powers than genuine smallpox can give? Vaccinated physicians and medical students in many cities of the United States and Canada visit and attend to smallpox patients and do not contract the disease. What better evidence of protection can be asked for? An editorial writer in the *Globe*, Toronto, March 19, 1907, asks: "If vaccination is really a preventive of smallpox, if it lessens the intensity of an attack that it does not prevent, and if it is attended with any serious measure of danger?" A century ago such questions were quite right; now they are somewhat suggestive of Rip Van Winkle. Even the watchful care of the best of health officers will not ward off the insidious approach of smallpox, which may lurk in manuscripts. Should the editor of the *Globe* decline vaccination, and should he catch smallpox, he may solace himself with the old saw, "There is no accounting for tastes," and on reflection he will be forced to confess that in his case also smallpox was an optional disease.

Treatment of Hemoptysis with Amyl-Nitrite.—Dr. Francis Hare, of Brisbane, maintains that the treatment of hemoptysis by amyl nitrite inhalation has obvious advantages. In hemoptysis there is a highly vicious circle in operation. The intrapulmonary irritation of effused blood causes cough; coughing, like any other

sudden exertion, causes rise of blood pressure; rise of blood pressure causes fresh bleeding, and so on. The circle continues to revolve in many cases until the loss of blood has been sufficient to reduce blood pressure materially and thus end the hemoptysis. This natural cure was at one time imitated by physicians, who resorted to the lancet. The treatment by amyl nitrite is another imitation, less complete, but possessing the advantage of economizing the patient's blood. The circle is broken at the same point and by the same process, namely, reduction of general blood pressure; but, the blood being saved, the procedure may be repeated as often as necessary. Amyl nitrite causes no interference with cough; it is influx of blood to the ulcerated lung tissue which is stopped, not its efflux from the bronchial tubes. Consequently blood already effused is rapidly cleared away, and retention and subsequent septic pneumonia obviated. The treatment is safe, easily and rapidly applied; hence, in the absence of professional supervision, it can be used by the patient. Dr. Hare sums up the matter by stating that of sixteen attacks of hemoptysis occurring in nine consecutive cases (eight tuberculous, one mitral) and treated by amyl nitrite inhalation, all save one ceased within three minutes; in the exception, cessation was delayed for ten minutes. Dr. Hare considers it a matter for surprise that the freedom from hemorrhage conferred by a drug, the influence of which is so fleeting, should last so long, as seems to be the case. One would be inclined to say that in Dr. Hare's cases the hemorrhage proceeded from a congested area and was limited, a class of cases in which the patient gets well if kept absolutely quiet. In such cases Dr. Osler advises rest, reduction of the blood pressure by minimum diet, purging, if necessary, and the administration of opium to allay the cough.

Influence of Infantile Mortality on the Total Mortality Rate of a Province of Canada.—In Canada, by the decennial census of 1901, the total deaths from all causes aggregated 81,201, a rate of 15.12 per 1,000 of population. The total mortality under one year was 21,328, or 26.26 per cent. of the total mortality of Canada. In Ontario, for 1901, the total deaths from all causes aggregated 33,272, a rate of 15.24 per 1,000 population. The total mortality under one year in Ontario was 6,697, or 20.12 per cent., of all the deaths for that year. In Quebec, for 1901, the total mortality from all causes was 30,570, a rate of 18.54 per

1,000 of population. The total mortality under one year in Quebec was 11,449, or 37.45 per cent. of all the deaths in Quebec for that year. The following table shows the facts:

A. D. 1901	Total Deaths under one year of age.	Percentage of the total mortality.	Population.
Canada.....	21,328	26.26	5,371,315
Ontario.....	6,697	20.12	2,182,947
Quebec.....	11,449	37.45	1,648,898

Thus the mortality of infants under one year of age, for 1901, in Quebec, was a good deal more than one-half the infantile mortality under one year of age in all Canada, as per table. The high general mortality rate in Quebec, viz., 18.54, is influenced by the high infantile mortality rate, which may be gathered from the following calculation: Deduct the mortality under one year, viz., 11,449, from the mortality from all causes, viz., 30,570—the remainder is 19,121, which, divided by the Quebec population, gives a mortality rate of 11.57 per 1,000 for Quebec. Apply the same test to the Province of Ontario: Deduct the mortality under one year, viz., 6,697, from the mortality from all causes, viz., 33,272—the remainder is 26,575, which, divided by the Ontario population, gives a mortality rate of 12.17 per 1,000. Apart, therefore, from the high infantile mortality rate, Quebec had a more favorable general mortality rate than Ontario in 1901.

