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## Original Communications.

### INFLAMMATION OF THE VERMIFORM APPENDIX—SYMPTOMS, CAUSES AND TREATMENT.\*

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In arranging this paper I wrote down all that I knew of the disease from my own experience. I took up the subject systematically under various heads. I then looked over the literature of the subject, in order to find out whether my experience coincided with that of others. The paper is, therefore, not an exhaustive literary paper, and it is not my intention to make long and tedious quotations from the work of others. Many of the conclusions arrived at from personal experience, coincide with the conclusions of others. Some of my views may not meet with general approval.

*Nature of the Disease.*—The disease now called appendicitis, formerly known as typhilitis, perityphilitis, paratyphilitis and iliac abscess, and in fact by several other names, is one that has excited much interest in the medical and surgical world during the past ten or fifteen years. From the time that the surgeon was amazed when he found extruded, amidst an offensive discharge of pus in the neighborhood of the right groin, an apple seed or an orange pit, up to the present time, this disease has been a common one, although not properly understood, and very imperfectly treated.

It belongs to the inflammatory group of diseases, and, on account of its origin, affects chiefly the peritoneal cavity. It may affect the whole peritoneal cavity or it may affect but a part of the peritoneal cavity. Inflammation in all these cases appears to originate in the appendix vermiformis, although some cases have been found in which the trouble appeared on *post mortem* examination

to have originated in the cæcum. No doubt with any inflammation about the head of the cæcum the appendix may be secondarily affected.

The pathological conditions found are therefore various, and they will be spoken of later on. After one has had a considerable experience with this disease, either on the operating table or in the *post mortem* room, many a case of supposed idiopathic peritonitis will become one of appendiceal peritonitis, or a peritonitis that is really septic in its origin, and the sepsis will be found to originate in some traumatism to which the appendix has been subjected.

I have yet to see the first case of peritonitis for which a definite cause has not been found upon *postmortem* examination. We are all well aware that the peritoneum must be tolerant to a certain amount of dirt. For instance, I have introduced into the peritoneum of a dog, dirt which has been taken indiscriminately from a back yard, without producing any particular injury to the dog or his peritoneum, but the contents of the bowel are not well tolerated by the peritoneal cavity, and a very small perforation seems able to set up a very great amount of inflammation.

*Pathological Anatomy.*—The appendix in health, is similar in structure to the tonsil, and, like the tonsil, seems prone to become diseased in childhood, and seems prone to vary greatly in size in different patients. Like the tonsil its function is not known, and we do not yet know why the appendix has been placed where it is in close connection with the cæcum. On account of its peculiar position it is liable to become a receptacle for heavy substances, such as the seeds of fruit, shot, pieces of lead from tinned goods, that have been admitted to the intestinal canal with the food. The opening in the appendix is usually small, but this opening seems to vary in size in different individuals, and, I believe, that if there is anything in the idea that appendicitis may be to some extent hereditary, that this heredity must be explained by the hereditary tendency that may exist to an increased patency of its upper or intestinal end. A father or a mother with very patent appendix, may, perhaps, be able to transmit to the offspring a patent appendix. The very position of the organ renders the ingress of foreign substances easy. There is no other portion of the intestinal canal at which it could have been placed

\* Read before the Toronto Medical Society, Jan., 1893.

to admit as easily of the entrance of foreign bodies into its open mouth. I believe, that during the act of defæcation a great amount of pressure is transmitted upwards through the rectum to the walls of the descending transverse and ascending colon, and to the walls of the blind cæcum, and on the walls of the ilio-cæcal valve and over the mouth of the appendix. During the transmission of the fæces from the ilium to the cæcum they pass through the ilio-cæcal valve. The fæces during their passage are semi-solid in their nature, and on the same principle that the particles of stone drop into the bulb of the lithotrity apparatus during the suction of water from the bladder after a stone has been crushed, the heavy particles of food, such as pieces of lead, bird-shot and seeds, naturally gravitate into the blind pouch of the cæcum, and lie around the opening into the appendix.

Although a large number of people are effected with disease of the vermiform appendix in a lesser or greater degree, it is a wonder that even more are not so affected. The method by which disease of this little organ is produced, has not perhaps been made very clear. I am confident that one form of the disease is similar to the change that takes place in an ovarian tumor after its pedicle has been twisted. After the pedicle of an ovarian tumor has been twisted hæmorrhage takes place into the cyst wall and into the cyst cavity, and, as a consequence, the cyst wall may be thickened and the cyst cavity filled with blood. The appendix derives its blood supply through its mesenteric attachment. The mesentery usually extends to a distance equal to about one-half or two-thirds of its entire length. The concretion may be formed in its mouth or in the cæcum around seeds or other foreign bodies, and this concretion, by the act of defæcation and the pressure that is transmitted along the walls of the lower intestine, may be forced into the mouth of the appendix; here it may remain for a long time without producing any bad effect, but, perhaps, during some excessive straining the mass may be pushed onwards a little further into the lumen of the appendix and remain impacted in its new situation. As a consequence of this impaction the veins are pressed upon and a venous congestion is produced. If a marble is dropped into the finger of a glove it will be found to press upon its wall with about an

equal pressure throughout its entire circumference. Each little onward movement of the marble towards the tip of the finger will increase this pressure, and it will be found impossible to press the marble to the very tip without tearing the glove finger. The presence of this concretion in an appendix is liable to give rise to an uncomfortable sensation that may become an actual pain, and this sensation sometimes warns the patient that there is something amiss in his inside. The impaction, just like a single twist of the pedicle of an ovarian tumor, may not produce sufficient pressure to completely obstruct the flow of the arterial as well as the venous blood, but a time may suddenly be arrived at when the impaction will produce a sufficient pressure to completely obstruct the supply of blood, and then gangrene of some portion of the appendix will result. When the obstruction is not great enough to produce gangrene hæmorrhage in the wall of the appendix, beyond the impaction may take place, or, owing to the congestion, an increase of the mucus secretion of the organ may take place, and this retained secretion may produce the cystic enlargement of the end of the appendix.

It is difficult to understand how a simple catarrhal inflammation of the appendix can produce any very great change in its structure. This simple congestion may, perhaps, pass into an inflammation and this inflammation may affect the mucus, the muscular and the serous coats. I believe that a gangrene of the appendix may be produced secondarily from a septic inflammation of the veins in its mesentery. Such a septic inflammation may originate at some distance from the appendix itself, perhaps, in some perforation of cæcum. I have noticed the mesentery, in some cases, run to the very tip of the appendix. If such a condition exists the dangers from impaction would be, to a certain extent, removed, because the blood supply would not be so readily interfered with. It would be interesting to observe the condition of the mesentery of the appendix in children as compared with that of the appendix in adults. The canal of the appendix may be completely obliterated by inflammatory changes and a solid cord be produced, or, there may be simply obliteration of the canal of the tip of the appendix while the lumen of the body may be changed into a funnel-shaped pouch, or the

lumen may be obliterated at some point, and a cystic enlargement of the part beyond be found. I have removed such an appendix.

It has been said that many people who are constipated and who eat seeds in abundance escape from diseases of the appendix; this may, perhaps, be explained by the fact that constipation exists. If diarrhoea existed in such patients the motion passing through the ilio-cæcal valve would be more liable to allow the foreign bodies, by virtue of their weight, to drop into the cæcum, but a constipated motion would be more liable to carry on these foreign bodies into the colon, and, in this way, act as a protection to the patient. We are recommended to give large quantities of mashed potato to children who swallow coins in order that the coin may be incorporated in the mass of potato and carried on into the small intestine.

Appendicitis has been found to occur more frequently in children than in adults. I imagine that this is just a survival of the fittest. The children who have appendices with patent mouths and who are allowed to eat the seeds of all kinds of fruit are not as likely to reach adult age as those children who have an appendix with a small lumen. The middle third of the appendix has been found sloughed through without any evident gangrene of the tip. In such cases I suppose the blood is supplied to the tip by the mesentery beyond the seat of the obstruction, and the tension of the wall of the appendix at the seat of impaction has been very great. The appendix has been found filled with pus. Many cases have been recorded in which no foreign bodies have been found.

At the time of operation or during a *post moriem* examination, a foreign body may be very easily overlooked. They are frequently lost in the pus, and, in such cases, can only be found, even at a *post mortem* examination, after a thorough and systematic search. On one occasion I saw a professional gentleman make a *post mortem* examination on a case of abscess in the neighborhood of the appendix in which he was unable to find any foreign bodies. He was just about to close up the abdomen with the idea that no foreign bodies were present, but one or two who were standing by insisted on a little closer search, and, at some distance from the original perforation, several grape seeds were found lying free in the abdominal

cavity. No other perforation except that in the appendix could be found.

I have often thought of the similarity and of the dissimilarity that exists between an appendix imbedded in adhesions and a fallopian tube filled with pus and bound down in a similar way. I find that others have also thought of this similarity of the two conditions. An appendix when filled with pus and fixed by adhesions is very closely allied to a fallopian tube filled with pus and fixed by adhesions. The walls of such an appendix rarely become thick, the walls of such a fallopian tube frequently become very thick. Such an appendix filled with pus has no fimbriated end through which a leak is liable to occur from time to time. Such an appendix can only leak through some small perforation of its wall, and, when such a perforation does occur, and nature shuts off by adhesions a small portion of the peritoneum in which such pus is pent up, and the knife of the surgeon gives vent to such pus through the abdominal wall, a cure is likely to result.

*Etiology.*—The etiology of the disease can be best explained by referring to the pathological conditions found. Age seems to have some influence in its production, because it is certainly more frequently found in youth than in adult or old age. Fitz, from his investigations, says that fifty per cent. of the cases were under twenty years of age. The youngest case recorded by him was that of a child ten months old. The disease may, however, be found at three different periods of life. Among my own cases I have seen it in a boy of little over three years old, and I have to-night to show three cases operated upon at different periods of life. One of them, a girl eleven years old, one a young man about twenty-six years of age, and one an old man sixty-six years of age. In the little girl the first attack was the last one, that is, up to the present time; in the young man the first attack was the last one; in the old man a period of fifteen years intervened between the attack for which operation was required and the attack previous.

It has been said that the disease occurs more frequently in boys than in girls; why this should be so it is difficult for us to explain. Whether errors of diet have any great influence in the production of the disease or not is a disputed point. It is now generally believed that it is unwise to eat grape seeds, orange pits, bird shot or, any of the

other foreign bodies mentioned, but still, hundreds of people take into their stomach these articles and do not suffer from appendicitis. Grape seeds are swallowed by a great many people, orange pits are perhaps taken into the stomach without the knowledge of the person who is eating the orange; occasionally plum stones and date seeds will slip down the oesophagus by accident. A plum stone I should consider to be especially dangerous, not only on account of its liability to produce trouble in the neighborhood of the appendix, but on account of its sharp point it would be liable to produce perforation of the bowel.

There are perhaps few people on the globe who do not eat raisins, grapes or oranges. It would be interesting to know whether these fruits are consumed to a greater extent by one people than by another, and, if so, whether appendicitis is more common among those who eat these seeds than among the others. The danger does not appear to lie altogether in the ingestion of the larger seeds. I have here to-night, an appendix with a perforation at its tip. The impaction was produced by what appeared at first to be a faecal concretion, but, in the centre of this, were found several raspberry seeds. The seeds of such fruits as raspberries, blackberries and thimbleberries are hard, and are, as a rule, swallowed without being broken. They are liable to become collected in clusters of two or three together and, in this way, become the nucleus for a faecal concretion. They pass through the intestine without change. Indian corn also frequently passes through the intestine without change, even though broken during the process of canning. There is no doubt that sudden violence frequently precipitates an attack of appendicitis; such violence probably pushes the foreign body a little further into the lumen of the appendix. I have recently seen a case in which on two different occasions the attack followed coition. Perforation of the appendix from typhoid fever and the perforation of a tuberculous appendix is rare. Many cases are supposed to be brought on by some error of diet. It is difficult to explain this and I believe that it is generally a coincidence.

*Symptoms.*—The symptoms of the disease are very various; premonitory symptoms are present in a large number of cases. The patients feel that something is wrong and that they are annoyed

by an uncomfortable sensation in the right iliac region or somewhere in the abdomen. This sensation at times amounts to an actual pain and this pain is difficult to locate. It may be referred to the left side of the abdomen, to the epigastric region, to the ovarian region, to the region of the gall-bladder; it may be neuralgic in its character and it may be diagnosed as a neuralgia. The patient is perhaps told that he is over-worked and run down, and, as a consequence, suffers from this abdominal neuralgia. Such a diagnosis is, at its best, but a cloak for our ignorance as to the exact nature of the patient's ailment. The cause of the pain, to my mind, is not properly accounted for by many authors. I believe that the pain is, in many cases, due to the interference with the blood supply of the appendix by the impaction of a foreign body in its lumen, and that this pain is identical with the pain produced by the strangulation of the pedicle of an ovarian tumor. The pain may be localized in the neighborhood of the gall-bladder, and the physician may suppose that it is due to some collection of gall stones, or to the passage of a gall stone. It may be referred to the ovarian region and the physician may suppose that the patient is suffering from neuralgia or inflammation of the ovary. It may be referred to the renal region and the physician may suppose that the patient is suffering from stone in the kidney.

Pain is not, however, a necessary accompaniment of disease in the vermiform appendix. Cases are met with in which no symptoms are found to point to any change in that organ. Such patients may suffer from headache, from chills and fever, and the physician may suppose that their condition is due to malarial fever, and yet, they are really suffering from a septicæmia originating in disease of the appendix and head of the cæcum. Other patients may suffer from sudden attacks of pain accompanied by vomiting, without any particular rise of temperature or increase in the frequency of the pulse. These attacks are frequently supposed to be due to some error of diet and the resulting indigestion. Pus may form with very little to warn us of its presence. I have seen opened large abscesses originating in disease of the appendix in patients who have suffered little, if any, pain to indicate the disease in this neighborhood. When these

patients who have been suffering from these indefinite symptoms are suddenly seized with the symptoms of acute general peritonitis the diagnosis is usually readily made and a correct conclusion as to the nature of the previous ill health is arrived at. Such a sudden attack is usually ushered in with a chill, accompanied by pain and this pain extends, perhaps, over the whole abdomen. The pain is not, however, necessarily severe, and, in some cases, is almost entirely absent; vomiting comes on and the pulse rapidly rises to 120, 130 or more. The patient's countenance becomes anxious, he is prostrate with shock and looks very ill. The temperature soon begins to rise and the thermometer registers perhaps 102 and 103 degrees. If the pain is severe the breathing is chiefly thoracic, the knees are drawn up and the abdominal muscles are tense. The bowels may move two or three times and then they usually become constipated. The pain that was at first general may now become localized in the right iliac region. Rigidity of the right rectus muscle may be noticed, although no distinct mass can be made out by abdominal palpation, unless, perhaps, under the influence of an anæsthetic or by examination through the rectum. A point may be found, at which a tenderness will be noticed to be greater upon deep pressure than the tenderness evinced by pressure on the surrounding parts. This has been given by McBurney as a distinct aid to diagnosis, and has been located by him at a point about one and one-half inches from the anterior superior process of the ilium towards the umbilicus, on the right side. It is not claimed by McBurney as a constant sign, but when it does occur it is of distinct value. The tongue now becomes coated and in a short time it may be dry and brown, or dry and reddish and glazed.

If the disease progresses, goes from bad to worse, the vomiting continues and is uncontrollable, the pulse increases in rapidity and the temperature may either rise or fall or may even remain about normal. Abdominal distention is not always present, because the patient may die before the disease has continued long enough to permit of the formation of any great quantity of intestinal flatus. If the patient survives this period the distention produces a great deal of discomfort. When very pronounced it usually indi-

cates the death of the patient. The intellect, in such cases, usually remains clear.

If, however, instead of going from bad to worse the patient improves, the pulse slowly drops to about 120 and then drops, in another twenty-four hours, to 100 per minute, the temperature may either remain elevated for several days or may drop to normal, and the tenderness will become localized. On careful palpation a boggy feeling mass may now, perhaps be felt in the neighborhood of the appendix. When this is found and the temperature remains elevated for many days a localized encysted abscess of the peritoneum usually forms. If the temperature drops within a few days the case frequently terminates without pus formation. I believe this more frequently happens in children than in adults. I have felt, in children, a great amount of brawny hardness in the neighborhood of the appendix and have found this hardness disappear gradually without pus formation.

When abscess forms on the right side flexion of the right thigh is often found. This also occurs in cases of pelvic abscess originating from other causes. Many of the cases of appendicitis with sudden severe symptoms will closely resemble cases of irritant poison, also cases of intestinal obstruction. In some cases the symptoms may be very obscure, they may point to a formation of an abscess in the liver, and the case may be diagnosed as one of abscess of the liver, and yet, at the *post mortem* examination the appendix will be found to be the seat of the original lesion. Disturbance of micturition is sometimes noted during the first three days after the occurrence of the perforation. The patient will complain of pain in making water; he will probably be forced to make it oftener during the first and second day after perforation, and, as the inflammation proceeds, micturition will become painful. Retention of urine, in such cases, or difficulty in passing it, is generally due to the administration of opium.

The percussion note over a collection of pus is not necessarily a dull note, because gas is frequently found in these fæcal abscesses. In some of the worst cases, the cases most rapidly fatal, no tumefaction can be anywhere felt in the abdominal cavity, either by external palpation or by bi-manual examination through the rectum or vagina. Such cases when operated upon by exploratory incision for the purpose of diagnosis will become

clear the moment the knife enters the peritoneal cavity; pus will gush out and the nature of the trouble will be soon revealed. I believe that we will more frequently find obscure cases in which the diagnosis lies between internal strangulation of the bowel and appendicitis with purulent peritonitis, to be cases of appendicitis than cases of internal strangulation. Cases have been operated upon in which the abdomen has been opened and explored in all directions and nothing found until at last, the operator has pushed his fingers deep down into the ilio-cæcal region. Such a patient may perhaps have been suffering from symptoms pointing to typhoid fever, or to the so-called typhomalarial fever, or, to some obscure septic condition with no definite symptoms to aid one in making a positive diagnosis. In my own operations on such cases I always explore the region of the appendix first.

Swelling of the right testicle has been noticed in some cases. Some years ago I had a case that I now believe to have been one of appendicitis, although at that time I diagnosed it as one of those mythical post-peritoneal abscesses, in which there was swelling in the spermatic veins on that side, during convalescence.

Some time ago I saw a case in consultation that I took to be one of typhoid fever. I still believe that it was one of typhoid fever, but as a complication, swelling of the right testicle occurred, and the patient suffered subsequently from a phlebitis on the right side, affecting the femoral vein. There is something interesting in this ground on which two diseases seem to become so closely allied, namely, the phlebitis that has a tendency to occur in cases of appendicitis and the phlebitis that frequently follows typhoid fever. The veins of the scrotum or leg are the only ones that show outward signs of phlebitis.

*Diagnosis and differential diagnosis.*—Appendicitis may be confounded with many diseases and many diseases may be supposed to be ones of appendicitis. The diagnosis in many cases is very difficult, and in many cases it is very easy. It is easy to make a diagnosis in cases in which, after the commencement of the attack with symptoms pointing to a localized inflammation of the peritoneum, a tumefaction in the right iliac region is found. In such cases the history must be taken into consideration and will be found of great service to

the practitioner. If such a tumefaction be found in a woman subsequent to labor, the chances are that it is either a pelvic abscess with pus burrowing in the plains of connective tissue, intending, ultimately to point in the right iliac region, or it is a pus tube entirely intra-peritoneal. If such a tumefaction be found subsequent to a miscarriage it is also likely to be pus either in the tube or in the sub-peritoneal connective tissue. Cases of appendicitis have undoubtedly been known to occur immediately subsequent to labor or miscarriage, but this must be the exception and not the rule. I know of no way in which we can exclude appendicitis in cases with such a clinical history. If the patient has had previous attacks that have been diagnosed as ones of appendicitis we must take this fact into consideration in forming our conclusion as to the origin of the inflammation.

