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Original Communications.

SOME POINTS IN THE SURGERY OF THE KIDNEY.*

BY JAMES F. W. ROSS, M.D., Tor.

Associate Professor of Gynecology, Toronto University.

It is impossible to take up the subject of renal surgery except very shortly, in the time at our disposal. To place the subject before you, I intend to draw upon my own experience and that of others in this field.

"Renal surgery dawned on the 6th of August, 1809," says Henry Morris, "when Gustave Simon, of Heidelberg, removed, by the lumbar method, the kidney of a woman who had a ureteral fistula." It had been stated long before, that he who would extirpate the kidney in the human subject must be a madman and a dreamer. We now know that operations upon the kidney are among the most satisfactory and successful performed by the modern surgeon.

GENERAL TECHNIQUE.

The usual technique is carried out for the sterilization of the skin. Operations upon the kidney are usually performed by means of the incision through the abdominal cavity, or the incision in the loin. Incision in the loin is the one most frequently employed. The incision in the right linea seminalis is generally used for the removal of large tumors of the kidney. The lumbar incision has a great many advantages, and, if properly made, ample room can be obtained through which the subsequent manipulations can be carried out.

*Read at meeting of Toronto Clinical Society.

I place the patient on the opposite side to that on which I intend to operate, in a semi-prone position, over a well padded elevated block and sand bags. She is raised sufficiently to produce tension of the quadratus lumborum muscle. The edge of the quadratus lumborum then acts as a guide in the performance of the operation. The incision is made to cross it towards its upper part, and is allowed to swing well away from it downwards and inwards after the crest of the ilium has been closely approached. Unless precautions are taken to bring this incision well down before curving it inwards, the operator is almost certain to invade the peritoneal cavity. The peritoneum can be frequently seen, and the liver can be seen moving with the respirations beyond it. If the peritoneum is cut into, it can readily be closed by catgut suture before anything further is done. The fascia is cut through, and the deeper structures are pulled back by means of the finger. The fascia here surrounds the quadratus lumborum muscle and forms a sheath, just as it does with the rectus muscle in front. If more room is required the incision can be continued upwards and backwards to the edge of the last rib. The incision into these structures increases the wound to a much greater extent than one would suppose from the length of tissue cut through. The rib has been resected, but this can only be necessary in patients who are very closely coupled, or, in other words, in patients who have a very short loin. An increase of the incision downwards does not give much more room around the kidney, but it enables us to deal with the ureter and to trace it downwards to the bladder.

The incision below can be carried across parallel to Poupart's ligament, about an inch above it, and as far as the internal abdominal ring. Such an incision may seem very formidable, but it produces no particular ill effect upon the patient. The yellow fatty capsule of the kidney bulges readily into the wound; this is torn through with forceps, pulled upon, and the kidney soon presents itself in the opening.

NEPHRORRHAPHY, OR NEPHROPEXY.

There are, in surgery, operations that are lauded by some operators and condemned by others. It is difficult to understand how two truthful men can recount such dissimilar experiences. The operation of nephropexy is one of these operations. Its performance is satisfactory in the hands of some, and unsatisfactory in the hands of others. While Morris is loud in his praises, Tait has remarked that out of seventy-four operations performed up to that time, there were three upon which he looked back with inexpressible regret. These cases were

ones in which he was induced, by the excessive pressure of other people, to perform the operation of nephropexy. He says: "I do not know any subject upon which more nonsense has been written than that of movable kidney. I have said over and over again that, in my experience, all enlarged kidneys become more freely movable in the horizontal direction than they are normally. I am still of the opinion that the condition of mesonephron, which we know of only in museums, is not a matter of surgical importance. Yet, in spite of this, I have been persuaded to perform three of these useless and unscientific operations, with the result that not one of the patients has been benefited in the least. I shall have nothing more to do with fixing kidneys."

In a reprint before me, from the *Medical News*, some cases are detailed by one operator, and in each of these cases there was a fabulous amount of trouble.

CASE 1—Chronic metritis and ante flexion. Curettage and amputation of the cervix. Cysts of both ovaries; bilateral ovariectomy and ventral fixation; diffuse chronic nephritis; movable right kidney, right nephropexy. Finally, perfect health.

CASE 2—Right movable kidney, left movable kidney, endometritis, salpingo-oophoritis sinistra; nephritis diffusa chronica; hysteria; bilateral nephropexy. Right kidney again became movable. History ends.

CASE 3—Movable right kidney; chronic interstitial nephritis; endometritis; bilateral salpingo-oophoritis. Nephropexy. Symptoms disappeared for eight to ten months; kidney again became movable as ever.

CASE 4—Right and left movable kidney. Chronic appendicitis. Bilateral oophoritis; chronic nephritis; bilateral nephropexy. Pain persisting in the left kidney, mark you, disappeared after inversion of the vermiform appendix on the right side, and breaking up of ovarian adhesions.

CASE 5—Movable right kidney; chronic metritis; chronic pelvic peritonitis; chronic appendicitis; chronic interstitial nephritis; nephropexy. Curettage of the uterus; amputation of the cervix.