Loss and Gain in Children Under 4 Years of Age in Quebec and Ontario.—By figures taken from the Canadian decennial census of 1901, it appears that the total tubercular mortality of Canada was 9,709. Of these deaths, 1,303, or 13.42 per cent., were of children under four years of age. The total tubercular mortality of Quebec was 3,373. Of these deaths 664, or 19.68 per cent. were of children under four years of age. The total tubercular mortality of Ontario was 3,544. Of these deaths 232, or 6.54 per cent., were of children under four years of age. The relatively high birth rate of Quebec is coincident with a tubercular mortality among children under four years of age in that province almost three times as great as that which is recorded in Ontario. In return, however, Quebec, with a population of 1,648,898 in 1901, had 45,351 living children under four years of age: Ontario, with a population of 2,182,947, had 47,235. By simple proportion Ontario should have had 60,038 living children under four years of age, thus showing a clear deficit in child life of 12,803—quite a small army. Our readers can make their own deductions.

News of the Month.

McGILL UNIVERSITY FIRES.

THE second disastrous fire within two weeks visited McGill University at an early hour on April 16th, and practically destroyed the Medical Building, one of the oldest and most valuable of the splendid collection on the college grounds.

The results of the fire were most disastrous, as in addition to the usual equipment of a college medical building, the museum, one of the best on the continent, was destroyed. The loss in this cannot be considered in money value, as the museum has been collecting for nearly three-quarters of a century, and contained many absolutely priceless specimens.

The magnificent Medical Library, however, was saved, and this is no small comfort to the University authorities, as it contained many works as valuable in their way as the collection in the museum.

Money cannot spell the loss which will be caused to the University by this second disaster, but a conservative estimate, made while the fire was raging, by one of the professors, estimated the damage at nearly half a million, with a strong probability of it running far beyond that. The amount of insurance is not known just now, but in such a disaster insurance is a mere detail. Money cannot compare with the actual loss.

How the fire originated is not known. It started in the centre of the building, on the second floor, where the lecture-rooms are situated, where, Dr. Ruttan stated, there had been nothing going on. The fire burned with great force. The firemen made a rapid response to the first alarm. Even in that short interval the flames had almost complete control of the centre of the group of connected buildings, and was raging as though nothing could stop it.

At first the firemen had not sufficient pressure, and the flames gained rapidly on them. Every few minutes the roar of the flames was punctuated with crashes, as though chemicals were exploding, and the crowd which had gathered ran back to a considerable distance.

The centre of the building, where the fire broke out, is described by the students as a veritable fire-trap, with a lofty hallway and lecture and other rooms all around. The roof was surmounted by a series of small domes.

The flames spread with great velocity from the second story to the roof, and within a few minutes the whole centre block was a mass of flames. Suddenly, the roof fell in, the heavy domes precipitating the crash, and with a thunderous noise the whole fabric collapsed, carrying a large portion of the walls with it.

A hush followed. It was not thought possible that the firemen could have got out in time to escape the crush of beams and stone. A moment later the tension was relieved, and when the crowd realized that every one of the fire-fighters had escaped, a cheer went up as they returned to the attack.

It was evident by this time that the whole middle of the block of buildings was doomed, and the firemen devoted their energies saving the north and south wings. At one time it looked as though they were obtaining mastery, but the wind, which was blowing freshly from the northwest, swept down, and again the fire broke out with fury, gradually working its way southward towards the library and basement, where bodies used for dissection purposes were kept.

So furious had the flames become by this time that the heat within reach of the building was unbearable, and the firemen were busy playing streams on the rear roofs of houses on Milton street to keep the conflagration from spreading to them.

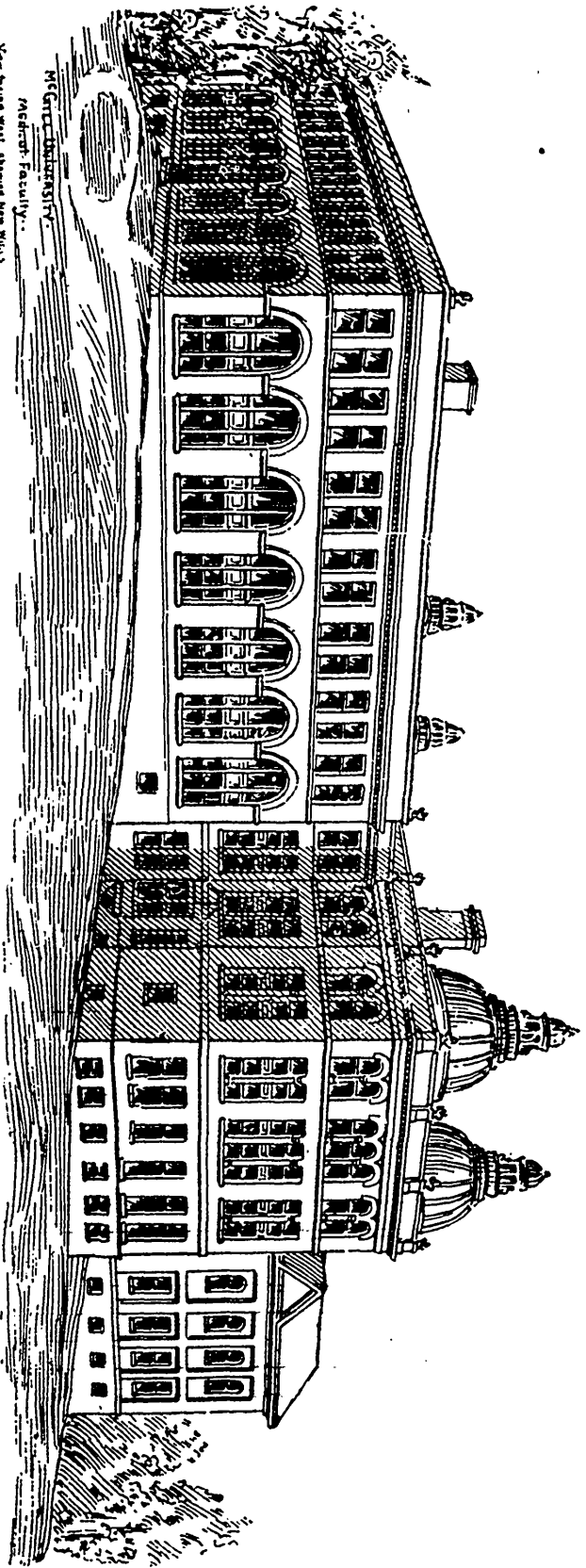
Chemicals in the Medical Building added zest to the flames. In many places the fumes of them colored the flames, while the continual mild explosions kept everyone but the firemen at a safe distance.