When cases occur with the symptoms of acute peritonitis, such as persistent vomiting, chills, collapse, rapid pulse and abdominal tenderness, they may readily be mistaken for cases of intestinal obstruction, or of internal strangulation of the intestines, or of strangulated hernia. I have been unable to make a positive diagnosis in one or two such cases until after incising the peritoneum.

The constipation, spoken of by some authors, I have not found to be constant in cases of appendicitis. The movement of the bowels subsequent to the primary invasion, would, perhaps, exclude the diagnosis of intestinal obstruction from any cause, but if constipation is present from the very onset of the disease, it is then difficult to determine the exact nature of the intra-peritoneal lesion. In some cases of strangulation of the intestine in which only a small portion of the entire lumen of the intestine is obstructed, we have movements of the bowels occurring subsequent to the onset of the attack. The vomiting subsequent to perforation of the appendix is sometimes quite as persistent and pronounced as the vomiting following intestinal obstruction. In intestinal obstruction, however, we are not likely to find rigidity of the right rectus muscle, nor are we likely to discover McBurney's point, but, on the other hand, perforation of the appendix may occur and we may not be able to discover rigidity of the right rectus muscle or McBurney's point. The diagnosis of peritonitis produced by perforation of the vermiform appendix from peritonitis, produced by per-

foration of any of the other hollow viscera, cannot be accurately made.

Now in perforation of the gall-bladder, there may perhaps have been premonitory symptoms of pain in the neighborhood of the liver, symptoms of the passage of gall stones through either the common or cystic duct, before the onset of the sudden severe pain and collapse accompanying the perforation. In perforation of ulcer of the stomach there will perhaps have been symptoms pointing to its presence before the final perforation took place. Such symptoms are frequently acute pain following the ingestion of food with, perhaps, vomiting, and with some blood mingled with the vomited matters. Perforation of ulcer of the stomach has been found in cases in which no premonitory symptoms were present; this is especially liable to occur if the ulcer be on the lesser curvature. In perforation of ulcer of the intestine there will, perhaps, have been present some symptoms pointing to the intestinal lesion, such as diarrhoea with bloody stools, or a recent history of typhoid fever or dysentery. In perforation of a stone through the ureter there will, perhaps, have been present symptoms of renal calculus and of the passage of renal calculi on previous occasions. The presence of such previous symptoms may enable us to make more correct diagnosis, but, with all these points kept well in view, we may frequently be mistaken, because disease of the vermiform appendix may closely simulate affections of the gall-bladder, intestinal obstruction, indigestion or the passage of renal calculus. Escape of pus from a fallopian tube on the right side may closely simulate an attack of appendicitis. This, of course, would only apply to females, and especially to females after the period of puberty. Rupture of an ovarian abscess or the strangulation of the pedicle of a small ovarian tumor by twisting occurring on the right side may closely simulate perforation of the vermiform appendix. The presence of a tumor in this locality, and the previous history of the case, would be our chief guide in coming to a correct conclusion.

In one child I mistook the rupture of an abscess in a gland in the mesentery for perforation of the vermiform appendix. The symptoms were sudden, although the child had been complaining of feeling weak and miserable for a week or two before the onset of the sudden pain. When I saw

her the abdomen was enormously distended with gas, free in the peritoneal cavity and with pus to the extent of about half a patten pail full. The rupture had taken place three weeks before. She lived for two weeks after evacuation of the pus and gas, and, it was only at the *post mortem* examination that the true nature of the disease was discovered. The father of the patient died of phthisis. The tubercular history, usually present in such cases, may be of some value, but we must also remember that tubercular disease may affect the vermiform appendix. As far as I can learn tubercular disease of the appendix is not likely to occur in children, and when it does occur it is usually only found as an accompaniment of tubercular deposit elsewhere.

Appendicitis must also be diagnosed from typhoid fever. I have seen two or three cases of appendicitis treated for four or five weeks as cases of typhoid fever in one of our best hospitals and in the service of some of our best practitioners. There seems to be a tendency on the part of the profession to place all obscure cases of continued fever with abdominal symptoms among the cases of typhoid fever. This would also seem to indicate that quite a few of the patients suffering from appendicitis are troubled with diarrhoea. There is no doubt that intra-peritoneal septic conditions are very prone to produce diarrhoea. I have noticed this effect over and over again in the convalescence of patients subsequent to laparotomy when the cases did not run a truly aseptic course. When the fever continues beyond the allotted space of, twenty-eight days without a return of normal body heat, the physician should always be on the watch for pus formation in the pelvis.

I have recently been treating a young woman who has a movable kidney. She was suddenly taken with symptoms that might readily have been mistaken for those due to movable kidney. Movable kidney, in some unaccountable way, produces attacks of pain in the neighborhood of the kidney, vomiting, rise of temperature, and slight diarrhoea. I have seen these symptoms accompanying this condition over and over again. If the kidney be on the right side, as it was in the lady mentioned above, it is difficult to differentiate between the symptoms due to the presence of the movable kidney and that due to an attack of appendicitis. Such mistakes have been recorded



in the practice of others. This young lady suffered, in my opinion, from an attack of appendicitis.

The diagnosis of the chronic form of appendicitis in which sinuses from burrowing pus are found in the groin, in the hip and in the loin, is at times difficult. The cases must be differentiated from those of hip and spine disease. Peri-renal abscess may also leave a sinus that may be mistaken for one following chronic appendicitis and *vice versa*.

Tubercular disease of the intestines may produce a matting in the right iliac region that will closely simulate the matting produced by disease of the appendix. Only two weeks ago I explored the abdomen of a woman aged sixty-five, in order to differentiate between cancer of the cæcum and appendicitis. I found the case to be one of cancer and not one of pus formation, and closed the abdomen. A collection of foreign substances in the cæcum may give rise to the idea that we have to deal with a case of appendicitis. I remember one such case in my own practice in which, on account of the peculiar griping pains, the absence of fever and the normal pulse, I diagnosed the lump as a collection of fæcal matter in the cæcum and not due to inflammatory thickening of appendicitis. The constipation was extremely obstinate, purgatives were used without avail, and I succeeded in dislodging the fæcal mass by giving very large enemata of hot water and changing the position of the patient so as to favor the onward movement of the water through the descending transverse and ascending colon. At last, when we almost despaired, a large mass, as large as a small fist, came away, and the patient immediately obtained relief from his pain and constipation. The mass consisted of the indigestible and hard end of asparagus, together with pieces of cartilage bitten off from the ends of the chicken bones; around this was fæcal matter that had become hardened. The patient was particularly fond of fowl, and was in the habit of eating rapidly and picking the bones while held in his fingers. He was so fond of asparagus that he ate the parts that should not be eaten. Fitz, in his admirable paper, mentions this affection as one that must not be lost sight of when making a diagnosis of a mass in the right iliac region.

And, finally, I would say that I believe the aspirator should never be used as an instrument

of diagnosis in these cases. It is not to be relied on, and the literature of the subject is filled with cases in which the aspirator needle was used, and, because no pus was found, operation was decided against, and yet, when too late, at the *post mortem* examination a large abscess was discovered.

*Physical Signs.*—The physical sign that is frequently found, and the sign that is, perhaps, of the greatest value, is the sense of resistance or actual tumefaction in the right iliac region. This tumefaction is not always found in the one situation. I have opened an abscess over an appendix in the neighborhood of the umbilicus. I have seen a secondary collection of fluid to the left of the median line in a child eight years old after an attack of appendicitis. I have felt a collection of fluid in the pelvis of a child between the bladder and the rectum after an attack of appendicitis with general peritonitis. I have opened abscesses accompanying disease of the appendix in the right iliac region and in the pelvis in the same case.

The abscesses are, in many cases, multiple, but there seems to be a tendency toward the formation of a pelvic collection of pus in most of the cases of appendicitis, therefore, the rectal examination should never be omitted, because it often gives very valuable information. One case I show to-night is a man aged sixty-five, operated on for appendicitis a year ago, and eight months after operated on a second time for an accumulation of pus in the pelvis. The second collection of pus was evacuated by puncture through the rectum with a long trocar.

The physical sign mentioned above of matting in the right iliac region, may not be present during the first, second or third attack, but may be present in some subsequent attack; but, when found, it enables us to come to a correct conclusion as to the nature of the previous attacks. The tumefaction may vary from a large dense swelling—and it may contain a large quantity of pus—down to a simple feeling of induration or increased resistance to the examining fingers. Rigidity of the right rectus muscle may also be found, together with McBurney's point of greatest tenderness.

*Course and Results.*—The course of the disease may vary; the first attack may be the last. The patient may be seized in the midst of health with a sudden attack of peritonitis, and may be dead in three or four days. After the first onset of the

peritonitis the pulse may increase rapidly for the first twelve or eighteen hours, and then begin to diminish in frequency though the temperature may remain elevated, and marked abdominal distention may supervene. In such a case, the peritonitis has probably become limited by the formation of adhesions, and the seat of the disease has been shut off from the rest of the peritoneal cavity by this provision of nature. Such a case may progress favorably subsequent to this formation of adhesions for a week or ten days, and then sudden collapse may set in at the very time that the patient's friends and physicians think that he is improving. Such collapse is due to the rupture of the limiting adhesions and a secondary extravasation of pus into the general peritoneal cavity. The pulse will become suddenly rapid, the face anxious, and a cold, clammy sweat will start in beads from the patient's skin. The patient will probably die in from three to six hours.

On the other hand, the limiting adhesions may be all sufficient; the inflamed area may remain shut off from the rest of the abdominal cavity and the effusion may rapidly absorb. This absorption seems to be more prone to occur in children than in adults. I have seen large accumulations, of what I took to be pus, in the right iliac region in children, disappear rapidly without any evidence of the discharge of pus by rectum, vagina or bladder. This agglutination of the bowel, occurring as it does with great rapidity and giving early signs of its presence, is similar to that agglutination of the bowel, ovary, fallopian tube, uterus and pelvic peritoneum that constitutes the so-called pelvic cellulitis.

If the appendix be fixed near the abdominal wall, this brawny, hard, indurated feeling will be recognized much more readily and at a much earlier period. With resolution the temperature drops, the pulse becomes slower and the patient rapidly regains health. If resolution does not occur the temperature is likely to remain elevated, and an elevation of temperature extending over a period of about ten days I have usually found indicative of the presence of pus. Pus may be present, however, without this elevation of temperature, and on two occasions I have seen abscesses perforate into the bladder without any elevation of the temperature to warn me of their presence. It has been said that a fatal peritonitis

does not occur after an attack of appendicitis. If there has been a previous attack, it has been considered that the previous attack is sufficient to set up adhesions that protect the abdominal cavity. I have seen one case prove fatal from acute peritonitis after the patient had three primary attacks.

There is no doubt that in many cases, what Fitz called a thrombo-phlebitis, affecting the veins of the mesentery, occurs, and, as a consequence of this phlebitis, a profound septicæmia is produced. Pus is carried into the blood current, and abscesses in the liver, minute in size and numerous, may be produced as a consequence. The veins of the liver may be inflamed, forming the so-called pylephlebitis. I do not think that this is necessarily a fatal affection, unless abscesses form, because, I have recently seen a case of great enlargement of the liver with septic symptoms following inflammation of the veins in the right side of the pelvis after labor, accompanied by swelling of the right leg. The patient made a good recovery; the liver greatly diminished in size. The fever remained high for several weeks. This thrombo-phlebitis may occur without any marked symptoms, and, I believe, without pain. A small quantity of pus may enter the blood current and produce a condition resembling malarial fever; the patient feels chilly, has headache and malaise. This condition may be present for some weeks before the patient has symptoms that point to any serious derangement. He may be going around performing his ordinary duties, but at last he feels so poorly that he seeks advice. The thermometer is then used, and gives the first indication of the presence of any abnormal condition. He may then probably be given quinine on the assumption that he is suffering from malaria. His condition goes from bad to worse; enlargement of the liver takes place, and death ensues.

Many cases are recorded in which a perforation of the rectum has taken place even after the patient has been operated on, and secondary abscesses have been opened in the groin and in the lumbar region.

Hernia has been found to follow operation in cases of appendicitis perhaps more frequently than after operation for other diseases by median incision. How this can be prevented is a problem of the future.

When pus perforates into the bladder it produces a very serious and frequently fatal complication. Such patients do not die suddenly, but linger on in a wretched condition and die of chronic septicæmia or pyæmia. Perforation into the rectum, in my experience, has been more favorable. I have seen one case in which pus burrowed outward into the buttock and also discharged into the rectum, and the patient died from pyæmia after a lingering illness. When pus forms towards the front of the abdomen, and is evacuated either spontaneously or by the surgeon's knife, the case usually progresses favorably. I have seen one case die of acute general peritonitis one year after the primary abscess was opened and after the patient had regained perfect health. Pus has been known to burrow upward from an appendicial abscess and to be discharged into the lung. I have recently seen a case in which the abscess extended up behind the diaphragm.

Peritonitis occurring in children, in my opinion, nearly always has its origin in the appendix, and, looking back over my past experience, many such cases that then seemed obscure now seem very plain.

*Recurrence of the Attacks.*—The attacks may occur at varying intervals. In some cases a second recurrence will take place after the lapse of nearly a week or two, and they may continue to occur from time to time until an abscess forms, until a fatal perforation takes place, or until the attacks cease to recur, and the patient regains his normal condition of health. When he regains his normal condition of health his appendix is probably bound down by protecting adhesions, and the disease has thus affected its own cure. In one of my cases a period of fifteen years intervened between the two attacks. In one case a period of eleven years intervened between the two attacks. The tendency of the disease is toward a recurrence of the attacks.

*Prognosis.*—When abscess forms and is opened in the right iliac region the prognosis is usually good. In opening such abscesses the surgeon must, of course, be careful not to disturb the protecting adhesions. When operation is performed in what I would call the intermediate stage before nature has completed her adhesive barriers, the result is not usually favorable to the patient. When operation is done in the early stage, within

the first three days after the onset of the attack the prognosis is better and is fairly good. When improvement takes place after the first twelve or eighteen hours, the patient may usually be left unoperated upon, and will frequently recover from this attack with nothing but medicinal treatment.

The prognosis of cases in which the abscess opens into the bladder, as I have said elsewhere, is usually bad while the prognosis of cases that open into the rectum is better than it is in those that open into the bladder. When the abscess burrows out into the buttock the prognosis must be extremely guarded; occasionally such a case may get well, but, they are, as a rule, very desperate ones and likely to die. When distention is extreme the case is generally fatal. I have now under my care a young man with a thick cartilaginous abdominal wall riddled with sinuses due to an old appendicitis. I have opened four separate pus pockets.

*Fæcal Fistulæ*—When fæcal fistulæ form they usually close of their own accord. In some cases these fistulæ remain open and must be closed by subsequent surgical procedure.

*Treatment.*—The treatment of the disease may be divided into medical and surgical. I believe that every case of peritonitis should be observed by physician and surgeon in consultation. The surgeon to say when operation is advisable, and the physician to carry out the medicinal treatment until that period arrives. If the surgeon is called in to see the patient when operation is supposed to hold out the last and only hope of saving the patient's life, he feels that the golden opportunity has been lost, and is wise if he refuses to operate in such cases. When operation is required in the early stage of the disease, or, what I would call the first period, it must be done as near the onset of the attack as possible before the patient has become saturated with the septic elements absorbed from the peritoneum. When the second period, or intermediate period, has arrived, and the patient is thoroughly saturated with sepsis, operation is almost always useless. The patient does not die as the result of operation when looked at from the scientific standpoint, but does die from the result of operation when looked at through the eyes of the public. In this way surgical procedures are held up to ridicule and severely criticized by the laity. Death occurs and it is supposed that

everything has been done that could be done to save the patient's life.

Suppose the patient, who may have had or who may not have had premonitory symptoms of some intra-abdominal trouble, is suddenly taken with the symptoms of acute general peritonitis, it is the duty of the physician to call to his aid a surgeon in whom he has confidence. The case should then be watched by both, and a nurse should be immediately procured, all arrangements for operation should be completed, so that it can be carried out without delay when it is thought desirable. The pulse is watched with care during the first two days. If, after twenty-four hours the symptoms do not ameliorate, but tend to go from bad to worse, with increased rapidity of the pulse, commencing abdominal distension, whether accompanied by increased tenderness or not, with increased respirations, with an increase of the anxiety expressed by the countenance of the patient, operation should be done without delay. Such cases are ones of perforation of the appendix and general purulent peritonitis, and the patient will undoubtedly die unless relieved by surgical procedures. If the symptoms ameliorate he may be left alone, and he then enters the intermediate stage of the disease. While in this stage, as I have said before, I do not advise operation. The adhesions are usually so slight, and the pus is so diffuse that the access of air to the abdominal cavity, the disturbance of adhesions that is required to evacuate all the pus seems only to intensify the septic condition, and to add to this septic condition the element of shock. In all such cases on which I have operated the patients have died. Operation in this intermediate stage, in my experience, has, therefore, been uniformly fatal. I now wait until this trying period has been passed through (unless it should prove fatal without operation) before advising the use of the knife. The patient may remain in this condition for a period of about a week or ten days; if he survives this the pus will usually have collected in one locality, and it can then be, with safety, evacuated, and the abscess cavity can be more thoroughly cleansed without the same amount of danger of disturbing the adhesions.

If the first stage has passed into the second, and the patient continues to make rapid improvement, no surgical operation will be required or advisable.

Medicinal treatment will be sufficient. During this apparent convalescence, however, it is necessary that the medical attendants should be imbued with the sense of their responsibility, and should carefully watch over any accumulation either in the pelvis or in the right iliac region. The temperature record should be closely studied, and the patient should be kept in the recumbent posture and warned against making any violent or sudden effort.

If a tumefaction still exists and does not tend to disappear, operation should be done so as to prevent perforation of the pus into the bladder or rectum. At times the tumefaction will seem to diminish, but this diminution will be more apparent than real, because the pus has simply burrowed further into the pelvis, and, in such cases, bi-manual examination through the rectum is invaluable.

The medicinal treatment should consist of warm applications to the abdomen for the purpose of allaying the pain. By allaying pain in this way we are able to reduce the quantity of opiate required to a minimum. This is always desirable. It is difficult to form an exact estimate of the progress of a patient suffering with this disease if he is kept constantly narcotized. Some of the worst cases suffer but little pain. The recumbent posture should be insisted on, and the diet should consist of fluids. If the vomiting be great it may be necessary to administer nutritive enemata; these may consist of milk or beef tea with some stimulant, such as whisky, brandy or champagne. Great efforts should be made to rally the patient from the primary condition of collapse. In my experience I have not found much benefit from the use of cardiac sedatives, but, I think, I have received more benefit from hypodermic administration of strychnine.

After the primary stage has been passed, and resolution has begun, this resolution may be aided by the administration of alteratives and application of some iodine or mercurial ointment for the induration. If, however, pus has formed, medicinal treatment is of but little use until the pus has been evacuated.

For the septic condition quinine or quinine and iron may be administered. During convalescence tonics should be employed. Delay of surgical procedures when required in the primary and

third stage of the disease is, to my mind, unadvisable, while delay in the secondary or intermediate stage is advisable.