Immediately to the north of the older building was an annex devoted to the physiology department, and here the firemen put up a strong fight. Time after time the flames reached the building, and as often numerous streams were directed towards them, and gained the victory.

At 2.15 the fight still looked dubious, but the firemen seemed to be gaining the advantage.

What the loss by smoke and water has been no one could even guess, but it must have been heavy, as the firemen were working all through the upper floors, directing streams wherever it appeared there was danger. Their efforts were aided by the fact that the wind blew the flames in the opposite direction, so that the smoke and heat were driven away from them and left a fair field for their work. The same cause, however, drove the fire in the opposite direction.

The fire steadily spread towards the southern facade of the building, and despite the efforts of the firemen it ate its way right through, and a little after half-past two the roof of this part of the building fell in, the crash and confusion adding fuel to the conflagration. This, however, was the last big effort of the fire,



McGILL UNIVERSITY
Medical Faculty
View facing west - Street View - 1883

MEDICAL BUILDING, MCGILL UNIVERSITY, RECENTLY DESTROYED BY FIRE.

and by three o'clock in the morning it was apparently under control, although still burning fiercely.

Dr. Ruttan stated that the most irreparable loss was that of the museum, which seemed to be a total loss. This had been collecting ever since McGill began, and contained many invaluable specimens.

The fire was first noticed by Prof. Cox, who was passing close by the building, and at first thought there was a chimney on fire. He at once turned in an alarm, and on returning was horrified to find that the small flames he had first seen had become a veritable conflagration. This was, at ten minutes past one. Then alarm after alarm was turned in from several directions.

Although the main portion of the buildings were quickly destroyed, the fireproof building in which the large library was situated resisted the flames. A large portion of the books were destroyed by heat and smoke.

By three o'clock the brigade had the fire well under control, and all danger of it spreading to any of the surrounding buildings had passed. Like the fire in the engineering building on March 29th, it had gained such headway when the firemen arrived that it was impossible to save the building in which it had started, and the firemen had to concentrate their energies in preventing it from spreading.

Immediately after the disastrous fire which wiped out the Engineering Building, the University authorities, it is understood, added a half-million dollars of extra insurance on the whole University plant. The Medical Building will share in this, but it is doubtful whether the insurance will cover one-half of the actual damage.

The buildings themselves were erected at a cost of about \$350,000. The collections which they contained are practically beyond all estimate as to value.

Dr. F. J. Shepherd stated that the fire destroyed for him the collection of a whole lifetime, his anatomical collection being part of the apparatus burned. The collection was famous throughout America, and with its destruction passes a chapter in the history of anatomical science on this side of the ocean.

When the building was built and remodelled some years ago it was largely through the financial assistance extended by the family of Lord Strathcona, their donations amounting to about \$125,000. The University also contributed to the cost, and it was probable that the extensions cost in all about \$160,000. The old building, which occupied the front site, was constructed in 1872. The upper flooring was of lead, this being on account of the presence of the dissecting done on that flat. This lead flooring kept the flames in check for a full half hour after the roof had been destroyed.

The main building of the Faculty of Medicine was erected in 1873. In 1885 and again in 1893 large additions and alterations were made. Again proving to be inadequate, a thorough reconstruction and enlargement of the buildings had lately been completed. The alterations and extensions consisted of three wings, the first one a laboratory wing, which occupied the northeast corner of the block of buildings, and replaced what was formerly the pathology wing. A second wing connected this with the front building on the east, and the third wing connected the second block with the original building on the west side. The central wings extended east and west about seventy feet, and formed the central feature of what was a symmetrical block of stone buildings.

The Medical Building stood four storys high, except in the front block, where the three original storys remained. The total length of the buildings was 280 feet, and the maximum width 145 feet. Its cubic capacity was about 1,750,000 cubic feet, making it the largest building in the University's campus.

The cause of the two fires at McGill University within a month has occasioned considerable discussion in local fire insurance circles. The most generally accepted idea is that they must have been caused by defective electric wiring. In both instances the fire started in the upper storys, and could not have been attributed to the furnace in any way.

The mysterious origin of both fires and the unusual hour at which they started—the first about five o'clock and the last one at one o'clock in the morning—causes some people to think that they may not have originated by accident. Unless due to a disordered mind, the professors and students can hardly conceive of anyone being so vindictive as to burn up two valuable buildings, entailing a loss of over a million of money and the destruction of collections of models and specimens priceless in value. Still, it is pointed out that it would not be a very difficult matter for some one to conceal himself in any of the buildings until everyone had departed at night and then start a fire, afterwards escaping through a window.

The fact that there were no night-watchmen in either building making rounds every hour, as in most commercial houses, would render it easy for anyone so inclined to set the places on fire. If the result of the fire-brand of an incendiary, the only hypothesis is that some student's mind may have become unhinged through hard work or fear of failure.

CANADIAN NURSES ORGANIZE.

A MEETING was held at the Hospital for Sick Children recently when a Canadian Society of Superintendents of Training Schools for Nurses was organized. Letters had been sent out seeking and the majority were heartily in favor of the proposal. At the meeting there were representatives present from Galt, Belleville, Collingwood, St. Catharines, Ottawa and Stratford.

The following officers were elected: President, Miss Snively, General Hospital, Toronto; First Vice-President, Miss Livingston, Montreal; Second Vice-President, Miss McFarlane, Vancouver; Secretary, Miss Brent, Hospital for Sick Children, Toronto; Treasurer, Miss Meiklejohn, Lady Stanley Hospital, Ottawa

A provisional constitution was framed, and the following Council was appointed: Miss Macdonald, Victoria Hospital, Halifax; Miss Wilson, General Hospital, Winnipeg; Miss McIsaac, General Hospital, Edmonton; Miss Monlong, Jeffrey Hale Hospital, Quebec; Miss Patten, Grace Hospital, Toronto; Miss Sharpe, Woodstock; Miss Stanley, Victoria Hospital, London; Miss Green, General Hospital, Belleville; Miss Scott, General Hospital, Kingston; Miss Chesley, St. Luke's Hospital, Ottawa.

It was decided to hold the first meeting at Montreal on September 11th, next year.

REUNION OF OLD TRINITY MEDICAL COLLEGE.

THE spirit of old Trinity Medical College was revived, with all its old-time vigor, at the banquet held Monday evening, April 1st, at McConkey's, King Street, Toronto.

The loyalty and enthusiasm of the graduates was unquestionably demonstrated by the large gathering of men from points throughout the Dominion and the United States to do honor to their Alma Mater and extend the glad hand to their fellow-students of the old school.

About 150 graduates and the final class to take the degree of M.D., C.M., viz., those who registered with Trinity prior to amalgamation and are completing their studies at Toronto University, assembled in the spacious banquet hall, which was elaborately decorated with the old colors, flags, bunting, flowers, etc.

From the time of assembling till the singing of "Auld Lang Syne" in the wee sma' hours of the morning, every moment was the scene of glad fellowship in speech and song, and revival of the old-time college yells and songs, which, though dormant in the breasts of her sons for many years, came forth with the old-time vigor, as though it had been but yesterday they sat in the school on Spruce Street.

The honorary chair was filled by Dr. W. B. Geikie, and the honorary vice-chair by Dr. G. Algernon Temple.

The chair was taken by G. H. Worthington. Dr. Frederick Marlow, in an able manner, performed the duties of toastmaster. opinions as to the advisability of forming such an organization,

THE TOAST LIST.

"The King" was honored as it always is.

"The Ladies," proposed by Dr. C. B. Shuttleworth, who, as bachelors can, exalted the good qualities of the ladies, and said he was glad to see this important toast occupy one of the first positions on the list. On behalf of the ladies, Dr. E. Stanley-Ryerson and Dr. Bradley responded in a most humorous and complimentary manner.

"Canada" was proposed by Col. "Dr." J. T. Fotheringham, who referred to the growth and wonderful resources of our country, but emphasized that we should not forget that we were but a part of a great Empire. Dr. Fotheringham spoke of the many pleasant associations of old Trinity, and the pleasure it gave him to be present at such a successful function.

Dr. G. Sterling Ryerson responded to the toast of "The Empire," and after expressing his pleasure at being present and his appreciation of the successful efforts of the committee who had the banquet in charge, he said that the scene was inspiring, one which awakened old memories of former triumphs in the history of Trinity Medical College, and one as little like an institutional funeral as could well be imagined. It was an evidence of the love of Trinity graduates and undergraduates for the old school. Though the college was now being digested by the University of Toronto, neither the "digester" nor the "digestee" felt pain—only regret. Trinity men were loyal to their stepmother, but looked back with love to their own mother. Trinity Medical College had reason to be proud of her record. Wherever the Union Jack flies her graduates were to be found doing noble service for humanity and reflecting credit on their Alma Mater. Nor were they less successful under the Stars and Stripes. Referring more particularly to the subject of the toast, he rejoiced in the awakening of the Canadian national spirit. He was pleased to observe the feeling of confidence in the future of the country, of pride in her glorious past and contentment with her present. He predicted that men now living would see twenty million souls peopling the country, and that with the enormous productive power of the land, of her mines, the innate qualities of her people and her strategic position in the Empire, she would play a great part in the future history of the world.