*Operation.*—For a time there seemed to be a dangerous wave passing over the medical and surgical world, this wave followed closely in the wake of that tidal wave that seemed to overwhelm the profession. I refer to the performance of the operation of cöphrectomy for the removal of ovaries and tubes that were supposed to be in a diseased condition. The lesser wave may be used to indicate the desire on the part of some surgeons to remove the appendix of every patient suffering from abdominal pain. Abdominal pains were, for a time, supposed to originate in the appendix. Operations were done, the appendices were removed, and they were submitted to a microscopical examination, and no disease was found, in my opinion, to justify their removal; but, of all these the reports of the cases wound up with the usual bit of self-praise on the part of the operator, namely, "that since the performance of the operation the patient has been perfectly well, and has had no recurrence of the former attacks." After our experience in connection with the subsequent history of patients from whom ovaries and tubes were removed, we accept these statements with some reserve. Just such glowing accounts of the results of cöphrectomy were to be found in medical literature a few years ago, but the results appeared well on paper, and the patients about whom the results were written appeared anything but well.

The question then, when should operation be done for a relapsing appendicitis, is a difficult one to answer. The consensus of opinion seems to be that the operation should be done during the interval between the attacks, and Weir has very well put it when he said that no patients should be submitted to the operation unless incapacitated for business, ruined in health, or likely to remove to a district in which surgical skill cannot be had.

When operation has been decided on, there is another question that confronts the operator at the time of operation, and that is, how much am I justified in doing, and when and where should I stop? Cases will be met with in which the appendix is found fixed amidst a mass of dense adhesions from which it can only be separated by a very dangerous process of enucleation. This enucleation increases the risk of the operation,

and, in some cases, it must be wiser to leave the appendix alone than to so greatly imperil the life of a patient not overmuch inconvenienced by his disease. Such a patient will linger along, and nature will soon come to his assistance. An abscess will probably form that can be subsequently opened and emptied, and the patient cured. Bull relates a case in which the mere fact of opening down to such an appendix and inserting a drainage tube relieved the attacks, while the drainage tube tract was kept open, but, as soon as the drainage tube tract was closed, the attacks recurred. Recovery has taken place after operation, and with a very prolonged period of convalescence.

Multiple incisions are sometimes required to open up the different abscess sacs. If a case is not doing well subsequent to operation, a careful examination should be made through the rectum, and perhaps a secondary abscess will be found pointing in that locality. When the pulse and temperature go down and the sickness at the stomach ceases, the attending physician is liable to congratulate himself that all danger is passed, but such cases, even after operation has been done, have become worse and died.

It is not necessary for me to describe the details of the operation, such a description would be of little benefit. Each operator must proceed according to his own ideas. I wish mainly to point out that many of these cases, no matter by whom they may be operated upon, no matter what method of operation is employed, and no matter at what period of time during the course of the affection they may be operated upon, will die. Cases that appear very hopeless rarely recover from operation. As Homans said after losing two sons of two physicians subsequent to early and late operation for appendicitis, the surgeon must often be disappointed with his results. A few days after losing a case subsequent to operation for appendicitis, he met with another case, and made up his mind that on this occasion he would operate early, and not be, as he thought, too late; he did operate shortly after the onset of the attack, but the case ended fatally.

I am convinced that we have yet much to learn regarding purulent peritonitis, and that, though the knife will often save life, it will frequently fail to help us as we perhaps think it should.

When I read reports of cases in which the peritoneal cavities were filled with multiple abscesses, and in which the abscess cavities were broken into and washed out, and the patients all made easy recoveries, I come to the conclusion that the author imagined a good deal that he wrote. That such cases will occasionally get well subsequent to operation I do not deny, but such is the exception, not the rule.

### TRANSILLUMINATION OF THE MASTOID CELLS AS A MEANS OF DIAGNOSIS OF MASTOIDITIS INTERNA SUPPURATIVA.

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When we consider the serious nature of confined pus in the mastoid cells, the frequency of death from meningitis, thrombo-phlebitis, or cerebral abscess, resulting from recognized or unrecognized cases, the gravity of the operation necessary for its relief, and the occasional operations which are done on a mistaken diagnosis in which no purulent collection is found, it is apparent that any means by which it will be possible to diagnose with greater accuracy this disease will be worthy of our careful attention. Such a means will be found in a miniature electric lamp, and the conclusions to be deduced therefrom will be based upon the fact of the diaphanous nature of healthy mastoid cells, and the opacity of pus, and the auxiliary proposition that, however mastoids may differ in size, shape, and thickness, and consequently in transillumination, they are practically, at least, the same on the two sides of a given head, thereby affording an easy and trustworthy standard for comparison.

The apparatus required is a battery capable of developing about 10 volts, roughly speaking a 5 cell battery, regulated so as to light well, but not burn out a 2 or 3 candle power lamp of very small calibre (supplied by Meyeroitz, East 23 Street, N. Y.,) this being protected by a thin rubber tubing fenestrated at one side and made to fit snugly at the meatus by a washer of larger tubing.

In a perfectly dark room the lamp is inserted well into the external auditory canal, the fenestra

directed backward, and the current made. Instantly a healthy mastoid is illuminated with a ruddy glow extending from the apex to the lateral sinus, and upward to the limits of the cells. The reverse manner may be more satisfactory when the canal is small, obstructed or painful, and may be performed with a larger lamp. A speculum as large as can be used is placed as for examination of the membrana tympani, the electric lamp encased in a section of rubber tubing projecting slightly beyond the lamp, is pressed against the mastoid and the current made, when the external auditory canal and tympanum will be filled with a rosy light from the posterior wall. By placing the lamp on different portions of the mastoid the limitations of the cells and the position of the lateral sinus may be accurately mapped out, and the particular region in which a pathological process exists demonstrated. If the cells be occupied by a purulent collection the glow will be absent, the cells will be dark.

Comparison with the opposite side renders the diagnosis complete. Whether or not the usual symptoms be present for suppurative mastoiditis, it may exist and produce death without the appearance of the external indications called for in the text-books. This form is, indeed, the most dangerous, as the process tends to extend inward instead of outward. D. Milton Green (*Journal Am. Med. Assn.*, Nov. 12, 1892), mentions five cases in which none of the external signs were present; no pain, tenderness, nor swelling, yet pus was found either at an operation or at the autopsy. Knapp has reported a fatal case (*Arch. Otolology*, July, 1892, p. 239) in which no discharge from the ear ever occurred. In a series of 80 cases reported by J. Orne Green, of Boston, (*Journal Am. Med. Sciences*, 1860, p. 575), 13% showed no external signs, yet confined pus was found. (See also record of 47 cases operated at Mt. Sinai Hospital, New York, *N. Y. Med. Journal*, Jan. 2, 1892.) Frank, developed cases with periostitis are easily recognized, but the classical indications of Schwartze, of Halle, or of Körner, quoted with more or less modification in every text book of otology, are of uncertain assistance in deciding a doubtful case. The method which I have herein submitted is scientifically accurate, easy of application, painless, strikingly pictorial, instantly decisive, and demonstrable to the patient's friends.

## Selected Articles.

### ON LUPUS.

Lupus has of late years attracted so much attention that I wish to say a few words about the pathology and treatment of the complaint, more particularly the latter. The paper, indeed, is simply practical. The question of the disease being due or not to the bacillus is dealt with very briefly, and all points connected with its histology, classification, and divisions are left on one side, the only arrangement touched upon being that of separation into common and erythematous lupus, with a short notice of the traumatic variety. The treatment recommended is therefore to be understood as applying to all forms of the complaint, and wherever seated, whether on the limbs, head, or face; and the suggestions offered on this head are based on the observation of 456 cases entered in my department at St. John's Hospital, and 24 treated outside the institution.

As to the supposed causes in the parent, of lupus in the offspring, they are one and all so utterly inadequate to account for the appearance of the disease, that for any light they throw upon the question they might be non-existent. Hereditary taint is often spoken of as a factor, but in my own practice I have met with no evidence showing that lupus is ever inherited; Pontoppidan, however, gives the proportion of instances of heredity at three in the hundred. One reason, perhaps, for the rarity of inheritance is that lupus often begins in early life, and that consequently most of the sufferers from it are, before marrying age, so disfigured that they have little chance of continuing their race; indeed, I never knew but one patient with lupus (a woman) marry. Struma in the parents or family is also quoted as an agent, but this I have equally failed to verify, and in the one solitary case seen by myself where there could be a suspicion of descent, the conditions were reversed: a mother attacked with lupus beginning rather late in life, being accompanied by her son, a young man, with well-marked strumoderma and suppurating glands. Again, strumous diathesis of the patient is ranked as a factor in the production of the disease, but struma constantly displays its worst features without being accompanied by lupus, and the latter may harass the patient for half a lifetime without a sign of struma being noticed. That the two are occasionally seen together in the same subject goes for nothing when confronted with such facts.

M. Beanier, as I understand him, and some of the French dermatologists maintain, not that a strumous diathesis is a cause of lupus, but that lupus is a strumoderma. In my opinion the doctrine must be entirely rejected. Strumoderma

does not begin with a slow formation of soft, half-translucent, reddish papules; a particular form of lupus attacks the strumous, and, after lasting for years, has been observed to have taken on none of the characters of strumoderma. The latter generally begins with, or is accompanied by glandular swelling, rare in lupus; it is much more amenable to treatment than lupus is, and occasionally dies out under the employment of very simple means, or even none at all, the change being then apparently due to the arrival of the sufferer at the age of manhood, which I have never seen happen in lupus. Prolonged residence of families in ill-lighted dwellings has often been noticed to exert considerable influence over the development of struma, whereas I have not been able to find anything confirmatory on this head with regard to lupus. As to the contention that lupus is a tuberculosis developed in a lymphatic diathesis, I have only to say that, however correct such a view of the disease may be if confined strictly to the country in which the idea took its birth, it is inapplicable here, where the victims of this disease may be seen of every diathesis, or even of no diathesis at all. If lupus be a strumoderma, then it cannot be a tuberculosis, for it is not the nature of the latter to die out under the use of internal means, as strumoderma undoubtedly does, and for that matter lupus too, whatever may be said to the contrary.

But the strongest argument is yet to come. Nothing can be more certain than the fact that lupus, like epithelioma, has been evoked by various kinds of injury. This form of lupus, first described by myself under the name of *L. traumaticus*, and repeatedly identified at the Hospital by medical visitors, has been traced there in more than twenty cases to lesions of one kind or other. Among these were bites, jagged cuts, bruises, almost always small but severe; scratches, burns of very limited extent, as from a cigar; stings, and so on; whereas in no single instance did I see reason to think that strumoderma had been brought on in this way. Farther, I have to urge that, while several cases have been recorded where carcinoma chelis, or epithelioma sprang up on a patch of lupus, I have not read of a single instance where this happened with strumoderma.

Nor do I see any reason to accept the view, several times put forward, that lupus is an outcome of weakness accompanied by a meagre development of frame. That mere want of strength is not in any way the efficient cause, is, I submit, amply shown by the failure of tonic treatment in the disease. That poor development of the frame may predominate among these patients, that many of them are thin, with stringy muscles, badly shaped, and bearing upon the impress of coming disease, may at once be admitted; but, on the other hand, some of them are healthy-looking, and

reporting themselves healthy, ruddy, and well-made people; and I have myself become as sceptical as to this affection being connected with any particular kind of bodily frame as to its being dependent on any diathesis or temperament.

Such arguing as that which ascribes lupus to the ravages of a micro-organism would not be allowed a hearing in any branch of science, and I am at a loss to understand why it should pass current in this case. The bacillus cannot always be detected in the tissues, and therefore to maintain that the disease is always due to it would be to maintain that there may sometimes be an effect without a cause; and if lupus can in some cases spring up independently of the organism, then in strict reasoning it may do so in every instance. Unfortunately there is with respect to many points but little strict reasoning in medicine, and here even a smaller amount than usual. The dependence of the disease on the bacillus and the operations of the latter are spoken of as confidently as if every position concerning them had been proven, though there is neither proof nor probability in their favor. The long venerated doctrine of blood poisons, the offspring of Sydenham's cherished creed, which was to flourish after his death, *me vita functo*, once so authoritatively taught, which required men to believe that two-and-twenty such poisons existed, though not one of them could be either seen or felt; that the entrance of every one of these into the blood, its multiplication there by zymosis, and its final elimination, were as effectually demonstrated as the discoveries of Harvey and Jenner; the doctrine so promptly abandoned, without even one word of regret, at the bidding of Pasteur and Koch, is really revived here, and indeed applied to other diseases, under a new name and in a new shape, and with all its inherent defects.

There never yet was a doctrine of blood-poison that would bear looking into, and the bacillus theory of lupus stands investigation almost as badly. It breaks down at the first stage, because it is certain that in remote country places patients contract lupus who have never seen a person with this disease. The second stage must share the same fate, for it is equally certain that in many instances the bacillus cannot be found in the most developed phases of the complaint, which again constantly gets well under treatment without anything special being done to starve, poison, or expel the invader, thus effectually disposing of the third stage. Face to face with clinical experience, the theory fades into a figment without beginning, middle, or end, and for anything it explains the bacillus might have for ever remained undetected by the microscope.

A patient with lupus frequently enough lives long years in a family without communicating the disease to a single person. The bacillus, which

traverses miles of open country to reach some lonely cottage, cannot in such cases overleap the slight and feeble barrier which stands between sister and sister, between husband and wife. The believers in the wonderful feats of the bacillus say that this is owing to its not having found a suitable soil to settle in, but figurative language of this kind usually masks an error or represents a superfluity of language. Here we have both. Nothing grows in soil but what undergoes a change; the seed dropped into it does not multiply as the bacillus does, and the phrase "suitable soil" is superfluous, because the condition is better expressed by the older term of predisposition to the disease. And to this as the real cause of the appearance of the disease the predominance must, I submit, be assigned. Where exposure with immunity is the rule, infection can only count for very little.

In the foregoing paragraph I have spoken of the wonderful feats of the bacillus, and as I do not like to make use of an expression of this kind without what appears, at least to me, a good reason for doing so, I shall attempt to justify the remark. As I am anxious not to occupy more time than is absolutely requisite, I have selected as evidence one fact out of several. A gentleman undertook to show me the bacillus in a piece of lupus tissue which he had been examining, and one was with great difficulty displayed; but in answer to my questions he at once admitted that this was the only specimen he had been able to secure, though he had examined a number of sections; and it certainly did appear to me, and ever since has appeared to me, wonderful that this mere mite of matter should be able to effect such a destruction of tissue, which could hardly have been brought about by a prolonged use of the most powerful caustics.

An unhealthy state of the climate has been suggested as an exciting cause of lupus, but nothing very definite on this head has come under my notice. We are also told that the disease is more common in a population exposed to bleak north and east winds, and Pontoppidan traces a good deal of it to raw sea-air. However strictly this may be the case in a northern country, I should, judging purely from personal experience, say that it does not hold good in England. I have not found lupus very prevalent at the seaside; and Margate, which is in a peculiar degree exposed to the sea-breeze, has been selected as the site of a hospital for the treatment of this disease and scrofula. I have several times traced lupus to low-lying villages shut in by hills and trees, but I do not attribute much importance to this, having seen the disease in people born in the most contrasted climates; and my colleague, Mr. Hitchins, after a long and careful search, found himself unable to come to any conclusion about the topo-



graphy of the disease. I am, therefore, disposed to believe that such agencies simply intensify an inborn tendency to lupus, which would have shown itself sooner or later without such assistance. With the view expressed by Sir Erasmus Wilson, that lupus is due to inherited syphilis, and that of Mr. Hunt, that erythematous lupus is syphilis, it is, I presume, no longer necessary to deal; they were utterly unfounded, and perhaps never had any particular influence over either pathological doctrines or treatment.

That lupus owes its existence to some widely diffused and resistless agency, acting unseen and silently on the whole mass of the population, and in conformity with a law long ago recognized by myself, but which I have quite failed to unravel, seems almost certain from the fact that, turn to which side we choose, search what part we may, we shall always find that the number of persons suffering from this affection bears the same common proportion to that of patients with disease of the skin, and unless my calculations have quite misled me, the same proportion, speaking, it is to be understood, exclusively of England, the same common relation to the number of the inhabitants, about one in eight thousand nine hundred and fifty, as well as I have been able to make out, any such computation being, however, quite open to correction. As to any attempt to explain the occurrence of lupus by some theory, or by offering the reader his choice of two or three theories, I have no figment of the kind to put forward; I look upon concoctions of this sort as little better than day-dreams, as things which waste man's time on earth, for they leave no man wiser.

The reader has no doubt noticed that I have included with lupus the erythematous form, which some authors have separated from it and classed with the erythemata. I believe the attempt to be a complete mistake. In a woman who had been suffering from the disease more than eighteen years, unmistakable lupus papules had formed on the posterior edge of the patch, which was seated on the right cheek, nearly covering it. Two women, in both of whom the disease had begun and spread, in classic fashion, like the rough outline of a butterfly, stretching across the bridge of the nose and over the cheeks, were attacked with equally unmistakable lupoid ulceration at the edges of the patches. A man with this form of the disease on the backs of both hands had sycosiform lupus of the face, and Dr. Jamieson mentions a case where erythematous on the cheeks passed imperceptibly into vulgaris of the nose, with characteristic ulceration and crusting. This variety, too, may, like the traumatic, start from an injury, which I have never seen in any erythema; a patch covering almost the entire right cheek of a woman, took its origin from the opening of an abscess over the zygomatic arch.

We now come to the important part of the matter, the treatment of the disease, and I propose to begin by examining the system of Dr. Koch, the history of which has revealed an amount of credulity, contempt alike of reasoning and grammar, hasty judgment and intolerance, not often, if ever, paralleled in the annals of medicine. The millennium of medicine had come, an era of science had dawned upon the world which for ever rendered all former experience worthless; about that no dissentient opinion was to be heard. Lupus had been cured in a week, even in five days; consequently its speedy extinction, or at any rate relegation to the list of mild affections, was merely a question of time, and a very brief time too. Consumption was also to fall before the unsparing arm of modern science, and the system which mastered it would deal equally well with tuberculosis of the joints.

Although I have read a good many reports and communications to the medical journals about injecting, I have only come upon one case which could be considered a history of a cure of lupus, that brought by Dr. Abraham, before the West London Medico-Chirurgical Society; how many hundreds of failures there have been we shall never know. Thirty patients were treated at St. John's Hospital in this way by Dr. Dockrell with all imaginable care, and in the presence of a number of medical men; they were kept under observation for months, and their subsequent histories, with one exception, systematically traced. All improved, but twenty-seven relapsed, two did not relapse, and one, the exception just mentioned, could not be followed up. It is not easy to see how a remedy could have been more impartially tried, or how failure could have been more complete; not one of those, I believe, who watched the experiment coming to any other conclusion.

From the eagerness with which tubercular injecting was at once elevated to the rank of supreme agent of cure, I presume it is generally believed that an agent of this kind outweighs in power constitutional and dietetic treatment aided by local means. It will need more success on its side than yet has been achieved with any purely topical remedy to supersede, in the judgment at least of unprejudiced persons, a comprehensive system of internal means to which topical measures are strictly subordinated. Such a method may be reproached with slowness of operation, it does not promise such speedy and brilliant results as the knife and sharp spoon; but properly and persistently carried out, it never, I believe, fails to improve the patient's health, almost always arrests the progress of the disease, and fairly often effects a cure, which at any rate lasts for years, if not for life. I say this quite advisedly. I have repeatedly shown the medical men, following the practice in my department at St. John's Hospital,

cases of lupus of all kinds in all stages of cure, not one of which had been subjected to any torturing application or any operation, only the mildest local means having been employed. I have not seen an instance where a patient, supposed to be cured by these means, had relapsed, and I have had several opportunities of learning that patients, discharged a considerable time before, had had no return. But there may have been even numerous relapses, and I limit myself expressly to saying that I have not heard of any.

Then, inasmuch as the advocates of scraping, cutting, and gouging out lupus patches and ulcers cannot but admit that the mild topical means just mentioned could by no possibility have destroyed the bacillus, the cure must, on their own showing, have been effected by the constitutional treatment alone; so that this is sometimes at any rate adequate to the task if we could only direct its powers aright. Farther, I suppose it will be conceded that the local measures named in the opening of this paragraph are at least painful, disfiguring, disabling, and not unfrequently useless; the disease returning just the same after what, in the report of the case, looks like a cure. If the gentlemen who recommended such operative proceedings do not admit the frequency of failure and relapse under their hands, then those who have seen a good deal of the disease will admit it for them. Leaving on one side a whole host of cases, I may mention that one girl, who entered at St. John's Hospital, had been scraped eight times, the lupus after the last of these operations being as bad as ever; indeed, a gentleman of large experience in these cases said, in my hearing, that of all the bad forms of treatment, scraping was the worst. I cannot quite agree with him, being of opinion that cutting is just as useless, rather more painful, and equally mischievous. Among other instances the two following may be cited. Not long ago a girl was attending at the hospital who had been cut five times for lupus of the face without the destructive progress of the disease being in the least staid, while the patient is disfigured for life; a lady came over from New Zealand to be treated for lupus on the back of the left hand, which was badly scarred both lengthwise and crosswise, the result of two successive operations, in the course of which the hand had been laid completely open, without the least good being done in the way of cure or even arrest.

I never could understand what the advocates of purely local treatment propose to do with the symptoms of general ill-health so often seen accompanying this complaint, notably loss of strength, wasting, indigestion, constipation, and headache; whether they have satisfied themselves that the removal of the local affection will be followed by the spontaneous disappearance of all such complications, or that trifling matters of

this kind are below the notice of science, are points respecting which the works I have consulted are silent; while in conversation I have only received in reply to my questions answers which did not allow of any satisfactory conclusion being drawn from them. Having never seen an instance of lupus cured by purely topical means, I speak, as concerns personal observation, in total ignorance of what the effects of such a cure may be on the general health; but I have seen plenty of cases where pretty well every form of outward treatment yet recommended had been tried without benefit to the disease, and where, when any effect had been produced on the system, it was decidedly of an injurious nature.

If medical men have been disheartened by their want of success in the internal and dietary treatment of lupus, they have in some measure, and especially in respect to the latter, only themselves to thank. For years and years they have, with one or two exceptions, gone on ordering tonics and highly-nourishing food in this complaint, seeing the patients get persistently worse, and yet never stopping to try whether benefit might not result from some form of change; repeating, one generation after another, the announcement that this affection is due to weakness and therefore demands the remedies suited to this state; and lastly, also one generation after another, winding up all treatment by sending the patient to a milder air, to some watering-place, or to the seaside, all three about of as much service as they would be in a case of cancer.

I may have been mistaken, may have gone too far in making such a sweeping statement as that in the foregoing paragraph, but till I am refuted I shall continue to believe that it is strictly in order, and that with the exception of Lugol's researches, which, though bearing chiefly on struma, cannot, looking to the views of French pathologists, be lost sight of here, and, indeed, two of the cases quoted in his famous treatise were cases of lupus—those of Dr. Piffard, of Dr. W. Frazer, with barium in perforating lupus, and of Morgan and Eames, with phosphorus—there does not exist evidence of any serious attempt to investigate the action of internal remedies in this disease. Compared with the apathetic routine of prevailing systems, Lugol's observations stand out in strong contrast; they were truthfully and laboriously carried out, and if he did not effect all the good he aimed at, his want of success was due to the inadequate powers of his great remedy, not to any want of ability on his part. Nor have the labours of the others yielded, so far as I can learn, much better fruit, Dr. Frazer's being the one solitary success achieved in this direction.

Several years ago I proposed to divide the internal means recommended in books for lupus, into three classes,—those possessing some control

over the disease, those of doubtful value, and those of no value at all. The first class comprising arsenic, calomel, saline aperients, and, in lupus of the limbs, iodide of potassium; the second, all the salts of antimony except the tartrate of soda, borax, mercury, iodine and potash, except those just mentioned; all combinations of these, such as iodide of mercury and Donovan's solution, cod-liver oil as ordinarily given, phosphorus, phosphates, every kind of chemical food, all mineral waters, and all vegetable preparations; to the third category were relegated steel, quinine, all mineral acids, bitters, sedatives, alteratives, and sudorifics. I have seen no particular reason to depart from the judgment then passed, and must contend that what I advanced is thoroughly borne out by facts. I distinctly assert that, while I never saw lupus in any way benefited by any of the rejected remedies, and especially not by bark and its alkaloids, steel and bitters, I have several times observed rapid and intractable exacerbation from the use of these things. Steel was particularly mischievous and always a failure; some of the patients had taken it for years without the least good being done, and I myself tried five different preparations of it with no better success. Lupus is not so rare but that there ought to be plenty of cures by tonics to bring forward, but to the best of my knowledge, no such evidence of their power exists. Mr. Hutchinson, an advocate of tonic treatment, honestly says the cures are few, but I should like to know where even these few are to be found recorded.

The reader will have gathered from the foregoing that the medicines to be introduced to his notice as curative in lupus are saline and mercurial purgatives and arsenic; these indeed, with occasional resort to tartrate of antimony, have alone proved useful in my practice. The saline I have generally employed, and of which I make the most unsparing use, is composed of four parts of the sulphate of magnesia to one of carbonate, and half to two thirds of a part of nitrate of potash, dissolved in a small quantity of water, which, with the view of averting griping, should be strongly aromatic, nothing for this purpose answering, perhaps, better than peppermint made from the English herb. When the flavor of this is objected to, as is sometimes the case, cinnamon or dill may be substituted, but they are inferior to the mint. A small quantity of this mixture, generally about a tablespoonful for a grown person, is given directly the patient wakes, or at any rate a good while before breakfast, and immediately after the dose a quarter of a tumbler of hot water or a cup of hot weak tea is drunk. This arrangement ought to secure a copious stool directly after breakfast and no more. If it operate beyond this, the dose is to be cut down, while it may be in-

creased to double in order to secure the needful degree of action. I have known people unable to bear more than teaspoonful, and sometimes a patient particularly strong-looking has reported little effect from two tablespoonfuls, and required such a dose to be supplemented by a pill. This medicine is given everyday month after month. If at any time the patient should get tired of it, the surgeon can suspend it for a short period, but the sooner it is resumed the better. Most persons, however, so thoroughly realize that some relief is derived from continuing the remedy, that their great wish, or at any rate the wish they most frequently express, is to be allowed to keep up the use of it.

Occasionally, and especially during mild weather, a mercurial purgative is given, generally twice a week and at bed-time. For this purpose I have found nothing equal to calomel. I can offer no explanation as to the way in which it operates; I only know that it acts curatively, and in lupus attacking the nose often materially promotes the patient's comfort. These patients often suffer rather severely from a sense of distention of the affected part when stooping, feeling, they say, as if all the blood in the head were rushing into the organ. This a smart dose of calomel often does away with,—sometimes, according to the statement of the patient, the very first taken. For adults the calomel is prescribed in the shape of a pill, combined with opiate confection in order to obviate griping; for the younger it is mixed with twice its weight of grey powder. The quantity given is just what will procure two or three loose stools, and during mild close weather, such an amount twice a week is well borne; with the return of cold raw east winds, it is sometimes not so well supported, and must therefore be employed in a much more restricted fashion for the time being, particularly if the patient's occupation involve much exposure to the air. But it should be resumed so soon as ever circumstances permit, and the reader is to understand that when the mercury is given it is to be given as a purgative, and that when the amount of action just mentioned is not attained to by the calomel, it must be effected by a supplementary dose of black draught, containing, however, not more than a fourth of the usual proportion of sulphate of magnesia, taken early next morning.—J. M. Milton, M.D., in *Edin. Med. Jour.*

(To be continued.)

#### MEDICAL NOTES.

Prof. Hare thinks *Croton Chloral* is infinitely preferable to chloral in sleeplessness due to pain.

Prof. Keen says that a dose of *Digitalis* administered before an operation will often avert a shock.

Prof. Hare says *Croton Oil* should never be employed as a purgative except in cases of extreme necessity.

In cases of severe *Chordee* Prof. Keen states that if leeches are applied they will prove effective in reducing it.

In cases of *Sore Relaxed Throats*, Prof. Hare recommends a gargle consisting of the sulphate of copper in the strength of four grains to the ounce of water as very serviceable at times.

In cases of *Empyema*, in which the attack is recent and of a moderate type, and a sample of the fluid withdrawn from the chest is but slightly opaque, Prof. Graham strongly advocates a medicinal plan of treatment without surgical interference.

Prof. Hare advises the placing of from one-half to one ounce of a one-thousand solution of bichloride of mercury in the spit-cup of *Consumptives*, in order to destroy the bacilli and thereby render the attendants less liable to infection.—*Coll. and Clin. Rec.*

#### A METHOD OF TREATING COMPOUND FRACTURES

The present paper deals with a method for treating compound fractures and with the results of that treatment as illustrated by the cases admitted into the author's wards at the London hospital during the last six years. The method aims at being simple, and in the following account it may be considered as applied to the commonest of compound fractures, viz., those of the leg: On admission, the limb is covered with lint soaked in carbolic lotion and is subsequently cleaned with the greatest care; protruding bone is replaced, loose or damaged bone is removed, and the broken ends are adjusted by means of splints with as little delay as possible.

1. Ordinary well-padded wooden splints are employed, but under no circumstances is the limb secured to the splint by means of strapping. Strapping may be used to form a stirrup whereby extension may be applied in the fractures of the femur or humerus, but no form of plaster appears to be other than objectionable when the question of fixing the limb is concerned. If the strapping be adjusted with sufficient firmness, it will often be found that within twenty-four hours the limb has swollen and the strips of plaster are cutting into the soft parts and are impeding the circulation. The strapping then has to be cut or reapplied, and a second adjustment of the limb is rendered necessary. On the other hand, in process of time, the band of strapping is found to have come loose from shrinking of the limb, and a further readjustment of the fractured parts is called for. In the place of plaster, straps of fine webbing and buckles are made use of to secure the

limb to the splint. These vary in length, and are applicable to all parts. If found to be too tight or too loose they can be altered as often as necessary in the day without the least disturbance of the limb. In this way the limb can be secured with a proper degree of firmness. Where the webbing crosses the shin or the dorsum of the foot a small shield made of gutta-percha, and lined with lint, is interposed. When side splints are employed these also are held in place by straps and buckles. No bandages are ever applied. They are quite unnecessary. They cannot be readily tightened or loosened, and they cover up to an undesirable extent the damaged parts.

2. In the second place the limb is kept throughout in the open air. This would happen by necessity, more or less, in the case of the upper limb, but it is insisted upon also in all fractures of the lower limb in which there is a wound. If the principles of aseptic surgery be well founded, a worse atmosphere with which to surround a wound could scarcely be found than that which exists under the bedclothes. This atmosphere is confined, is hot and moist, and when flatus is passed or the bed-pan is used must of necessity become especially offensive. In all compound fractures of the leg or thigh the limb is kept throughout entirely uncovered as well by night as by day and in the winter as in the summer. In cold weather the nurse makes a cotton wool cap for the foot, but during the six years in which this rule of uncovering the limb has been observed there have been no complaints of chill or evils arising from exposure. It might be mentioned that in the author's wards in all cases of wound of the lower limb, including amputation wounds, and in all cases of ulcer, the part is kept throughout the whole period of treatment uncovered save by the necessary dressings, and since this plan has been adopted the results have been infinitely improved.

3. The third element in the treatment concerns the care of the wound. In cases of compound fracture there is usually a not inconsiderable amount of bleeding and oozing from the wound which will often be continued for many days. It is very desirable that this fluid should not be pent up in the limb, and that it should be allowed the freest possible means of escape. The plan of sealing the wound with collodion may be spoken of in general terms as bad. It can in no way control the oozing, which may long continue from the damaged parts, and merely confines within the recesses of the limb a fluid which is admirably adapted for the development of bacteria.

While a free exit should be given for all discharges of blood and serum such a barrier must, at the same time, be erected as will prevent the entrance of pus-producing bacteria. A dressing of antiseptic gauze wool may possibly meet these conditions, but in a large proportion of cases such a

dressing needs to be very frequently changed, and such a change cannot always be effected without disturbing the position of the broken bones and putting the patient to no little inconvenience.

In the present collection of cases the wounds have been simply covered with a heap of dry antiseptic powder, which has been applied without stint. This covering of powder may be considered to seal the wound so far as the possible entrance of bacteria is concerned, while at the same time it in no way impedes the free escape of blood and serum from the damaged parts.

The discharge find its way into the protecting powder forms with it a harmless scab or crust. As the powder becomes saturated, more and more of it is applied, but the crust produced is not disturbed. In certain cases the oozing continues for many days, and in one or two instances the crust produced has exceeded the size of the adult fist. The powder employed has been iodoform or creolin. The latter has been found to be the more convenient. For the first few days the powder may need to be dusted on every few hours, and as the limb is kept always uncovered the saturation of the crust can be at once noticed. When no more blood is found to be escaping the powder is discontinued, and some seven days after this period the artificial scab is removed and the wound beneath may be expected to be healed or to be healing.

When the laceration occurs upon the upper surface of the limb there is no difficulty in covering it with powder. When it is placed upon the sides of the extremity a platform of cotton wool must be so fixed in place that the powder when dusted upon it will bury the wound. The cotton wool may be kept in position by fixing it against the side splints, or by attaching it to the skin by gum.

The following advantages may be claimed for this method. It is simple and requires but the simplest appliances. The fracture when once adjusted need not be again disturbed. The damaged part is kept exposed to view, and the position of the ends of the bone can be ascertained at any moment.—Frederick Treves, F.R.C.S., in *Annals of Surgery*

THE PATHOLOGY OF NERVOUS DISEASE.—In an interesting and instructive paper on this subject Dr. Charles W. Dane (*Boston Med. and Surg. Jour.*) concludes as follows: I would sum up the points which I have tried to bring out and emphasize in the preceding remarks somewhat as follows:

(1) The term inflammation, as now understood, has to be applied more carefully and with restrictions to nervous diseases. Many forms or cases, for example, of meningitis and myelitis are in reality toxæmias or processes secondary to mechanical injury. There cannot be an inflammation without a specific cause, and we should associate this

fact with our conception and our diagnosis of the inflammatory processes.

(2) In the organic neuroses of degenerative type there is a toxine of extrinsic or intrinsic origin, which is negatively chemotactic. The body cells and proteids cannot defend the special parenchyma, against it. The degenerations, including muscular atrophies and primary scleroses, are of toxic origin. There is a poison at work which it should be the effort of neurological science to find out how to antagonize and combat.

(3) In the chronic neuroses of functional origin, so-called, such as paralysis agitans, chorea, epilepsy, and Basedow's disease, there is a toxic factor which is of fundamental importance. This may be due to defective gland action as in Basedow's disease and in myxœdema or to humoral poisons of other origin. Many neuroses are really glandular or nutritive or infection diseases.

(4) There is another element of equal importance in the etiology of the neuroses, and that is an inborn or an acquired lack of resistance to injurious agencies, whether engendered within or introduced from without. This diminished power of resistance on the part of nerve-centres is produced in some cases by strong emotions and shocks; and while under this depressing influence, the nerve-centers become susceptible to the action of the poisons which then continue and keep up the disease. In some such way as this we may explain the origin of paralysis agitans, certain forms of neurasthenia, and exophthalmic goitre, perhaps, also, even of the organic neuroses like locomotor ataxia. These views lead to the practical conclusion, that in treating many of the chronic neuroses there are two kinds of measures to be employed: first, those which increase strength and resisting powers of the organism; second, those which are of antitoxic or specific character. There are, in all probability, specific cures for many of the diseases which we now regard as hopeless; remedies which will stop the progress of locomotor ataxia and progressive muscular atrophy, and which will neutralize the poisons that keep up exophthalmic goitre, paralysis agitans, epilepsy and other neuroses.

(5) The toxic origin of nervous diseases has been established in the case of myxœdema and made probable in that of exophthalmic goitre, paralysis agitans and chorea; and the importance, at least of a toxic element has been shown for epilepsy.

(6) Finally, by the term toxine or poison is meant a very wide range of injurious substances, including the products of defective metabolism, defective gland action, microbic growth, and the extrinsic vegetable and mineral poisons.

THE OFFSPRING OF MULATTOES.—Observations extending over a period of over thirty years con-

cerning the morbid proclivities of mulattoes are embodied in a paper by Dr. W. A. Dixon, in the *Med. News*. Living close to the boundary separating the old slave States from free States, the author has had peculiar facilities for studying his subject at length. Fifty years ago and more, it was the custom of wealthy planters, as they advanced toward age, to liberate such portions of their "estate" as bore to them a filial relationship, and establish these in homes in localities where good treatment, consideration and respect due to citizens could be secured. Thus in Southern Ohio there grew up a community of mulattoes, the offspring of white men of wealth and position, who themselves represented the best New England stock. The pure mulattoes were tall, muscular, well-developed, complete types of physical perfection, many living to old age, sometimes to one hundred years. Proud of their parentage and light skin, they took for wives women who were also half white. Prosperity and pride held them aloof from the negroes. Their children intermarried, and their race continued until the fourth generation, when these families gradually became extinct. The offspring of the first cross were robust, those of the second paler, more ash-like in complexion, slight in figure, evincing predisposition to, and characteristic of, tubercular disease; while in the second and third generations of pure mulatto intermixture all the children were girls, and notably sterile. The fourth generation proved even less fertile, and presented cutaneous affections, ophthalmia, rachitis, hydrocephalus, hip and knee-joint disease, and various glandular abnormalities. These facts would seem to prove the affirmation of ethnologists, that human hybridity can not be maintained without reversion or fresh supply from parent blood. Such a type can only have an ephemeral existence. In the second and third generations of pure mulatto blood the offspring were inferior in vitality and intelligence, and consequent morality. Their churches, independent school-houses, their very names, in time, disappeared. Some form of tuberculosis gradually undermined and extinguished them. The statement is made that when purity of race is maintained in civilized or barbarous countries, there is but little or no tuberculosis. And the dismal suggestion of ethnologists, cited by Broca, is given in full, to make us shudder and pause, according to temperament, to wit, "that the United States, where the Anglo-Saxon race is still predominant, but which is over-run by immigrants of various other races, is by that very circumstance threatened with decay, inasmuch as their continuous immigration may have the effect of producing a hybrid race containing the germ of disease, degeneration and future sterility." The writer of the paper forcibly remarks that it is wise as well as necessary to look beyond the bacillus for causes

resulting in tuberculosis, crime, idiocy and insanity. Purity of race is one safeguard against constitutional inferiority that brings with it lessened mental and moral vigor.

**IRRIGATION OF BLADDER.**—In preparing for irrigation of the bladder, the first step is to scald out a small pitcher. In this the antiseptic powder is dissolved in a few ounces of boiling water. While waiting for perfect solution, a pint and a half of boiling water should be poured into the fountain syringe and allowed to remain until the syringe is needed. The catheter, which has been kept in a bottle of 1:1000 bichloride solution, is removed to a small basin containing boiling water. The antiseptic solution can now be reduced in temperature by the addition of cool, sterilized water taken from the cotton-plugged bottle already mentioned. The prepared solution is now poured into the fountain syringe, all air is expelled, and the cut-off screwed down. Meanwhile, the nurse has cleansed the external genitals of the patient with a 1:2000 bichloride solution. There remains only to pass the catheter and connect it with the tube of the syringe. Taking the catheter from the hot water with fingers disinfected in an antiseptic solution, bichloride glycerin is poured over two inches of the end as a lubricant, and the instrument, in a good light, is passed instantly into the bladder.