"The Medical Profession" was proposed by Dr. R. J. Dwyer. In proposing the toast to the medical profession, the Doctor

took occasion to exalt the honorable calling of the medical practitioner. Their work was and should be, said the Doctor, for the relief of suffering humanity, rather than the monetary compensation.

This toast was responded to by Drs. A. E. and A. P. Ardagh, of Orillia, and Dr. Brien, of Essex. These gentlemen, in the eloquent and kind words they said about their chosen vocation, brought forth round after round of applause. They enumerated many of the trials and struggles of the practitioner, and spoke of the effort they had made to be present at the reunion, which gave them unbounded pleasure. They hoped the function would be perpetuated and made an annual event.

"Old Trinity Medical College" was proposed by Dr. Bird, Gananoque, Ont. Dr. Bird spoke of the splendid course that had been provided in medical education by old Trinity, and reviewed the many pleasant associations he had formed while at the old school.

When Dr. W. B. Geikie, "the Dean," rose to respond to this toast the reception accorded him demonstrated a pent-up desire bursting forth from the hearts of the graduates to do honor to their old chief.

Dr. Geikie spoke as follows:

He thanked those who had invited him as a guest to the splendid reunion of Trinity Medical College graduates—the second of the kind which had been held. He was always delighted to meet the graduates of *the old college he had loved* with his whole heart. He spoke of some of the causes of the phenomenal success of the college for the thirty-two years it had lasted, which gave it a high position amongst the best teaching medical colleges of Canada. He exhibited the original paper, dated 1871, in his handwriting, which suggested the establishment of the college. This stated, first, that it should be established on such a basis as would ensure its success from the outset, by placing men of established reputation as medical teachers in the principal chairs, ready to work hard and enthusiastically.

The suggestions made were acted upon and the college established in 1871, early in the spring. Its first work was to hold examinations—primary and final—as many applications had been received from candidates for these examinations, as soon as the Medical Faculty was appointed. The following well-known names, Dr. Osler, Regius Professor of Medicine, Oxford, England; Dr. Peter Macdonald, M.P., Deputy Speaker of the House of Commons, and Dr. Angus Mackay, ex-M.P.P., of Ingersoll, were amongst the primary examination candidates. In 1872 Dr. Logan More, of Brandon, and Dr. Peter Macdonald were our first gold and silver medalists.

The college was well received by the public and the profession at once. It was immediately fully recognized by all the Royal Colleges of Physicians and Surgeons in Great Britain and Ireland. This gave it every privilege enjoyed by any colonial medical college in Great Britain.

Great care was always taken in conducting correspondence with intending medical students, and a real interest felt in their welfare and progress. The entire curriculum—primary and final—was made *practical*. No subject of any value was omitted, while minor subjects were not allowed to encroach upon the time required for the chief subjects. It was the ambition of the college to send out *well-taught men only* in the work essential at the bedside, in diagnosis, prognosis, and treatment.

The result of this policy is seen to-day, for, as a rule, wherever our men settled they were successful. We were careful not to *subdivide* the subjects taught into *fragments*. This greatly lessens the interest of teachers and students alike. Enthusiasm in teaching and in learning is essential, and to secure this a fair amount of teaching should be given to every good teacher. *Second, third and fourth* class teachers should have no place in any medical college. Good teachers can no more do themselves justice, where a fragment of a subject only is allotted to each, than a golf player or a curler could play either game in a space of a few square feet, or a game of billiards on a bagatelle board. To each teacher in Trinity Medical College his subject was assigned, and he was expected to know it and to teach it thoroughly. If this was not done, a change would not be long delayed. The didactic and clinical teaching of the college were both full. As our curriculum was based on those of the best colleges in Great Britain, this was highly important. Some teachers undervalue *didactic* teaching, and say that there cannot be too little of this. If such courses be *poor*, they cannot be too short, but if *good*, as *they should always be*, the fuller they are are better for all good students. It is said men can read up much of this work. They *could* do so, but in the great majority of cases they *won't*. Nothing prompts men to read fully so much as good didactic teaching, for they are thus enabled to get fifty per cent. more good from the clinics they are required to attend. A good lecture on any subject encourages those who hear it to read on the subject, and this holds good, in a special degree, of medical subjects. Dr. Geikie quoted Prof. MacKendrick, of-Glasgow, a splendid teacher, giving his rule as to practical teaching on his subject, physiology. In his farewell lecture he told the class "that it had been his rule to remember that the great majority of those present were studying physiology, not to be *physiologists*, but to be *medical men*. He therefore aimed to teach the students the broad essentials of the subject required by medical practitioners, and he avoided the tendency to wander off

into the seductive paths of pure physiology." This was well and wisely put. In Trinity Medical College the men in every part of their course were taught what was most necessary for medical men to know at the bedside. This soon became widely known, and led to her graduates being much sought after and highly prized.