If the bladder is full, considerable urine must be allowed to escape to make room for the antiseptic solution. If there is little urine, there is danger in allowing it all to run out and permitting germ-laden air to be introduced through the catheter. The only convenient means of expelling the air from the catheter, when this instrument is first introduced into the bladder, is to allow a small stream of urine to pass outward through it. Before the catheter is connected with the syringe tube, all air must likewise have been expelled from the latter by allowing a column of the antiseptic solution to pass through. At first a gentle stream is turned on. The force is governed by the elevation of the reservoir and by the screw cut-off. The importance of injecting slowly can not be too strongly emphasized.

When the patient begins to feel a sense of slight distention the tube and catheter are disconnected. While the operator cuts off the stream from the syringe with his right fingers, with his left he guides the stream from the catheter into a quart bowl placed between the patient's legs. The operation of siphoning must not be carried to the extent of absolutely emptying the bladder. A little fluid should be left in to prevent the admission of air and to keep the bladder-walls from collapsing and causing spasm. It is best to leave at least an ounce of the antiseptic solution in the bladder after the last siphoning.—*Med. Brief.*

**GASTRIC CRISES IN FLOATING KIDNEY.**—The gastric crises which sometimes occur in cases of floating kidney were recently discussed at a French medical society. Dr. Mathieu had observed patients in whom there had been severe attacks of vomiting some ten or twelve times a day for a fortnight or even more. There was a strong resemblance to some of the gastric crises of locomotor ataxia. There was severe abdominal pain. In a few cases there was enough gastric dilatation to suggest constriction of the pylorus. It was very possible that the symptoms resulted from a temporary displacement of the kidney and more or less torsion of its pedicle. The best treatment for floating kidney he had found to be rest and the abdominal bandage, with a large and soft pad over the kidney. At the time of the lighter gastric crises he had used chloroform, cannabis indica, and a milk diet, with some success, but for the more severe cases he had not found relief by drugs. Of surgical attempts to fix the kidney he believed there had been twenty-six successes and eleven failures. Dr. Legendre agreed that the displaced kidney probably pressed sometimes upon the pylorus and by that means excited the vomiting, but he did not think the vomiting could always be stopped by getting the kidney into its right position again. Dr. Guyot had observed for forty years cases of floating kidney, but had not found gastric dilatation or fits of vomiting. Dr. Rendu gave an account of the case of a lady in whom there had been many gastric crises. At first they were considered to be due to a pre-ataxic condition; later, when they were accompanied by jaundice, to gall-stones; and finally, when the jaundice, no longer recurred, to floating kidney. A surgical operation to fix the kidney was contemplated, but before it was performed the crises ceased completely, and the problem of the origin of the symptoms remained unsolved.—*Le Progrès Médical*.

**CERTAIN ASPECTS OF GONORRHOEA IN WOMEN.**—Dr. Noble (*Amer. Jour. of Obs.*) says an interesting phase of gonorrhœa in women is the invasion of the womb, Fallopian tubes, ovaries and peritoneum. In the urethra, the vulvo-vaginal glands, the vagina, the uterus and the Fallopian tubes, the general facts are the same—the disease has little, if any, tendency to undergo a spontaneous cure. The rule is that a chronic catarrhal condition succeeds the acute inflammation—if the disease has not been chronic or “creeping” from the beginning—and that in some fold of membrane, crypt or follicle, enough of the specific poison remains to set up acute inflammation anew. The known chronicity of the disease, and its rebelliousness to treatment in accessible regions, offer but little encouragement to expect a perfect cure in an inaccessible tube from which drainage is difficult, if not impossible. Personally, he knew

of no case in which a gonorrhœal salpingitis had been perfectly cured. He believes that the rule of practice should be to remove all such uterine appendages when the health of the patient is compromised by their presence. There is reason to believe that gonorrhœal salpingitis invariably produces occlusion of the tube, except in those cases where the infection spreads quickly to the peritoneum and induces rapidly fatal peritonitis. In respect to the question as to removing both uterine appendages when only one is infected with gonorrhœa, he mentions the fact that when one uterine appendage has been removed for inflammation the disease is likely to attack the other tube subsequently. Therefore, in operating upon women the mothers of families, and who are approaching the menopause, it is certainly wise surgery to remove both uterine appendages, even though one is healthy. In young women desirous of bearing children, where only one tube is infected, it should be left to them to elect whether one or both tubes should be removed, as they alone must suffer the consequences of success or failure. Probably the percentage in which extension to the healthy side will occur can be materially reduced by appropriate treatment.—*Sheffield Med. Jour.*

**TYING THE PATELLA FOR FRACTURE.**—Twyman (*Brit. Med. Jour.*), says of the various methods of dealing with fractured patella, the simplest, and the one that most nearly fulfils the requirement laid down by Barker, is one the results of which have not been made known. A large perineum needle is used, fixed to the handle at right angle. The point is entered through a small incision on the outer side of the upper fragment and passed around it, keeping as close to the bone as possible. The quadriceps tendon is traversed from side to side, and the point of the needle brought out on the inner side of the joint. It is now threaded with stout silver wire and withdrawn. The lower fragment is then dealt with similarly, the ligamentum patellæ being transfixated from side to side. The needle is then threaded with the other end of the silver wire and withdrawn, thus surrounding the bone. The fragments are then pressed together and the wire drawn tight, twisted off and the end hammered to the outer side of the upper fragment. The leg is placed on a “back” splint and slung at an angle of 60 degrees. The patient may be allowed to go about in from nine days to two weeks. Three cases are reported, in two of which bony union took place. The ordinary perineum needle is a little short, and as the point is passing around, the last quarter of bone tends to spring away from it. The author’s needle comes down straight for three-quarters of an inch at that part where the needle proper joins the handle at right angles. The needle must be entered opposite the widest part of the patella in



order to keep close to the bone. The wire must be nearly pure silver, and stout. The needle must be carried deep enough into the patellar ligament and quadriceps tendon, and also keep clear of the deeper skin layers, which is very difficult with the ordinary needle. Care must be taken that the wire does not kink on the inner side when it is being drawn tight. This is best prevented by crossing the ends and seizing them with two pair of forceps, drawing evenly with both hands, while the fragments are pressed together by an assistant. The incision through the skin should be made in the length of the limb, as it facilitates the hammering down the knot. The wire does not enter the joint, hence there is very little danger of suppuration. The operation takes but a few minutes, and the knot is so placed that it cannot be knelt upon. A joint distended with blood must be aspirated.—*Univ. Med. Mag.*

**THE CAUSE OF DEATH AFTER BURNS.**—Salvioli (*Centralblatt für Chirurgie*), says that the cause of death after burns is due largely to the involvement of the blood vessels in the different organs. According to Bizzozero, the great increase of blood plates in the normal circulation is essentially the result of burns. When the mesenterium of mammals is examined microscopically, and then heated to a temperature of from 50 to 55 C., it is noticed that the flow of blood becomes quickened, and that the blood plates collect along the walls of the vessels and cause the formation of white thrombi. These, in turn, are torn loose by the blood stream, and as a result we have an enormous number of emboli. In certain cases, and especially when considerable heat has been applied, the blood does not circulate. This condition of stasis is partly due to thrombotic and embolic conditions, which stop up the arteries; partly to contraction of the arteries; and, lastly, to a change in the red blood corpuscles, which become sticky and hang together and thus hinder the blood flow. After death, numerous emboli are found in the lung parenchyma and many blood-plate thrombi in the vessels. To prove that these results are due to the increase in number of the blood plates, we have only to defibrinate the blood, and the application of heat will produce but little effect. In performing this experiment it is necessary to remove a large quantity of blood defibrinate by whipping, filter, and again inject into the animal. This should be repeated ten times in two hours. Through this process the blood loses its power of coagulation, and is poor in blood plates. Before this procedure, one plate to thirty-five corpuscles was counted; after it, one in two hundred and seventy.—*Univ. Med. Mag.*

**INDICATIONS FOR THE USE OF CIMICIFUGA.**—According to Dr. Reed, ten to thirty drops of the

fluid extract after meals are used to cure seminal emissions. This has rarely failed in his experience. Half a grain to a grain of the resinoid cimicifugin, twice a day, has occasionally been found useful in conditions of nervous depression, hysteria, and incipient melancholia. Five to twenty drops of the tincture, several times a day, have proved very helpful in scanty menses, especially in maiden ladies; but if repeated, as often as every three hours even, are likely to cause severe headache. This untoward effect he has never seen from the largest doses, such as half a drachm or a drachm of the fluid extract three times a day. Very small doses, as one quarter of a drop up to one drop of the ordinary tincture, repeated every one or two hours, will often promptly relieve a frontal headache due to mental fatigue, or any kind of a headache resulting from pelvic congestion at the menstrual period in women. The same doses are often efficient in preventing abortion when threatened from weakness or passive congestion of the uterus, or from habit at a certain stage of pregnancy. Two or three drops of the tinctures of cimicifuga and gelsemium—sometimes one drop of each—every hour or two, are among the most certain means of bringing on the menstrual flow when delayed by passive congestion, cold, or other similar cause, and acts similarly with the lochial discharge after parturition. Dragging pelvic pains arising from the same causes may be relieved by the same combination.—*American Therapeutist.*

**THE SIGNIFICANCE OF VAGINAL DISCHARGES.**—A leucorrhœa inodorous or of mild odor persisting during the climacteric, accompanied by increasing hæmorrhage, is suspicious, and demands investigation. A leucorrhœa profuse, of peculiarly fœtid odor, grumous, excoriating, appearing early or late during the climacteric, with profuse hæmorrhage, is reasonable evidence of cancer of the cervix. A leucorrhœa moderate in amount, ill-smelling (the peculiarly fœtid odor of cancer of the cervix being absent), accompanied by hæmorrhage, suggests cancer of the corpus uteri. A leucorrhœal discharge with hæmorrhage containing material like the washings of meat, is said to indicate sarcoma. A watery discharge, as a rule, occurring during menstruation, odorless, or of little odor, persisting, accompanied by profuse hæmorrhage, indicates fibroids; with little or no hæmorrhage, polypi. Profuse bloody discharges coming on gradually with declining menstruation, ceasing usually with the menstrual flow, point to fibroids. Persistent profuse discharges of blood occurring spontaneously, arising from sudden exercise or coition, occurring, as a rule, after the menopause, indicate cancer. A gradually increasing amount of menstrual flow is suspicious and needs investigating. "Post-climacteric hæmorrhages in a fibroma of the uterus of long standing, form one of the principal



grounds for the suspicion of sarcoma." (Borner.) The early recognition of malignant disease is demanded and possible prevention of the fatal exhaustion which accompanies it by the administration of drugs, and the application of those methods which, in a measure, may be supposed to offset the terrific drain on the nervous system; inasmuch as present experience shows that early removal of diseased tissue prolongs life, and the importance of early diagnosis and treatment can hardly be over-estimated.—*N. E. Med. Gazette.*

A CASE OF MYXEDEMA THAT TERMINATED FATALLY IN THE COURSE OF THYROID TREATMENT.—Thomson (*Edinburgh Medical Journal*,) has reported the case of an unmarried woman, fifty-one years old, who for ten years had presented well-marked, but not very severe, symptoms of myxedema. For five years the woman had been living a quiet life and the disease had progressed but slowly. For many months she was greatly relieved by taking thirty minims of tincture of pilocarpus three times a day. In this way her skin was kept comfortably moist, but the dryness of the skin ceasing to cause any annoyance the medicine was omitted; so that for some years the woman had had no special treatment for the myxedema. Dyspeptic symptoms, with constipation and hæmorrhoids, with chilliness and a distressing feeling of weakness and disinclination for exertion, persisted. On one occasion the woman had been seized with severe pain in the precardium, extending down the left arm. This recurred from time to time in varying intensity. Treatment with the thyroid gland of the sheep was instituted, at first a quarter of a gland and soon a half of a gland being given, twice a week. Nitro-glycerin (m j. of a l per cent. solution) was also administered for the relief of the paroxysmal pain. Notable improvement in the woman's condition took place, but upon attempting to sit up in bed on one occasion she suddenly fainted and died. At the *post mortem* examination the cerebral arteries were found to be atheromatous. The pituitary body was enlarged and firm and its fossa deep. The thyroid gland was flabby and of diminished volume. The thymus was wanting. The heart was in a condition of advanced degeneration. It is pointed out that while the state of the heart-muscle was sufficient to account for the fatal syncope, the treatment may possibly have had some influence in hastening the fatal issue.—*Med. News.*

THE ETIOLOGY OF GOITRE AND CRETINISM in the Pyrenees has been made the object of special researches by Dr. Chopinet. He arrives at the following conclusions:

1. Goitre and cretinism are symptoms of one and the same disease and are observed almost exclusively in the bottom of valleys and near rivers.

2. The intensity of this endemic trouble increases from the source of a river down to where it leaves the outskirts of the mountainous region. It is most marked in the widest part of the valleys.

3. The disease is decreasing at present in the whole district. From some places that used to be affected it has disappeared altogether. This change cannot be attributed to a change in the chemical condition of the drinking water, but is due to the improved hygienic conditions and to the general progress of the population.

4. It cannot be denied that one of the constituents of the soil, viz., the schistic lias, has some injurious influence.

5. Amongst the numerous causes of goitre and cretinism, humidity and uncleanness of the houses, defective of aëration, want of light and poor nutrition are prominent.

6. In the district studied by Chopinet this theory of the multiple causation of the disease is the only one that is not contradicted by the facts.—*Rev. Interna. Bibliog.*

THE END OF HOMŒOPATHY.—In a paper read before the Philadelphia County Medical Society, Dr. John B. Roberts, with entire sincerity of spirit, indicated numerous points of resemblance between so-called homœopaths and regular practitioners, and points out that the treatment pursued by both is practically the same. If the position that Dr. Roberts takes is the correct one (note well, however, the qualifying *if*), there is no true homœopathy, and those who have designated themselves homœopaths will do themselves credit and increase their usefulness by absolving themselves of all sectarian designation. Under such circumstances we believe that we could bring ourselves to forgive them their little and fading delusion of *similia similibus curantur*.—*Med. News.*

CASCARA SAGRADA AS AN ANTHELMINTIC.—Dr. J. Stephen regards cascara sagrada as an effective remedy for tape-worm. He used the following formula:

R.—Fl. ext. cascara sagrada, . . . ʒ vj.

Syrup of orange peel, . . . ʒ iiss.—M.

Sig.—Three teaspoonfuls daily; for children half this dose.

By means of this remedy he claims to have expelled, in several cases, the tape-worm.—*Lancet Clinic.*

CYSTITIS IN WOMEN (*Jour. de Med. de Paris*).—

R.—Pot. Citrat. . . . . ʒ ss.

Ext. Trit. repentis, fl.

Tinct. Belladonnæ, . . . . āā ʒj.

Ext. buchu, fl. . . . . ʒ js.

Aq. . . . . āā ʒ jv.

Sig.—ʒ j. in a wineglassful of water three times a day.

# THE CANADA LANCET.

A Monthly Journal of Medical and Surgical  
Science, Criticism and News.

*Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address, DR. J. L. DAVISON, 12 Charles St., Toronto.*

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The LANCET has the Largest Circulation of any  
Medical Journal in Canada.

## BANNF HOT SPRINGS

At the present time, when the tide of summer travel has set in, and each train is loaded with passengers seeking health or recreation in various parts of the country, at the seaside or in the cool depths of the forest, we consider it our duty to draw the attention of those invalids or tourists who wish to unite recreation of the most valuable kind with a sojourn at the most valuable "Hot Springs" in America, to Bannf Springs, situated in the heart of the Rocky Mountains. It is frequently the case that people will travel extensively in foreign lands in search of health or strength, enduring all the discomforts incidental to such journeys, which seriously make against them, especially in the case of ladies, or aged persons, when much nearer home they could enjoy themselves much better at a less cost, which is no little consideration, and with every comfort that modern civilization can command.

While Bannf may be considered as being a very long distance from Ontario, it is only relatively the truth, for owing to the speed and safety of the trains of the Canadian Pacific Railway, it is only a three days' rest in a luxurious coach, with every faculty brightened by the rapidly flitting panorama of pine forest, and lake in Ontario, flower spangled prairie in Manitoba, Assinibouia and Alberta, and to cap the climax, the sight of the grandest mountain chain probably in the world, "The Rockies," raising to the highest point, the spirits of even the most confirmed invalid.

The great value of Bannf, apart from its scenic beauty, consists in its thermal, alkaline and sulphur springs, and great altitude above the sea level.

The tourists or invalids will find that they have the choice of several excellent hotels, of which the palatial structure of the Canadian Pacific Railway is the best.

In appearance it is like a large Swiss ch alet, very nicely situated in a valley between two immense mountain ridges, 4,000 feet above the sea level.

The accommodation is the very best, every bedroom being lighted by electricity, while the weary pilgrim taking his first wash will find that the management have placed nothing commoner than "good washing soap" at his disposal.

The table is excellent, every delicacy of the season being served in a maner equally pleasing to the palate of the epicure, and the fastidious stomach of the chronic invalid, and all this, remember, at a most moderate price.

Thoroughly resting after the fatigue of the journey, one may gratify his or her inclination as the case may be, in various ways. For the sportsman there is excellent fishing, shooting and boating in the neighborhood. The mountain climber will find trustworthy guides to show him the paths leading to the summit of any of the giant peaks which tower in all directions. The invalid may bathe his stiffened joints in the healing thermal waters which are brought to the hotel by means of pipes, fresh from its source in the bowels of the earth, laden with medicinal virtues. And for those fond of pedestrian exercise, there are pleasant shady walks innumerable, where one may saunter, inhaling health and strength with every breath of the healing ozone-laden air, rich with the balsamic odor of fragrant pine forests.

Owing to the elevation of the situation, the rarity of the atmosphere causes a greater expansion of the air cells of the lungs, increasing the vital capacity of the chest, as well as the force of the heart's action, the effect being tonic and stimulating in the extreme, especially valuable where there exists any tendency, hereditary or acquired, to chronic pulmonary disease. Among "the ills to which flesh is heir to," particularly to be benefited by a sojourn at Bannf, might be enumerated incipient phthisis (pre-tubercular stage especially)

chronic bronchitis and asthma, where the heart has not become concomitantly affected, hay fever, skin or joint affections of a gouty or rheumatic character, and the neurasthenia or nervous debility of the overworked professional or business man.

Other diseases might be added by the score, but the foregoing are the ones most benefited by "taking the waters" which are of remarkable efficacy in chronic rheumatism, syphilitic and other skin diseases.

Many persons were met with by the writer who, after patronizing in vain the "spas" of Europe, at length found alleviation of their ills in the healing waters of Bann.

Others were seen, who, having come on crutches, confirmed cripples, were, after a due trial of the baths, enabled to return to their homes enjoying a comfort of body and mind to which they had been strangers for years.

The analysis of the water made by the Government in 1887, shows the composition to be something as follows per 100,000 of water :

Sulphuric anhydride . . . . .	51.26
Calcium salts . . . . .	24.43
Carbon dioxide . . . . .	16.47
Magnesium oxide . . . . .	4.14
Sodium salts . . . . .	27.53
Lithia . . . . .	traces
Total . . . . .	123.88

It is supposed, however, that the above is only approximately correct, the analysis not having been made on the spot, which is essential to a correct result. It is sufficient to enable us, however, to form an idea of the great therapeutic value of the water.

Nothing more need be said about the actions of springs, but we cannot urge too strongly that people desirous of enjoying the full benefit of the springs go during the summer or early fall months, and they will be amply repaid for their journey.

FOR CHRONIC URETHRITIS.—The (*St. Louis Cor. Med.*) gives the following :

R—Ext. hydrastis, . . . . . f̄ij.  
 Zinci sulphat., . . . . . gr. xvj.  
 Morphinae sulphat., . . . . . gr. iv.  
 Aquæ dest., . . . . . q. s. ad ̄viiij.—M.

Sig.—Inject four times a day to begin, and gradually reduce as the discharge diminishes.