Fifty-one consecutive years' connection with medical education—for, being still an examiner, I am not entirely out of it—enables me to speak with the utmost confidence on these important points. Our college, entirely at her own cost, was able to occupy good buildings—to add largely to them, more than once—to equip her well in every department, and to add to this yearly; to provide excellent lecture-rooms and laboratories, these being also improved year by year, and a very good museum, creditable to any medical college, filled with specimens of all kinds, as aids to teaching the various subjects. Professor Allbutt, of Cambridge, England, who a few years ago went through the college, was highly pleased with everything he saw, saying that it was in every way most creditable.

Above all, we educated some 2,000 doctors, the peers of any in Canada. We have a list of 196 gold and silver medalists, besides a long list of valuable scholarships given by the Medical Faculty.

The college had also her own special Act of Incorporation, given in 1877 by unanimous vote of the Legislature. This was drawn up by Chas. R. W. Biggar, M.A., K.C., son-in-law of the late Sir Oliver Mowat, G.C.M.G., and his biographer, with what help the speaker was able to render. Mr. Biggar, who was for some years our professor of botany, said that our College Act was, so far as he knew, the best of its kind in Canada.

We went on prospering year after year. Our two last sessions, 1901-02 and 1902-03, were amongst our best, if not, indeed, the very best. This was the opinion of all the students and my own. Our college was in excellent condition financially, according to the statement of its treasurer—able to pay everyone fairly for what he did—and, I am told, it paid them much better than teachers are paid at present in some of our Ontario medical colleges.

Although for the past four years our beloved college has been but a memory, yet, in view of the splendid work done by her, and its duration, it is a very grand memory. With my intense devotion to her interests for thirty-two years, having been her dean for the last twenty-five years of her existence, and her executive officer, as far as work was concerned, during the entire thirty-two of the best years of my life, as well as her representative on the Medical Council for twenty-five years, and having been the means of setting her going in 1871, it would have been quite impossible for me to have been a consenting party to the changes of 1903, by which her name and autonomy were entirely blotted out. I had fondly hoped that the college would continue to exist as a famous medical teaching body long after I had been gathered to my fathers, but in this was bitterly disappointed. Nevertheless, if

now only a memory, she is a very dear one to me, in view of all the years of teaching I have done within her walls, and the time otherwise devoted by me to her interests, and of the many large classes of good students I had the pleasure of teaching during so long a portion of my life.

No graduate she ever taught, worthy the name, will ever forget her. The eminence many of these have attained, and the love of all her true sons for her will, I trust, for many years to come throw bright halos around her much-cherished name, and they will continue to revere that name and regard the good work she did for them during their years of student life, as an inspiration stimulating them in no slight degree while in the discharge of the many responsible duties of their profession. It is to be hoped that her sons, scattered widely over our beloved Canada, the United States and the world, will often meet, as we do to-night, and as they have done before, to think and to speak of their Alma Mater with an affection which the lapse of time can never decrease. May I not go one step farther and say that the character, the extent, the duration of her work and the acknowledged position her great success gave her, may have much influence in improving the medical education of the future in Canada by causing it to be made more practical in all our medical colleges, thus fitting the graduates they send out to do the best possible work for their patients in the important duties of their profession.

"Old Trinity Faculty and Graduates" was proposed by G. H. Worthington, of the undergraduates. Mr. Worthington, on behalf of the committee, thanked the graduates, especially those from a distance, for their coming to join in the good-fellowship and making the function such a phenomenal success. He said the class had probably decreased in numbers since the days of Trinity, but not in loyalty and enthusiasm. The faculty of old Trinity Medical College was probably unparalleled as a teaching staff, and, as a result, her graduates went forth thoroughly equipped and most desirable men in their profession.

Drs. Temple, Bingham and Powell responded to this toast. "They Are Jolly Good Fellows" and three cheers greeted Dr. Temple. Dr. Temple very fittingly responded to this toast, outlining the work of the old faculty and their duties, which, while naturally arduous, had been pleasant and, he hoped, profitable to those who had been students at Trinity Medical School. Dr. Temple congratulated the committee on the success of the function and the consequent pleasure it gave him to be present. Upon taking his seat Drs. Temple and Geikie were presented with bouquets of flowers by the committee.

Dr. Jas. Bingham, of New York, was most enthusiastically cheered. He very wittily compared the amalgamation to matrimony. He said he was delighted to attend such a magnificent gathering of his fellows. He had come all the way from New

York to be present, and was being more than repaid by the joy such a gathering brought to him. He was in the presence of fellow-students, many of whom he had not met since the old days at Trinity.

Dr. Powell, in his usual entertaining manner, recalled many of the pleasant days he had spent as a student, and afterwards as a teacher at old Trinity. The reunion, he said, gave him very great pleasure, as no doubt it was the sentiment of each and every graduate.

"The Class of '07" was proposed by Dr. H. B. Anderson. Dr. Anderson congratulated the undergraduates on the success of the function, which was largely due to their efforts. They had laid the foundation for what would doubtless be, and should be, an annual event, and while they were small in number, they had lost none of the old-time enthusiasm of Trinity Medical students.

Mr. Crux, in responding to the toast to "The Undergraduates," said that as undergraduates his fellows felt that an honor was being done them in the graduates joining to make the dinner such a success. Trinity students were as loyal as in former days, to the old school which they would always be proud to honor.

"Hospital and Press" was proposed by Dr. Parsons, and responded to by Dr. Clouse.

At this most opportune juncture Dr. Wishart interrupted the proceedings, and said: "We owe a debt of honor to our old chief, whom we are all pleased to have with us on this occasion. I feel we cannot better show our recognition of his long and faithful service to old Trinity Medical College and medical education than to have his portrait painted and placed in what will be the Academy of Medicine." He moved that this be done, Dr. Clouse seconding the motion and voicing the sentiments expressed by Dr. Wishart the motion was carried by rousing cheers and singing "For He's a Jolly Good Fellow."

Dr. Anderson moved a vote of thanks to the committee for the splendid banquet, emphasizing the good feeling and great pleasure such functions were bound to bring, and included in his motion that the reunion be made an annual event, and to take place at the time of the Ontario Medical Association meeting, the next to be in 1908.

Dr. McMurrich was appointed convener of committee.

All present grasped hands and sang "Should Auld Acquaintance Be Forgot."

Much credit is due the committee in charge of the function, viz.: Hon. Chairman, Dr. Geikie; Hon. Vice-Chairman, Dr. Temple; Chairman, G. H. Worthington; Secretary, A. Crux; Treasurer, B. S. Cerswell; Dr. Marlow. Dr. Pepler Dr. McMurrich, Dr. Hayden, Dr. T. B. Richardson, Jas. Sproat, W. T. Scheck, and O. A. McNichol.

The menu was elaborated by Dr. Hayden with many interesting and amusing sketches.

HOSPITAL ASSOCIATION.

THE Canadian Hospital Association was organized at a well-attended meeting held in the reception-room of the Parliament Buildings, on April 1st. The attendance, mostly of superintendents of hospitals, was gratifying and quite representative. Constitution and by-laws were adopted, a number of interesting addresses were delivered, and the following officers were elected: President, Miss Louisa Brent, Hospital for Sick Children, Toronto; First Vice-President, Dr. C. K. Clarke, Toronto Asylum for the Insane; Second Vice-President, Dr. McIntyre, Kingston General Hospital; Third Vice-President, Mr. W. Kenney, Royal Victoria Hospital, Halifax, for the Maritime Provinces; Fourth Vice-President, Mr. H. E. Webster, Royal Victoria Hospital, Montreal; Fifth Vice-President, Mr. A. L. Cosgrave, Winnipeg General Hospital, for Manitoba and the West; Secretary, Dr. J. N. E. Brown, Toronto General Hospital; Treasurer, Miss J. Patton, Grace Hospital, Toronto.

As a preliminary Dr. McIntyre, Kingston, was elected chairman, and Dr. J. N. E. Brown, Toronto, secretary, of the meeting.

Dr. R. R. Ross, of the Buffalo General Hospital, President of the American Hospital Association, delivered a short address, in which he outlined some of the important work carried on by that organization, and gave some useful suggestions as to the formation of a society here. During the course of his remarks he said that the American Association would probably hold next year's annual convention in Canada.

Dr. Bruce Smith, Provincial Inspector of Hospitals and Charities, read a paper, in which he dealt with some problems of hospital life and work. He emphasized in his preliminary words the growth of hospital work and usefulness in Ontario, pointing out that last year 41,950 patients were treated in the hospitals of this Province, and that the total annual expenditure for maintenance, including capital account, had reached the aggregate of \$1,228,289. Dr. Smith urged, among other things, the adoption of a uniform hospital register, up-to-date methods of accounting, true economy as distinguished from parsimony, and increasing efforts to make the hospital an institution with an educational aim, as well as a place for the healing of sick bodies.

The work in asylums for the insane was the subject of a paper read by Dr. Ryan, Superintendent of the Rockwood Hospital for the Insane, at Kingston. Diagnosis, classification of patients, and other like matters were dealt with.

Hon. Messrs. Foy, Hanna and Beck briefly addressed the meeting, expressing the hope that the organization to be formed would meet with success. The Provincial Secretary alluded to the

increase in the provincial grant to the hospital. This year the aggregate is \$130,000, instead of \$110,000. The reason for the increase is the new basis of distribution—namely, a flat rate of 20 cents per day for each non-paying patient. Formerly the sum of \$110,000 was divided among all the hospitals on the per capita basis, and the increase in the number of institutions and the class of the patients mentioned had reduced the per capita to about 17 cents.

The election of officers and the adoption of the constitution and by-laws followed. In the evening those present from outside points were the guests of the Toronto superintendents at a dinner served in the buildings.