## THE ONTARIO MEDICAL COUNCIL.

At its first session the Council elected Dr. C. Campbell, of London, as its President for the current year. It need only be said that he performed the duties of the office in a very satisfactory manner. Dr. J. Philip, of Brantford, was elected Vice-President. The principal committees remained of practically the same complexion as last year.

The report of the Chairman of the Finance Committee showed the affairs of the Council to be in a better condition as regards money matters than for some time past. The reason advanced for such satisfactory showing is the power till lately vested in the Council for collectibn. The only liability now is the mortgage on the building.

The Discipline Committee reported on the cases of Dr. McCully and Dr. Anderson, the same day. In each case the sentence was suspended during the good conduct of the offenders. It may be noted that the remarks lately made by *The Mail* as to the power possessed by the Council to deal leniently with such offenders, are, we think, not correct.

The wisdom of such suspension of sentence during good conduct, by the Council, was well shown in the recent appeal by Dr. Washington against the action of the Council in striking his name from the rolls, when it was held by the judges that such lenient action greatly strengthened the Council's position in the said appeal. Therefore it is reasonable to suppose that if in future any appeal be made against the final disqualification of offenders by the Council, the same strong position will have been made for that body, and not only so, but a precedent will have been established in this utterance of the judges in the former case.

A very important and necessary change has been made regarding therapeutics, that subject being now taken at the intermediate examination, and being made a separate subject, by having an examination paper set for it alone, instead of being joined with the paper on medicine as heretofore. There is now no examination in therapeutics at the primary examination, and the anomaly examining second year men, in what is essentially a final, and most important final subject, is done away with.

The subsidy of six hundred dollars to the *Ontario Medical Journal* has been again granted. When the Council last year saw fit to give to a new and untried journal all its prestige, and a subsidy besides, to the discountenancing of the two old and tried journals, we considered a dignified silence as to the injustice of the act, the wisest course to pursue. The Council was at that time in dire peril, and the *free journal* to every registered medical practitioner in the province was the sop thrown.

That a journal partly owned by a member of the Council, should be subsidized, and in effect rendered the official organ of that body, is to say the least, a proceeding rather peculiar.

This year the *Practitioner* and LANCET offered to publish all the proceedings free of charge, and to pay for the stenographer's report, if the subsidy should be discontinued. But in spite of this obvious means of saving several hundred dollars, the subsidy was again passed.

We wish our readers to know what treatment has been extended to the two old journals by a body which they have always supported. For the Ontario Medical Council, has always had, and has still, the loyal support of those journals. Had it been otherwise, and had the old journals joined the ranks of the Medical Defence Association last year, the Council might have felt the result in a way not to their advantage. But believing that the Council has honestly endeavored, in spite of the cliquism which we believe in former times existed, and to a certain extent still exists, to do its best for the interests of the profession, we have stood by that body. They on the other hand, have seen fit to give a severe blow to independent medical journalism in Ontario, and in spite of our memorializing them, and offering to save them several hundred dollars of disbursement, have gone on for another year.

What lies at the bottom of such action? Has there been any pledging of the members to the one member who is personally interested in the subsidy? Has there been any canvassing of the members done, during the past year, and before the Council met?

It may yet be found that the true interests of the profession and of the Council lie in the direction of absolute fairness exercised towards all medical journals.

## THE ONTARIO MEDICAL ASSOCIATION.

The late meeting of the Ontario Medical Association was not so largely attended as some others have been, but the opinion of those who ought to know whereof they speak, is that it was one of the most successful of the whole series. Toronto has this year the honor of furnishing the President in the person of Dr. Laughlin McFarlane. We are assured that the Association could not have chosen a more efficient or popular candidate. The Secretaryship remains with Dr. D. J. Gibb Wishart, now in his sixth year of office, a fact which speaks well for the manner in which he has conducted the business of his department.

The social side of the gathering was more than usually prominent this year. The Association was invited by the trustees of Victoria Hospital to visit the building where an excellent lunch was provided, and speeches galore were in order. From the building the guests were conveyed to the Lakeside Home, and around the Island, the whole entertainment being very enjoyable, and one which will redound to the generosity of the trustees, and work for the popularity of the hospital.

The papers read were up to the average, and the discussions were more than usually good.

Then the Association's luncheon at Webb's was thoroughly enjoyable, and we think the members went home feeling at peace with themselves and the world.

### THE FRENCH TREATMENT OF ANGINA PECTORIS.

—M. Huchard, in an abstract in the *Gazette des Hôpitaux* (*London Pract.*), from his recently published work, directs attention to the importance of distinguishing between true (coronary) angina and pseudo-angina, which, associated by the presence in both of neuralgia of the cardiac nerves, are separated by the occurrence, in the true form only, of ischemia of the myocardium. M. Huchard considers the treatment of angina pectoris under four heads.

1. *Preventive Treatment.*—Here we must combat the tendency to high arterial tension, and attend to hygienic methods, particularly diet. Treatment must likewise be directed against aortitis and arterio-sclerosis by the use of milk and of iodides and nitroglycerine. On account of the tendency of aortitis to narrow the coronary orifices, and

thus to hamper the nutrition of the cardiac muscle, we must endeavor to diminish the work of the heart, attending especially to the peripheral vessels. Treatment to this end by means of the iodides is all important. The iodide of potassium is given in doses of fifteen grains three times daily. As loss of appetite, epigastric pain, and diarrhoea may arise, it is well to give the drug for twenty to twenty-five days only in each month, nitro-glycerine in small doses being prescribed in the intervals.

2. *Curative Treatment of the Attacks.*—Under this heading we may prescribe amyl nitrite by inhalation, or nitroglycerine in one-tenth grain doses, three or four times daily, for a period of seven or fourteen days. On account of the tendency of nitrite of sodium to change hemoglobin into methemoglobin it is not looked upon with favor. Morphine produces increased cardiac action and passive dilatation of peripheral arteries, with consequent lowering of pulse tension, besides exerting a sedative and analgesic effect. By combining the nitrites with morphine, good results are often obtained; and if the nitrites fail, one-third of a grain of morphine hypodermically is of great value.

3. With respect to the treatment of *complications*, renal insufficiency and cardio-sclerosis appear during the periods of freedom from anginal attacks. Cardiac dilatation of paresis and syncope are due to the influence of the attacks. Heart tonics, especially digitalis, are indicated in cardio-sclerosis and cardio-paresis. For renal insufficiency we must favor depuration of the blood, and suppress all kinds of food liable to the formation of ptomaines. Caffeine, ether, or nitroglycerine, injected subcutaneously, is advised in syncope.

4. M. Huchard refers, lastly, to useless or dangerous methods. Such are electricity and cocaine, bleeding, bromides, hypnotics, inhalations of oxygen, belladonna, and aconite. Briefly, therefore, we must combat pain, direct treatment alike against arterio-sclerosis, the development of which leads to degeneration of the cardiac tissue, and against lesions of the coronary arteries, and, above all, against cardiac ischemia, which is the "chief and only danger" in this affection, and thus we should at a very early date, when signs of arterio-sclerosis appear, even in the absence of anginal symptoms, commence the iodide treatment.

TREATMENT OF DYSMENORRHEA.—Dr. Thomas E. Craig, of Lawrenceburg, Ind., give the following formula to *The Prescription*, containing  $\frac{1}{240}$  grain of corrosive sublimate to the dose.

R.—Resinæ guaiaci, . . . . . āā ʒ. i.  
Terebinth. canadensis, . . . . . ʒ. ii.  
Ol. sassafras, . . . . . ʒ. ii.  
Alcohol, . . . . . ʒ. viii.  
Hydrarg. corros. chlor, . . . . . gr. ii.

Dissolve the guaiacum and canadensis balsam in one-half of the alcohol, and the corrosive sublimate in the other half. Mix and filter, and then add the oil of sassafras.

Dose, ten to fifteen drops three times a day, to be given in a capsule or dropped on dry sugar.

The doctor called it a "specific in dysmenorrhea, also in chronic endometritis."

He further states as follows: "I have used it for twenty years or more, and have given the formula to several physicians, and have never heard of a failure, when properly prescribed and taken. I have prescribed it in cases of dysmenorrhea when the suffering was almost unendurable, but success was the result, after being taken four or six weeks."

THE JUSTIFIABLE PREVENTION OF CONCEPTION.—The physician not infrequently has to warn against conception in cases where a pregnancy would endanger the life or the health of the patient. (*Med. Age.*) Pelvic contraction, abdominal and uterine tumors, etc., form such an indication. The advice to abstain from coitus is but seldom followed, and the means usually employed to prevent gestation (mechanical) are objectionable from a hygienic and ethical point of view. Kleinwachter has endeavored to find a remedy which would have none of the aforementioned drawbacks. He prescribes a cacao-butter suppository containing 10 per cent. of boracic acid to be introduced high up into the vagina. These suppositories dissolve in about one hour, and the liberated acid destroys the spermatozoa. Bichloride of mercury in 0.001-gramme doses can also be used, but in that case a vaginal douche has to follow the sexual act. The solvency of the suppository is heightened by adding one grain of oleum olivæ. The author considers this a safe and sure remedy to prevent conception. Therapeutic effects may be combined by the add-

ing of various drugs—for instance, tannin in cases of uterine catarrh.

**THE EMPLOYMENT OF SODIUM SALICYLATE BY ENEMA IN THE TREATMENT OF ARTICULAR RHEUMATISM.**—As a result of the employment of sodium salicylate by enema in the treatment of fifteen cases of acute articular rheumatism, seven of chronic articular rheumatism, one of pneumonia, one of puerperal septicemia, and in a healthy individual, Erlanger (*Archiv für klin. Medicin; Med. News*), recommends this method of medication in all cases in which the salicylates, though indicated, cannot, for one reason or another, be taken by the mouth. It is essential, in order that absorption take place, that, if the bowels have not been spontaneously moved, a preparatory enema of water be given to clean out the lower bowel. The medicated enema should contain from a drachm and a-half to two drachms of sodium salicylate, with half a drachm of tincture of opium and three ounces of water. It should be warm, and is best administered in one dose. The nozzle of the syringe should be introduced into the bowel for a distance of about eight inches. The patient is to be instructed that the enema is to be retained and not expelled.

**GASTRIC CATARRH.**—Dr. Whittaker, in *Lancet-Clinic*, says: Pure and simple gastric catarrh is curable in a short time, usually at most in two weeks, by the use of the stomach tube every day, best at bed-time, and the administration of hydrochloric acid. It seems to me that I have never had anything so satisfactory in the treatment of chronic gastric catarrh. I have seen so many men, who believed themselves victims of cancer, plunged in despair, cured in two weeks by simply washing out the stomach at bed-time and the administration of hydrochloric acid, with some regulation of the diet. I give milk and all mildly-cooked meats, and certain vegetables—pineapples, celery, asparagus, spinach, lettuce, onions. It is a great mistake to treat these cases without an appeal to the vegetables; but the stomach tube, I repeat is the *sine qua non*. It almost renders everything else superfluous in the treatment of gastric catarrh.

|| **TANNIN AND BORIC ACID IN DYSENTERY.**—Dr. Liebersohn (*Vratch*) reports two cases of severe

acute dysentery which were treated by hot enemata of tannin and boric acid. The results seem to show that the injection speedily arrested the intestinal hæmorrhage and quickly restored the natural character of the passages. Pain and tenesmus were immediately relieved and the course of the disease materially shortened. The enemata were given every three hours, each consisting of one fluid pound of a four per cent. solution of boric acid, ten grains of tannin and three and three-quarter drops of tincture of opium, the whole to be dissolved in a tumbler and a half of hot boiled water. The injecting fluid was retained in the bowel for one or two minutes.

**TREATMENT OF BOILS BY BORIC ACID.**—*L'Union Médicale (Therap. Gaz.)* quotes Alison as having obtained good results in the case of general furunculosis by the administration for eight or ten days of from ten to fifteen grains of boric acid a day, divided into two doses. At the same time, four or five times a day, the inflamed areas were washed with a hot solution of boric acid, in the strength of four per cent. Between the applications of this lotion compresses were applied to the diseased parts, which had been wet with the same solution of boric acid. In this way he claimed to have been able to relieve the boils which had already formed, and to do much towards preventing other outbreaks. By this means he thinks it possible to avoid surgical intervention.

**FOR SCIATICA.**—Dr. Lawrence in *Amer. Pract. and News* recommends the alcoholic solution of nitro-glycerine, one per cent, commencing on one drop three times a day, and gradually increasing to five drops three times a day.

**GELSEMIUM FOR LUMBAGO.**—It is stated that ten drops of tinct. gelsemium every four hours, will almost invariably relieve that painful condition or backache, commonly called lumbago.

**FOR MYALGIA.**—(*Med. News.*)

R.—Ext. emicifugæ fluid.,

Ext. erythroxyli fl.,

Tinct. guaiac ammon. . . . . āā ʒj.

M.—Sig. Take a teaspoonful three times a day

**VENEREAL SORES.**—Don't cauterize a sore or excoriation on the penis until you find out its character, for the caustic action may mask the true

nature of the lesion so as to leave your patient a lifetime of doubt.

For a herpes use a dry soothing powder, or the powder on absorbent cotton.

For a chancre, equal parts mercurial ointment and oxide of zinc ointment is a pretty good dressing, but you will not hasten the cure much.

Thorough cleansing of a chancroid and a good antiseptic dressing is useful. Caustics don't help matters much in any of these, and may do much harm in herpes.

**FOR SWEATING FEET.**—A wash alone will not cure the trouble. Dusting the feet every morning with a mixture of tannin and salicylic acid, with a pinch of same in each shoe, will generally give relief. But where this fails the following is said (*Indiana Pharm.*) to be a sure cure :

R.—Boric acid, . . . . . 80 grains.  
 Borax, } of each . 1½ ounces.  
 Salicylic acid, }  
 Alcohol, . . . . . 2 ounces.

M.—Rub the feet morning, noon and night with this solution, after washing them well in hot salt water or a permanganate wash.

**INJECTION FOR CATARRH OF THE BLADDER.**  
 —It is reported that Mosestig (*Med. Sum.*), a foreign authority, uses the following prescription in catarrh of the bladder :

R.—Iodoform. . . . . ʒ iss.  
 Glycerin. . . . . ʒ x.  
 Boiled distilled water. . . . ʒ iiss.  
 Gum tragacanth. . . . . gr. iv.

Wash the bladder out with warm water which has been boiled, and inject for three days a tablespoonful of the mixture named in a pint of water. It is stated that three or four injections are ordinarily sufficient to cure chronic cases of cystitis.

**VOMITING OF ANESTHESIA.**—Vomiting during anesthesia may be arrested by compression of the phrenic nerve and vagus. Dr. Joos, of the Cantonal Hospital at Winterthur, applies compression with the thumb on the left side, immediately above the sternal end of the clavicle. The hand is held flat on the thorax and the thumb is parallel with the clavicle. In Dr. Joos' experience the vomit and hiccough forthwith ceases. He also suggests that this treatment might be useful for the relief of seasickness.

**DIPSOMANIA.**—Dr. Kitto writes to *Merck's Bulletin, Med. Rec.*, that he has used the following formula in several hundred cases, and that it positively destroys the desire for alcohol :

R.—Ichthyol, . . . . . ʒ ij.  
 Sulphate of hydrastine, . . . . ʒ ss.  
 Resorcin, . . . . . ʒ ij.  
 \*Watery solution of calumba, . . ʒ iij.  
 Tincture of nux vomica, . . . . ʒ iij.  
 Sol. acet. ammon. (*recent*) q. s. ad ʒ vj.

Two teaspoonfuls every three or four hours while awake, during a period of two or three weeks.

\* Made by evaporating the tincture to dryness and taking up the residue with an equal quantity of water.

**TREATMENT OF ECZEMA OF THE VULVA.**—Lusch recommends, *Therap. Gaz.*, the following prescription in this condition :

R.—Tincture of opium,  
 Bicarbonate of sodium, . . . . . āā ʒ ij.  
 Bicarbonate of potassium, . . . ʒ j.  
 Pure glycerine, . . . . . ʒ iss.  
 Aquæ destil., . . . . . ʒ viij.

Make a solution, and apply it hot, morning and night, to the diseased area. After each lotion, powder the parts with the following :

R.—Finely powdered starch, . . . 49 parts.  
 Finely powdered camphor, . . . 1 part.

**A VALUABLE DIURETIC AND CARDIAC TONIC.**—

R.—Juniperi . . . . . ʒ xii.  
 Potassii acetatis . . . . . ʒ viii.  
 Digitalis . . . . . ʒ ii.  
 Scillæ . . . . . ʒ i.  
 Vini albi . . . . . O viii.  
 Spiritus rectificati . . . . . O i.—M.

Sig.—Two teaspoonfuls at a dose.

**FOR ANEMIA WITH CONSTIPATION.**—

R.—Extracti nucis vomicæ . . . . gr. ¼.  
 Ferri sulphatis exsiccatae . . . . gr. i.  
 Aloin . . . . . gr. ¼.  
 Pulveris myrrhæ . . . . .  
 Pulveris ipecacuanhæ . . . . . āā gr. ss.  
 Extracti gentianæ . . . . . gr. ii.

Misce et fiat pilula. Sig.—To be taken every night.

**A HINDO VIEW OF MALARIA.**—As a curious illustration of a fundamentally correct idea existing in the traditions of a nation, the following pas-

sage from Orton's work on cholera, published in 1831, is of interest (*N. Y. Med. Jour.*) "The natives of India are an enlightened race. Some idea of the value of their opinion on any doubtful subject, may be formed from the fact of their universally believing that malaria fevers are owing to drinking bad water." Time has justified the Hindoo rather than Orton's belief.—M.

FOR SCIATICA.—Dr. Charles B. Lawrence (*Am. Pract. and News*) says, of an intractable case of sciatica that finally nitro-glycerine was given in an alcoholic solution of 1 per cent. strength, commencing with a dose of one minim three times a day, gradually increased up to five minims. Improvement was almost immediate, and in ten days the patient was able to walk to his work. A complete recovery ensued.

VAGINISMUS.—The following is recommended by De Siney, *N. Y. Med. Rec.*, as affording relief in obstinate cases of vaginismus :

- R—Thymol, . . . . . grs. iij.
- Ext. belladonnæ, . . . . . grs. xij.
- Potassii bromidi, . . . . . ʒ ss.
- Ol. theobromæ, . . . . . ʒ iv.
- M. et ft, suppositoria No. iv.
- Sig.—One suppository, as needed.

FOR URTICARIA OF CHILDREN (*L' Union Méd.*):

- R—Chloral hydrat.,
- Camphoræ pulv.,
- Acaciæ pulv., . . . . . āā ʒ j.
- Triturate until liquefied, and add
- Cerat. simpl., . . . . . ʒ j.—M.
- Sig.—Apply topically.

MIGRAINE.—Migraine may be relieved, Lucking says, *Hosp. Gaz.*, with a pill, twice daily for some time, consisting of Indian hemp one-sixth grain, phosphide of zinc one-tenth grain, and arsenic one-thirtieth grain. The severity of the attack may be effectually diminished with liquor trinitrinæ in minim doses two or three times daily.

FOR ACNE.—Dr. G. T. Elliott prescribes :

- R—Zinci sulph., } āā . . . grs. v-xxx.
- Potass. sulphuret., } . . . . .
- Aquæ rosæ, . . . . . ʒ j.
- Sulphuris præcip., . . . . . grs. xx-xl.
- M. Sig.—Apply to face three times a day.

DYSPEPSIA.—Dujardin-Beaumetz recommends (*Therap. Gaz.*) the following :

- R.—Bismuth submit. } . . . . . āā ziii.
- Magnesii sulph. } . . . . .
- Cretæ preparat. } . . . . .
- Sodii phosphatis, } . . . . .
- M.—Div. in pulv. No. xi.
- Sig.—One after each meal.

THE SURGEON'S ENEMIES, says Lister, are almost always sporeless bacilli, though some of these show great resistance to the action of anti-septics, such as the staphylococcus pyogenes aureus, the common cause of suppuration. It has, nevertheless, been shown that carbolic acid destroys these organisms more rapidly than corrosive sublimate.

OSSEOUS SUTURE is considered by Hennequin of very problematic usefulness, excepting in the patella and olecranon, or in pseudoarthrosis after fracture, in which the lower override the upper fragment, from which it is separated by soft structures, or when the end cannot be brought into apposition or kept so by external apparatus.

Man, born of woman, is of few days and no teeth. And indeed it would be money in his pocket sometimes if he had less of either. As for his days he wasteth one-third of them. And as for teeth, he has convulsions when he cuts them ; and as the last one comes through, lo ! the dentist is twirling the first one out ; and the last end of that man's jaw is worse than the first, being full of porcelain and a roof-plate built to hold blackberry seeds.—*Burdette*.

FOR OBSTINATE VOMITING OF PREGNANCY.—Fluid extract of golden-seal has, according to Fedorow (*Med. Rec. Therap. Monat.*) proved to be an excellent remedy in the treatment of obstinate vomiting pregnancy. Fedorow prescribes 20 drops of the fluid extract four times daily.

PERSONALS.—Dr. Murray McFarlane, of Toronto, has been appointed oculist and aurist to St. Michael's Hospital.

Dr. E. A. Spilsbury has removed to 189 College Street, corner of Henry Street.

In simple atony of the uterus ten or fifteen drops of the wine of ipecac., given at intervals of



ten minutes, will (*Annals of Gynec. and Pediatrics*), cause a marked activity in uterine action. Its effect is not tetanic, the contractions being of a regular normal type.

We regret to have to announce the death of Thomas R. Dupuis, M.D., Professor of anatomy and clinical surgery in the medical department of Queen's University, Kingston. The Dr. died on Sunday 25th inst., after two weeks illness.

MARRIED.—On Wednesday, May 24th, at St. Paul's Church, Oakland, Cal., Mary P. Collier, Point Edward, Ont., to J. E. Pickard, M.D., Virginia, Neb.

A scientist who has investigated the matter, states that the men who are employed in the Paris sewers are as healthy as the average person and no other 800 men in that city are so free from zymotic diseases.

Tampons soaked in oil of turpentine are said to control nasal hæmorrhage. If the oil should cause much irritation of the mucous membrane it may be diluted.

A simple preventative of bed wetting is that suggested by Dr. Von Trenton, viz., to raise the foot of the bed so that the child lies on an incline with the opening of the bladder uppermost.

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### Books and Pamphlets.

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EYE, EAR, THROAT AND NOSE. By F. E. Miller, M.D., Throat Surgeon, Vanderbilt Clinic, N. Y.; James P. McEvoy, M.D., Throat Surgeon, Bellevue Hospital, N. Y., and John E. Weeks, M.D., Lecturer on Ophthalmology and Otology, Bellevue Hospital Medical College, N. Y. Students' Quiz Series. One of the series written by practitioners and teachers of New York City, and edited by B. B. Gallandet, M.D. Philadelphia: Lea Bros & Co.

This seems to be quite up to the mark set by the rest of the series, and being on subjects which are relegated largely to the specialist, must contain much which would be profitable reading to the general practitioner and student. The method of instruction which obtains in most of the good American institutions has led logically to condensations such as this series includes, and while

excellent for review purposes, cannot be said to conduce to the wide training which results from broad handling of a subject. It seems impossible but that the student trained after such models should be a casuist, a Jesuit, in medicine, a dealer in detail, rather than in broad generalizations. To illustrate, he is apt to study, for instance, inflammation of the eye as one thing, and inflammation of a joint as another, instead of learning the broad lines of treatment for inflammation as a process unchanging in character wherever found.

HYDROTHERAPY AT SARATOGA. By J. A. Irwin, M.D., Cantab., M.A., M.D., Dublin University, etc. Cassel Pub. Co., N. Y. 1892. 270 pp.

This little treatise is upon a subject certainly too little enquired into by the general practitioner, who is too apt to succumb to the general demand of the public for drugs rather than other remedial measures. It is written more for the laity than for the profession, partly perhaps as an advertisement of Saratoga's advantages, and with much freedom from the hyperbole that usually characterizes the literature emanating from hydropathic sources. The scholarship evidenced is of a fair order, but the proof is not well read; apart from from this the typography is good.

ELEMENTS OF HUMAN PHYSIOLOGY. By E. H. Harling, M.D., Lond., M.R.C.P.; Joint Lecturer on Physiology at Guy's Hospital, London, etc. 100 illustrations; pp. 437. Philadelphia: P. Blakiston, Son & Co. 1892.

This text-book has been received with great and merited favor by the highest authorities in the medical world. While of course not entering the field with such larger works as Foster's, it aims at presenting in short clear form "the main facts of Physiology that are of importance to Students of Medicine." In this aim the author succeeds, as he is evidently a well-trained teacher. All the details of Histology are left to be learned from other texts. Perhaps the best chapter in the book is the Introduction, a thoughtful and very suggestive epitome of practically all the functions of the human organism. The chapter on "The Fate of Food Stuffs in the Organism—Metabolism," is a summary that every medical man should read at least once in a twelve-month, and the same may be said of the chapters on Special Senses, Spinal Cord, Brain, and Reproduction.

# SUPPLEMENT TO "CANADA LANCET."

## THE ONTARIO MEDICAL ASSOCIATION.

The thirteenth annual meeting of the Ontario Medical Association met in the hall of the Educational Department of the Normal School, June 21st, at 10 a.m., Dr. R. W. Hilliary, of Aurora, in the chair.

Vice-Presidents, Brock, of Guelph; McKay, of Ingersoll; Dr. Sheard, President, and Dr. Birkett, of Montreal, Secretary, of the Dominion Association, were invited to seats on the platform.

Dr. Wishart then read the minutes of the last meeting, which were carried.

As Dr. Powell was absent, the president called on Dr. A. A. McDonald, who read an excellent paper on "Cholelithotomy with Choleduodenostomy, for the Relief of Cholemia due to Obstruction of the Common Bile Duct." Below is an excerpt of the paper:

Gall stones may exist for some time in the gall bladder and produce no definite symptoms, but not so when they become impacted in the common duct. The treatment for this latter condition has heretofore been unsatisfactory, but now such advance has been made in the way of surgical treatment that it appears that it will be placed on a scientific and satisfactory basis. Chronic jaundice depends upon obstruction to the flow of bile. Where the jaundice is due to a new growth, the following are some of the symptoms: emaciation, dyspepsia, flatulence, absence of bile in the fæces, its presence in the urine, etc., death ensuing usually within a year. When due to impacted gall stones or stricture, the symptoms are not so constant, and the case may last for years. The presence of gall stones in the gall bladder cannot be accounted for, although they are frequently found at autopsies in subjects over 60 years old. The assigned causes are: Sedentary habits, too much starchy food, constipation, tight-lacing, etc. In order to treat these cases successfully the bile must re-enter the intestine. The doctor then outlined the history of a case he had upon whom this was attempted. After an incision through the abdominal wall the gall bladder and the duodenum were opened and through each incision was put one of Murphy's buttons. These were then approximated, bringing the two serous surfaces together. The patient's jaundice disappeared, but death ensued later. A *post mortem* showed non-union, due to a very low condition of the patient.

The president then gave his address. He said he felt much honored at being elected to the position he occupied, more especially as he was absent from the last year's meeting; and also because the position had formerly been filled by such a distinguished array of men. He referred feelingly to the loss the Association had sustained by the deaths of Dr. Worthington, of Clinton, and Dr. Henderson, of Kingston, both past presidents of the Association. He was glad to know that the matter of reciprocal registration of medical men between Canada and the Old Land, rested with the home authorities, but thought not much could be expected from them, when we ourselves had not decided on reciprocal provincial registration. He (the speaker) advocated a Dominion council. He endorsed raising the educational standard for medical men in the Province. He detailed some of the evils of club practice and denounced it. In regard to the Medical Council, he saw much to approve and some things to condemn; but as it was constantly improving in many ways he thought it should be liberally dealt with. He strongly advocated the formation of a club which might meet in the Council building. This would tend to foster a spirit of cordiality and unity among the members of the profession that no other means could. There might be, he thought, some wards made, into which patients brought from outside the city by their physicians upon whom they (the physicians) wished consultation, might be placed for a time. The speaker favored the increase of territorial representatives, and in regard to contested elections, he approved of the method of having the case tried before the county judge. In concluding his address, Dr. Hilliary welcomed the visitors present from the other side of the line and hoped they would be treated by the members of the Association with the same cordiality and good feeling which Canadians were accorded.

Dr. DeGarmo, of New York, said that he proposed to devote his time to the palliative treatment (hernia)—means within the reach of every practitioner. The doctor gave a short account of the history of trusses, pointing out the good qualities and the defects in them. A good truss should hold the hernia completely within the abdominal cavity. No truss for inguinal hernia should have its pad attached by a descending arm; the centre of the pad should correspond to the centre of the spring. He also pointed out the value of the cross-bodied truss. The English truss, however, which had this good point, had too strong a spring. The doctor then showed a truss of his own invention for femoral hernia, which filled the necessary requirements demanded in a truss for femoral hernia. After getting a perfectly fitting truss, the practitioner should watch his patient until cured, seeing him at least once a month, to see that the

hernia was securely held. In infants, the springs were usually too strong. They should be light, waterproof, and should be left on at night. The doctor had treated infants as young as ten days old. There was no lack of appliances, the doctor concluded, but there was of medical men who understood the application of them.

Dr. Barrick said he wished to refer to two or three points mentioned by Dr. DeGarmo. The first was with regard to the pad being in line with the spring; the second, the relation of the pad to the internal ring. He said that in old cases of hernia the internal ring was dragged down towards the external ring, therefore, he thought that the English truss, condemned by the reader of the paper, was constructed on the right principal, the pad being below the line of the spring.

Dr. Grasett said that he agreed in the main with what Dr. DeGarmo had said, but he did not like to hear the English truss condemned so strongly, as in many cases of failure it was not the fault of the truss but was due to some accident by which it was broken or disabled.

The president then called on Dr. Powell, of Ottawa, who addressed the Association on "The Management of Abortion." Syphilis, either through the mother or the male parent, was one of the commonest causes of abortion, and in these cases mercury had been found to be very beneficial. Endometritis, fibroids, malignant disease, and everted or patulous os, and malpositions, were other causes. The last condition was readily treated by keeping the fundus in its proper position for about three months. Sub-involution was another cause of the aborting habit, and in these cases local applications and general medication were needed. In other cases no cause could be given. Rest was an essential part of the treatment, particularly in threatened abortion. He also recommended absence of sexual intercourse, the use of opium, bromide of potash and viburnum for the aborting habit. In primiparæ, where abortion had taken place, hæmorrhage was often arrested by the ovum itself filling up the cervical canal. In multipara the tampon was often necessary. He advised curetting where there was continued hæmorrhage accompanied by retention of a portion of the membrane which were beyond the reach of the finger.

Dr. Temple said he did not agree with the paper in one or two points:—First, hæmorrhage, in his experience, was more severe in primiparæ, than in multiparæ, therefore he would in treating them use the tampon. Second, in primiparæ, he believed that abortions were more frequently due to the patients not taking care of themselves, and were not so often due to syphilis. Third, he considered that the after results, septicæmia, etc., were far more to be dreaded than the hæmorrhage at the time of the abortion.

Dr. A. H. Wright said that he did not agree with Dr. Temple that accident was the chief cause of abortion, as working women in his experience were least likely to abort. To prevent abortion his treatment was rest, opium and pot. brom. as an adjuvant. It was, he said, very difficult to decide that any given case was one of inevitable abortion. When it was inevitable he emptied the uterus of its contents as soon as possible. If those was undilated he used the tampon, but if dilated he generally used his finger to get rid of the contents.

Dr. Powell then closed the discussion. He said that he did not agree with Dr. Temple, as he had found that hæmorrhage in primiparæ was not so severe as in multiparæ, that the ovum filled the canal, and therefore no tampon was needed. He had not said that syphilis was the great and only cause of abortion, but that it was one of the most fruitful sources of it.

The Association was now addressed by Dr. Wilson, of Richmond Hill, on "The Treatment of Diphtheria." The doctor strongly advocated the use of prophylactic treatment in the way of removing all sources of irritation from the mouth, nares and tonsils, and anything that would cause hyperæmia of these parts. The general condition of the system should be kept in the best possible condition and the hygienic surroundings perfect. Early treatment, the doctor said, was necessary in order to lessen the vitality of the germs, and their virulence and power of reproduction. When the membrane was small in amount it was possible to keep it rubbed off and the denuded surface then sprayed with bi-chloride solution. The membrane could be dissolved by papoid, hydrogen peroxide, etc. In many cases where we could not kill the bacilli, we could lower their vitality so that their virulence needed not to be feared. In cases with pain the cold coil should be used. The constitutional treatment consisted of rest, liquid diet, and the administration of tinct. ferri. perchlor.

Dr. Milner, of Toronto, now read a paper on "Diphtheria, Its Cause and Treatment." In speaking of treatment, he said an external application of turpentine was useful, and that among solvents the peroxide of hydrogen was the most reliable. If the membrane formed very rapidly, obstructing respiration, it should be removed. Tincture of iron, he affirmed, was our sheet anchor in treating the constitutional symptoms. Stimulants, also, should be given from the first. The diet should be chiefly iced milk. Speaking of tracheotomy and intubation, he said that intubation should be used in infants under three and a half years old, also in adults. Tracheotomy should be performed in those between three and a half and five.

A paper was now read by Dr. Bryce on "The Public Schools in Relation to the Dissemination of Diphtheria." He showed by statistics gathered,

that school life is the particularly susceptible age. The doctor showed both from epidemics at home and abroad that the schools are a fruitful source of dissemination of the disease. Density of population, bad ventilation, lack of sunshine, decaying matter, etc., are all helpful in spreading the disease. The doctor showed that the cubic amount of air space in the rooms used, the cleanliness of the floors, the frequency with which the air is changed, entered largely into the prevention of its spread. The altered humidity of the air in school-rooms in winter, he thought was a potent factor in the spread of the disease, as it materially affected the condition of the mucous membrane of the respiratory tract.

Dr. Wilson then asked how it was that sanitation had decreased all other diseases, but diphtheria had increased.

Dr. Spencer said he would like to know why the most unsanitary parts of the city were free from diphtheria, while the parts perfect in sanitation were constantly having cases.

Dr. Bryce answered by saying that if the germs could be kept out of the school from the first there would be no danger. But in the most healthy parts of the city, germs had got into the school-rooms from some one affected, and were thus spread by the school, and in this way those parts of the city were infected.

Dr. E. A. Spilsbury read his paper on "Deflection of the Nasal Septum and its Surgical Treatment." The etiology he considered was traumatic, the symptoms were those of catarrh, buccal respiration, with its attendant evils, a change in the voice, etc. The treatment he recommended was removal of the obstruction by incision or by crushing. He gave a history of the different methods employed in operating on a projecting septum, and entered into the details of Delstanche's method, which consists in crushing the septum by using a pair of forceps, having the limb which enters the occluded nostril and which comes in contact with the obstruction, armed with a stellate knife. After being thus straightened, he inserts a splint whose two arms entering the nostrils and brought into contact with the nasal septum, hold it in position till healing takes place. The doctor then gave a history of several cases in which he had employed this method with marked success.

Dr. Primrose then followed, his subject being "The Anatomy of the Child." This paper was highly interesting, because he had frozen sections wherewith to illustrate his paper, also photographs of the same. He said this method of studying anatomy was particularly useful in learning the anatomy of the viscera and the structure of the joints. Many interesting points were to be seen, such as the relations of the antrum, the straightness of the nasal septum, the fascia of the eyeball, the horizontal position of the Eustachian tube, the

relative position of the temporary and the permanent teeth, the immaturity of the mastoid cells, the "sucking cushions" so-called, the mediastina, the high position of the apex of the heart, the highly developed diaphragm, the relatively large kidneys and suprarenal bodies, the small pelvis, the abdominal position of the bladder, the vertical position of the rectum, and many other interesting features.

Wednesday evening.

Dr. Arnott, of London, read a paper entitled "A Review of the Diagnosis and Treatment of Asiatic Cholera." He pointed out the difficulty of recognizing the disease before it got a foothold in the community, by reason of its similarity to sporadic cholera. He recommended that every case of diarrhoea be treated with all the sanitary precautions with which cholera is. In such a case the appearance of marked nervous phenomena should make us suspicious. The doctor portrayed vividly the various symptoms of the various stages, and emphasized the necessity of becoming absolutely certain of the diagnosis by a bacteriological examination. He described various conditions of the body and of the surroundings which favored the spread and strength of the disease. In regard to the treatment, he went fully into the discussion of the merits of the different plans employed—the eliminative, the astringent, the sedative and the antiseptic, dwelling on the futility of any and all of them in many cases. The disease ought to be studied from cases uninfluenced by drugs. He opposed the use of alcohol in its treatment. His leanings were toward the eliminative treatment and the application of heat externally and hot douches per rectum.

Dr. Sloan said that he did not agree with Dr. Arnott when he said that opium and alcohol were narcotics and not stimulants. He, Dr. Sloan, had treated many critical cases with alcohol and opium and consequently proved to him that they were stimulants.

Dr. Temple then said that he had seen several outbreaks of cholera in India, and had found that in many cases drugs were worthless; he thought alcohol was the best remedy for it. Warmth should also be applied. Dr. Spencer said that he had seen cholera when in the east, and he agreed with Dr. Temple in every particular. Dr. Hunter than asked Dr. Temple if he would treat the disease among Europeans as he would the people of India. Dr. Temple replied that he would. Dr. Barrick said that he had seen an epidemic of cholera in London, England, and that it depended on the severity of the epidemic and not on the treatment as to the number of deaths. At the beginning of that epidemic the patients got alcohol and died. But as the epidemic got milder they lived in spite of the alcohol. He closed by saying

that he agreed with Dr. Arnott as to the use of alcohol.

Dr. Philp, of Hamilton, now read a paper on the "Prevention of Cholera." The doctor proved by citing several instances, that the progress of the cholera could be checked by quarantine and thorough disinfection, also that it was mainly propagated by the stools of the patient affected, therefore it was imperative that the water supply should in no way become contaminated with the stools of the cholera patients. All excreta, he said should be sterilized by carbolic acid or sulphate of iron, all clothing should be thoroughly disinfected which had come into contact with the contagium and that great cleanliness should be observed and the houses fumigated.

The following synopsis of a paper on "Cholera," was presented to the Association by Dr. Saunders. In speaking of the morbid anatomy, he stated that there were very few characteristic appearances to account for the violent nature of the disease. The speaker described the condition in which the alimentary tract, heart, liver, lungs and kidneys, were usually found. One of the most constant pathological conditions was that the blood was nearly always dark and thick. There were two views as to what caused this. The doctor decided that it was due to the chemical action of the morbid material excreted by the comma bacillus. It must be remembered that the bacillus was destroyed by a heat of 140 F., and by weak disinfectants. Cholera could be diagnosed by bringing a culture of the bacilli into contact with free acid in the presence of oxygen, when a bright red color would be produced.

Dr. Rice, of Woodstock, now read a paper on "The symptoms and Treatment of Cholera." He said that many cases of dysentery, diarrhoea, etc., under bad hygienic surroundings would, if they occurred in infected countries, be classed as cases of cholera. The doctor then proceeded to give the symptoms which were found in the four stages of the disease. Then he dwelt on the treatment, saying that there was no specific line of treatment, but five indications were to be met, viz.:

1. The premonitory diarrhoea.
2. The loss of liquid by the bowels.
3. The low temperature.
4. The toxæmia.
5. The collapse.