ITEMS OF INTEREST.

Canadian Branch of the Waterbury Chemical Co., of Des Moines, Iowa.—The Waterbury Chemical Co., of Des Moines, Iowa, have opened up in Toronto a Canadian Branch of their house, where they will, from this date, manufacture for this market their Waterbury's Metabolized Cod Liver Oil Compound, with creosote and guaiacol, and Waterbury's Metabolized Cod Liver Oil Compound, plain. The firm are anxious to bring the merits of their preparations under the notice of the Canadian Medical Profession, and will be pleased to send a sample of both, with literature, to any physician sending them a post card expressing their desire to receive the same. Meanwhile, both preparations can be obtained from any retail druggist in Toronto and other large cities, or through the wholesale jobbing houses. Vide announcement on page v. of this issue of the JOURNAL.

The Canadian Medical Exchange.—Physicians in search of a field for practice may not know that they can find out from the Canadian Medical Exchange, conducted by Dr. Hamill, 75 Yonge Street, Toronto, practically every medical practice for sale in the Dominion, as well as many places where there is no doctor and the community needs one. This information is given prospective medical buyers free of any charge whatever, the only condition being that buyers must agree to hold sacredly confidential and for their own use only all information received from the above office. Medical vendors and vendees can secure the goal desired by having their names registered with Dr. Hamill better than by all other methods combined that they might adopt, as practically everything in the market having merit is in his office. It is a great convenience to buyers and sellers to thus have one central depot to supply their needs.

The Physician's Library.

BOOK REVIEWS.

A Compend on Bacteriology, including Animal Parasites. By ROBERT L. PITFIELD, M.D., Pathologist to the Germantown Hospital, Pathologist to the Hospital for Lung Diseases, Chestnut Hill, Pathologist to the Widener Memorial School, late Demonstrator of Bacteriology at the Medico-Chirurgical College, Philadelphia. With four plates and eighty other illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1907. Price, \$1.00 net.

This is one of Blakiston's well-known Quiz-Compendes. It is well suited for review work by students, or as a convenient reference for the busy practitioner. The more important pathogenic germs are described and illustrated, and a good account is given of their morphology, vital resistance, chemical activities, pathogenesis, modes of growth and staining immunization. Erlich's theory, the opsonic theory, vaccines, toxins and antitoxins are explained. A section is devoted to animal parasites, making it a very complete and useful little work.

W. J. W.

On Retro-Peritoneal Hernia, being the "Arris and Gale" Lectures on the "Anatomy and Surgery of the Peritoneal Fossae," delivered at the Royal College of Surgeons of England, in 1897. By B. G. A. MOYNIHAN, M.S., F.R.C.S. Second edition, revised and in part rewritten by the author and J. F. DOBSON, M.S., F.R.C.S. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1906.

This is a book of 195 pages and contains valuable information on the forms of herniae which develop from time to time in the various folds and fossae which are found in different parts of the peritoneum. The first chapter deals with the development of the intestinal canal and peritoneum. This is given in sufficient detail to make the relations of the peritoneum to the viscera, as one finds them in the adult, intelligible. The second chapter describes the duodenal folds and fossae. The third chapter is upon the peritoneal folds and pouches in the neighborhood of the caecum and vermiform appendix. The fourth chapter on the intersigmoid fossa and, lastly, the fifth chapter on the herniae into the lesser peritoneal sac completes the work.

The essay contains references to all the important cases which have been recorded in the literature of herniae of the type under consideration. Numerous historical references are of interest also and the value of the work is further enhanced by the details of appropriate methods of treatment to be adopted in individual cases.

We are undoubtedly indebted to Mr. Moynihan for presenting in such concise form a valuable and useful monograph on an important subject.

The Practice of Obstetrics. Designed for the Use of Students and Practitioners of Medicine. By J. CLIFTON EDGAR, Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College; Visiting Obstetrician to the Emergency Hospital of Bellevue Hospital, New York City; Surgeon to the Manhattan Maternity and Dispensary; Consulting Obstetrician to the New York Maternity Hospital. Third edition, revised, with 1,279 illustrations, including 5 colored plates and 38 figures printed in colors. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1906. Canadian agents: Chandler, Ingram & Bell, Ltd., Toronto.

It is but two years since the last edition of Dr. Edgar's work appeared, and now it comes out revised almost from cover to cover. Up to date, the sale of his book includes no less than 11,000 copies in less than three years.

We find that one of the criticisms made when the first edition first came to light, viz., that the book was a trifle bulky, has been met by the author in cutting down this edition by fully 100 pages, notwithstanding the fact that a large number of new illustrations have been added. The following subjects, which did not appear in the second edition, are taken up at some length in this: Appendicitis complicating pregnancy; tapeworm complicating pregnancy; fibroma molluscum gravidarum; hematoma of the vulva; lactation atrophy of the uterus and breasts; brachial birth paralysis; vaginal incision and drainage and new history chart-for institution work.

The author has paid a great deal of attention in bringing the embryology and pathology of the subject up to date.