The first condition could be met with calomel followed by an astringent, with proper food and surroundings.

In the second stage a large dose of calomel should be given followed by successive small doses of the same and opium or chloral or chlorodyne, the latter to be given for the pain, if present. The doctor advised the use of hot antiseptic douches with tannin, for the serous diarrhoea. For the lowered temperature he recommended the continuance of the douches with hot baths. We have, he said, no specific for the toxæmia, but calomel, iron and quinine have been recommended. In the

stage of collapse hot baths were advised with injections of whiskey, brandy, strychnia, ether, etc. But usually when this stage had arrived the patient was beyond help.

Dr. Harrison, on being called now addressed the Association on the subject of blood-letting. He said that it had been practised from time immemorial, that Virgil had mentioned it in one of his pastorals. He did not think there were many men who had graduated during the last fifteen years, who knew how to perform venesection. Prof. John Hughes Bennet, he said, gave blood-letting its death blow by his attack against it. The doctor thought that its indiscriminate use also assisted; but he felt sure that this was a very useful agent, which was now so universally discarded by the profession. He said that he had perfect confidence in it as an efficient remedy in pneumonia, in which he had often tried it with success. It was useful, too, in emphysema. It was also useful in the various forms of heart disease, particularly where the right ventricle was overloaded. He also spoke highly of its use in his own practice in the treatment of apoplexy, and also in eclampsia. Even tuberculous patients were often helped. He stated that it was also useful in chlorosis by stimulating the blood forming organs.

Dr. Olmstead in discussion said that he had not had much experience in blood-letting, but thought it was indicated in conditions of high arterial tension, lividity and engorgement of the right ventricle, such as is often found in pneumonia and some conditions of the heart. In using it in cerebral cases we should be very careful because if the case were one of thrombosis, blood-letting would be contra-indicated. In chlorosis, he would stick to iron.

Dr. McPhedran said he could not agree with Dr. Harrison's statement, that pneumonia was more fatal in the hands of the modern practitioner than formerly, and he had seen statistics which proved this. The object of blood-letting was to relieve the right ventricle. This could be done in a great many cases effectually by bleeding the patient into his own vessels by using nitro-glycerine. The speaker had proved this by experience.

Dr. R. A. Reeve said that blood-letting, by means of leeches, was very serviceable in certain forms of disease in the eye and ear.

Dr. McKinnon, of Guelph, said that he had seen beneficial results from blood-letting in eclampsia, pleuritis and pneumonia, and strongly recommended it in eclampsia. Dr. Birkett, of Montreal, had seen good results in mitral stenosis in old people from blood-letting by nature's method, epistaxis.

Dr. Barrick related a case of eclampsia where everything else had been tried. Blood-letting afforded immediate relief. He would not advise its use in anæmia.

Dr. Harrison closed the discussion by saying that he had tried nitre-glycerine and was not so satisfied with it as was Dr. McPhedran, he preferred the lancet.

Thursday morning.

The Association, after the opening business, listened to an instructive paper by Dr. Holford Walker on the subject of massage and its application in general practice. He defined massage to be the communication of motion to the tissues of the body "at best accomplished by the hands," the motion controlled by the various movements adopted and the force used. Strange to say, it would help directly opposite conditions—it would fatten the thin and reduce the fat. Unlike drugs, it did not unpleasantly affect the system. Its effects were mechanical, reflex, thermal, and electrical. The doctor explained how the body cells were stimulated, the movement of the blood quickened, the absorbents stimulated by the first; how the nervous system was soothed by the light stroking used in the second; how the muscular exercise induced the thermal effects; and, lastly, how the electrical effects were manifested in effecting cures, in an inexplicable way, of various paralyses of the body. Massage was particularly useful in neurasthenia, rheumatism, rheumatoid arthritis, fractures, sprains, constipation, sciatica, and many other diseases. Even the weakest patients could stand it.

Dr. Hunter endorsed all that Dr. Walker had said. He had tried it with gratifying success in fractures. It had given splendid results in the various neuralgias.

Dr. McKinnon, of Guelph, then followed on the subject, "Acute General Peritonitis, Laparotomy, and Recovery." The subject was a pale girl, and the attack sudden and severe. Morphine gave only partial relief, and, after consultation, operation was decided upon, pulse being 100, temperature 101°, and tympanites great. After incision, it was discovered that on the lower anterior wall of the stomach, about two inches from the left extremity, adhesions were found, which on being separated disclosed an old ulcer. The edges were trimmed and scraped away and the peritoneal cavity washed out with hot water. The distension made it extremely difficult to close up the incision; so much so, that the prepared silk worm gut broke and unprepared silk was used. A drainage tube was left in until the second day; the patient subsequently developed an attack of pneumonia, followed by phlebitis, occurring successively in the left, the right leg, and the left arm. These attacks he considered were septic and due to the suppuration arising from the stitch holes of the unprepared silk. The question, when to operate, is a serious one. In idiopathic and some forms of puerperal peritonitis, the opium treatment was sufficient; but in the perforated variety, unless considerable shock be present, operation was indicated.

"The Failures and Successes of Bromoform, in the Treatment of Whooping-cough," by Dr. Duncan, was the next paper read. He cited cases where it had been used with little or no effect, and some cases where it had had a toxic effect. Being narcotic, it somewhat unfavorably influenced the general condition of younger children. It was found by some who tried them, that bromide of potassium and chloroform did better. The Dr. then gave some reports of its successful use among Toronto and outside men. Some reported that it did not shorten the disease, but cut short the paroxysms. In his own practice he had found, where a small dose was ineffectual, that increased doses gave great relief. It should be carefully prescribed, as there was a case reported where one drachm had been prescribed with four ounces of water, a teaspoonful being the dose. The last dose killed the patient.

Discussion now went on in the medical section.

Dr. Stalker, of Ridgetown, said that he had had an epidemic of pertussis in his practice, and that he had tried bromoform, but he found quinine to be better. His treatment was quinine and fresh air.

Dr. Duncan closed the discussion by saying that he would not use bromoform to the exclusion of all other drugs. He would not give it more than three times a day, and once during the night.

The nature of fever and its phenomena and treatment was the subject dealt with by Dr. Holmes, of Chatham. The processes which govern the maintenance of the normal temperature, he said, were but imperfectly understood, and that heat loss was not always uniform, neither was heat production; and in order that a uniform temperature might be kept, the mechanism governing it must be in intimate relation with heat production and heat loss. Heat production was the result of retrograde tissue change. Four-fifths of the body heat was generated in the muscles. The increased respiratory and cardiac action he explained to be dependent on the increased temperature of the blood. There might be rise of temperature without fever, and also fever without rise of temperature. Dr. Holmes wondered why the profession were hunting around for new remedies when the cold bath was at their disposal. By using it in one hundred cases of typhoid fever his death-rate was only two.

In discussing this paper Dr. McPhedran said that the cold baths were a means, but not a specific in fever. This he said was excellent treatment in the summer diarrhoea of children. The baths ameliorated the symptoms in typhoid but did not eliminate the poison.

Dr. Hunter fully agreed with Dr. Holmes and Dr. McPhedran.

Dr. Bromley said that he had used jars filled

with cold water, placed about the patient, but did not use the bath. In typhoid fever he used the cold bottles and antiseptics.

Dr. Rice asked Dr. Holmes if he would bath in a case of summer diarrhoea, with a cold surface and an internal temperature of 103 or 104.

Dr. Holmes closed the discussion by saying that the cold bath shortened the duration of the disease and prevented many nervous symptoms arising. As to Dr. Rice's question, he stated that he had always got excellent results from the cold bath in all cases of summer diarrhoea; he also used massage of the extremities. It had always stopped the convulsions, in his experience, also.

Dr. McPhedran then presented a case of abdominal aneurism to the Association. After giving the patient's history and showing the members the area of the tumor and of the pulsations, he proceeded to describe the treatment. The patient had come to the General Hospital a year ago last March, and had been kept in bed until October. The treatment was that adopted by Balfour, of Edinboro': Iodide of potash and nitro-glycerine. The nitro-glycerine was increased until the pulse became very small and soft. He began with 1-100th of a grain, and increased it to 1-50th. The diet was light and nutritious, and as little liquid was given as possible. The tumor gradually lessened in size until August, but from August until October there was little change, when he was allowed to go home, with the injunction that he was to do no hard work. However, he worked hard all winter. Now the tumor was somewhat larger than it was. However, the patient was very materially relieved, if not absolutely cured.

Following this was a paper by Dr. Adams, of Toronto, on "The Prevention of Tuberculosis in Ontario." In opening his paper the speaker dwelt on the predisposing causes of the disease, hereditary and unsanitary surroundings being the principal. To lessen this scourge, Dr. Adams recommended: the reporting of all cases to the public health department, the inspection of milk and meat by qualified men, the death of all affected animals, receptacles for sputa in public places, such as railway waiting rooms, thorough disinfection of houses after the death of patients, the complete isolation of first cases in prisons, etc., and the erection of special hospitals for patients suffering from this disease.

Dr. Burns, Toronto, now read a paper on "Polymastia." The case was that of a woman who, in her third confinement, complained of swelling in both arm pits. She had noticed it before her second confinement also, but not after the first. After the second she noticed a constant oozing in the left axilla, which was much aggravated after the third. On examination, a supernumerary mammary gland, quite distinct from the gland proper, and which had a rudimentary nipple

about the size of a split pea, and from which fluid like milk exuded, was found. This fluid, examined under a microscope, showed the presence of colostrum corpuscles. In the right axilla, in a corresponding position, another one was found. The doctor thought if secretion were encouraged lactation would go on as well and as long from them as from the mammae proper.

Dr. Primrose said that he had examined the patient, and had found the supernumerary glands quite distinct. He had also examined the secretion from them under the microscope, and had found the colostrum corpuscles. The mammary gland, he said, was of the same origin as the sebaceous gland.

Dr. Howitt, of Guelph, next addressed the Association on appendicitis. He stated that the authorities differed greatly as to the treatment of the disease. The preliminary abscess was usually intra-peritoneal. The appendix generally had a short mesentery. It varied greatly in size and position. This disease was commonest in the young and in males, and was often not manifest during life. The case, he opined was ulceration of the mucous coat caused by faecal concretions or foreign bodies. After giving the various points in the diagnosis, the Doctor spoke of treatment, rest in bed, opium, easily assimilated food were recommended. After the pain had subsided if twenty-four hours had elapsed, an enema should be given. He would not use calomel. If the symptoms became aggravated and the temperature fluctuated operation would be necessary. As a rule this should be done on the third or fourth day if it is certain pus is present. The Doctor described the method of operation in the different forms. He had operated twenty-four times with good success. He then outlined the history of eight cases, where the seat of trouble was not in the right iliac fossa.

Dr. Temple then said that he had only the highest words of commendation for Dr. Howitt's paper. He thought that the diagnosis was at times very difficult. He agreed that it was also very difficult to say in some cases whether one should operate. If the abscess were allowed to rupture into the peritoneum, it was a most serious matter.

Dr. McFarlane agreed with Dr. Temple in the difficulties he had referred to.

Dr. Howitt then closed the discussion by indicating some of the symptoms which would lead him to operate: they were, the increase in the size of the tumor after the third day, accompanied with pain which opiates failed to control, and the appearance of a septic temperature chart.

Dr. A. B. Osborne, of Hamilton, followed by reading a paper on gonorrhoeal ophthalmia, including ophthalmia neonatorum. He described the peculiar manner in which the gonococcus attacked the



conjunctiva, how its virulence depended upon the amount of invading poison, how the conjunctival secretion was inimical to the poison, and how the quickness with which the eye could close, making it difficult for the finger to touch the conjunctiva, was the reason it often escaped infection. He gave an elaborate description of the various symptoms, both of the earlier and later stages, and also of the sequelæ and complications. He advocated general, as well as local treatment. At first he would treat with antiseptic lotions with cold, and later by astringents, if called for. If the cornea became infiltrated centrally he would advise atropine: if circum-corneal eserine would do good. Opium should be given if the pain called for it. Antiseptic midwifery was doing much for the prevention of ophthalmia neonatorum. Its treatment was similar to that of the other. Prevention in both was better than cure. Doctors should advise all patients to be exceedingly careful as to cleanliness. The pregnant woman, if she has any discharge should be treated before delivery. This was the most fruitful cause of blindness. In the institution for the blind in Brantford, sixteen of all cases of blindness were traceable to ophthalmia neonatorum.

The next paper handed in was written by Dr. Gross of Fergus. It was a case of a young woman, her first confinement, under Dr. Chisholm, of Wingham. She had been in labor two days and two nights, when Dr. Groves arrived he found her much exhausted. A solid bony tumor filled the pelvis the anter-posterior diameter of which was less than an inch. An operation was decided upon, although the surroundings were unfavourable. They incised on the right side, paralled to pourpart's ligament, commencing close above the symphysis pubis, and extending six inches, a sound being passed through the urethra into the emptied bladder. The section was continued into the vagina, and the child, a strong healthy girl of average size extracted. The mother died, but the child lived. The doctor said this operation was much safer than Cæsarean section. He concluded by saying that it was never justifiable to deliberately destroy one human life when there was reasonable hope of saving both.

Dr. P. P. Burrows, of Lindsay, then read a paper on "Treatment of Talipes Varus by continuous extension." It was unnecessary, he said, to enter into an anatomical description of this deformity, as he had entered fully into the question in a case reported in the "Canada Lancet," June 1887. In the case reported he divided the contracted tendons the plantar fascia and muscles. Next morning he applied a plaster Paris splint, with cotton batting padding. After ten days a small portion of the splint below the ankle joint was removed, the foot, over-corrected, and fresh plaster secured it in the new position. In thirty

days he removed the splint and found the limb perfectly straight. He then had a laced boot put on, stiffened on its inner side.

Dr. Powell, of Ottawa, asked what age the child should be before the tendons should be cut.

Dr. Burrows said that in the child reported the age was four.

Dr. Bryans asked how long the plaster Paris splint should be left on in a marked case. Dr. Burrows replied that he left it on thirty days.

Dr. Sullivan, of Kingston, asked Dr. Burrows how many cases he had used traction on. He also wanted to know if he would operate before the fourth year. The doctor thought that great deformities could not be overcome before the fourth year by traction, nor could talipes varus be overcome, where there was contracture of the tendons, etc., without section. Dr. Burrows said that a moderate case of talipes, if left untreated, became much worse if left long, as a result of contraction. He thought counter extension rational treatment.

Dr. B. E. McKenzie then stated that different specialists had different modes of treatment. He thought no one line of treatment could be adopted for all cases. He said that in children he was cutting less than formerly, and that he never cut the tendo-achilles under the one year. Often in talipes time was lost in extension when the knife should be used.

Dr. Temple's paper came next. "A few brief remarks on some of the details which lend success in Abdominal Surgery." One secret, he said, was attention to details, another was experience, another was a good knowledge of the peritoneum and more especially of its delicate epithelial coat. The instruments should be sterilized, the surgeon's and his assistants and nurses hands should be carefully cleansed; the sponges should be boiled and the abdomen around the place for incision made aseptic. It was not necessary as was done formerly, to completely dry the peritoneal cavity, the sponging was often done too vigorously, causing inflammation of the delicate membrane. Where it was indicated, Dr. Temple would flush out the cavity with plain boiled water, moderately hot. This had not only a cleansing, but a general stimulating effect, as well as being helpful in arresting hæmorrhage. He advised the drainage tube in those cases where there had been adhesion with more or less oozing and to be removed within the next forty-eight hours, depending on the color of the fluid. He had not had a case of hernia follow its use. He was not in favor of giving opiates after the operation. No food should be given for twenty-four hours. To relieve thirst a couple of ounces of water with a little salt in it was useful as an enema. The patient should be kept warm. If tympanites appeared he would give calomel followed by mag. sulph.



Dr. Atherton said that he agreed with Dr. Temple except in one point; he would not use hot water to wash out the abdominal cavity if there was no pus or other deleterious matter present. When he did use water he would not use it very hot, as in one of his cases he feared the peritonitis which followed the operation was due to it.

Dr. Howitt asked Dr. Temple if he would remove all the fluid from the cavity after the operation before he sewed up. In regard to the drainage tube he thought that the walls of it should be thick and the holes small, so as to prevent the soft tissues protruding into the opening.

Dr. Powell, of Ottawa, asked Dr. Temple how he would treat the pedicle, and how he treated the abdominal wound externally.

Dr. Powell, Toronto, asked if salt might be advantageously added to the flushing fluid, and what the temperature of the water should be, whether near the highest or lowest allowable temperature.

Mr. Cameron, gathered, although he had not been present, that the points of discussion referred to to the use of sponges and the drainage tube. The practice of making the "toilet of the peritoneum" had fallen into disuse, and he thought, to some extent, unmerited disrepute. This was, perhaps, on account of the way in which the sponging was done: there was danger that the delicate lining of the peritoneum might be rubbed off. He thought it well to leave it as clean as possible, as any blood clots left would make nidus for germs. If there was much irrigation, his practice was to pass a sponge into Douglas' pouch, and also one into the interior clude sac which he removed just before the completion of the operation. Regarding drainage tubes: he said they might be a source of infection.

Kelly had pointed out that the tube was a source of danger. He advised that it be removed as soon as possible, and in regard to its use, he would reverse the old maxim "when in doubt use the drainage tube," to "when in doubt do not use the drainage tube." He found that if left in for a period not exceeding 48 hours, it did not militate against the closure of the wound. For the immediate purpose of getting rid of deleterious material, from the operation or for warning one the presence of hæmorrhage, the drainage tube was very serviceable. If there were any holes in the side of the tube, they should be as small as possible. If one feared that the lower end would be plugged by soft tissues, it might be obviated by filling the tube with iodoform gauze, allowing the end of the gauze to extend beyond the tube. It would then also establish capillary drainage.

Dr. Temple closed the discussion by saying that he would not use hot water, but warm water. In the case of a simple cyst he would not use any. He used silk worm gut in stitching up, then he sprinkled on the wound dry iodoform and applied a dry dressing.

In reply to Dr. Powell, of Ottawa, he said that the treatment of the pedicle did not vary much now, that he treated it by simple dropping it back into the cavity after ligation. He ligated by the transfixion method, and did not sear the stump in simple cases. Respecting Dr. N. A. Powell's point, he said he thought salt might be added without the slightest injury. With regard to Dr. Howitt's question, he said he allowed most of the water to run out and squeezed a good part of the rest out by pressure on the sides of the abdomen. If there was a little left he would draw it off through a drainage tube by means of a glass sucker. He advised the use of a small drainage tube. He could not tell the exact temperature, as he merely tested it with his hand.

Dr. Mackenzie followed by reading a paper on the mechanical treatment of tuberculosis of the knee-joint. The Doctor had four patients present in varying stages of the disease wherewith to shew the nature of the splints used. He first described the mechanism of the joint. It was the joint most often affected by this disease. Fortunately, if (the joint) could be put at rest without confining the patient to bed. The two points in the treatment were to allow the patient to walk without putting the foot of the affected limb to the ground, and in cases of flexion with sub-luxation to correct them. The first was accomplished by the use of a Thomas' splint, which the speaker described. The second was accomplished, if the case was not gone far enough for operation, by employing continuous traction from the bottom of the splint. When convalescence had taken place pretty well, the Dr. showed how to modify the splint so that part of the body weight might be transmitted through the affected limb to the ground. The cases, whose histories were given fully in the paper, were very instructive.

The report of the nominating committee showed that Dr. L. McFarlane, of Toronto, had been chosen as the next President. He was duly installed.

After listening to the report of the General Secretary, which was a full and able one, and to the reports of the various committees, and to the general routine closing matters the convention was adjourned.