It is to this sort of thing that Mr. Lawson Tait refers. The above detailed cases are neurotics, patients suffering from neurasthenia who were treated in the olden days, before the dawn of aseptic surgery, by the old-fashioned family physician, and were cured without surgical interference. If you desire unsatisfactory results, operate on such patients. If you desire to be surgically busy, operate on such patients. I, myself, am not anxious to treat these patients in this way, and will operate on no more neurasthenics for the relief of symptoms that are

supposed to be due to somewhat movable kidneys. Fortunately, or perhaps unfortunately, patients can go through such ordeals and recover health.

I have made a calculation that one operator has seen 3,593 cases of movable kidney, according to his own statements.

The first operation, as performed by Hahn, consisted in drawing the fatty capsule of the kidney taut and stitching it into the wound. It was soon found that this did not hold the organ in place. The kidney was then stitched into the wound, some stitching it to the skin and others to the transversalis fascia and aponeurosis of the transversalis muscle. It was still found that if the sutures were removed, and if the wound was aseptic and no suppuration was produced, the kidney became again movable. I have endeavored to keep the kidney in place by leaving the sutures in for several months, with the ends projecting through the skin. I found it difficult to remove these sutures, and even after they had been removed, the kidney, in some cases, became again movable. I am convinced that nothing but the buried suture will hold the organ in place, and that the suture must go deeply through the renal structure and must include plenty of the tough fascia or aponeurosis above mentioned.

Many objections have been raised to the buried suture. Sinuses were found that continued to discharge for a long time, subsequent to operation; the sutures were no doubt infected. Fenger says that it is impossible to operate upon the kidney without meeting with infection. He considers that the infection is in the urine. The stitch that is less likely to become infected, than any other, is the silkworm-gut suture, or the silver wire. Silkworm-gut suture answers every purpose, but, unless carefully managed as to the knot, is liable to produce considerable irritation. Morris prefers silk. He states that he has had ample opportunity of observing the silk a long time after the performance of the operation, and has found it nicely imbedded in thickened inflammatory tissue, doing its work well and holding the organ up in its place. If a large amount of suppuration is produced in the wound the kidney will undoubtedly remain fixed, but such an amount of suppuration endangers the life of the patient.

I have had an opportunity of observing this fixation of the kidney following suppuration in the wound. I operated on a Mrs. D. and she very nearly lost her life as a consequence. Gauze was packed down into the wound to favor healing by granulation. The wound suppurated. She recovered, and some years after again entered the hospital, suffering from what we supposed was tubercular meningitis. At the *post mortem* examination the kidney was so firmly fixed that it could

scarcely be torn away from the side. I must say, however, that the after history of most of my cases has been unsatisfactory.

The operation is one that can be easily performed. The kidney can be brought out on to the surface of the loin and thoroughly explored; the suturing can then be begun. When sutured it should be placed about in the normal position. The mortality of the operation is practically nil.

Because the kidney became movable after operation, Vulliet, of Geneva, suggested that it should be fixed by transplanting through its substance a slip of the tendon of the erector spinæ muscle. This method does not seem to have found favor. Operators thought that it was necessary to strip away the capsule from the kidney in order that the bare kidney substance could become fixed in the wound. I am satisfied that this is not necessary.

NEPHROTOMY.

It is to be hoped that a greater acquaintance, on the part of the profession, with diseases of the kidney will enable us, as surgeons, to deal with these cases before the organ has been damaged to any very great extent. We do not see as many cases of suppurating kidney and advanced septicemia as we saw a few years ago. Our methods of diagnosis have been improved and, as in the abdominal cavity so in operations on the loin, the exploratory operation has come to stay. When, however, a tumor is to be found, no one hesitates to advise immediate operation.

Tumors of the kidney can readily be differentiated from tumors of other organs, and even though at times it is impossible to differentiate these growths, surgical interference is urgently called for. I have, myself, been unable during the performance of an operation to decide between suppurating gall-bladder and suppurating kidney. During the first part of the operation I thought the tumor was one of the kidney, then felt disposed to believe that it was a tumor of the gall-bladder, then finally satisfied myself that it was kidney, and after opening it removed several gall stones. The only relief to be obtained was by a surgical procedure; different, it is true, in the two instances. But, as a rule, we are able to satisfy ourselves that a fixed tumor in either loin, extending through to the palpating hand behind, is a tumor of the kidney, and if pus is found in the urine, especially in acid urine, the diagnosis is complete, or at any rate we think so. But, within the past week, I have had a rude awakening in a patient passing pus with acid urine, and with a mass in the right loin extending through to the back. I operated, and found the mass

to be an enormous tongue of the liver projecting down in front of the right kidney, extending fully to the crest of the ilium. The origin of the pus has not yet been determined.

An incision into a tumor of the loin is not free from danger. If such tumors be malignant and simulate pus collections, primary incision may be accompanied by uncontrollable hemorrhage. This occurred in one case that had been under my care, after operation was performed on the patient in a neighboring city. I was satisfied the tumor was malignant; others thought it was a hydronephrosis. The young lad bled to death after nephrotomy. The operation was performed by a most eminent surgeon. The tumor proved to be one of villous cancer of the kidney.

I saw another case in which an aneurysm was taken to be a large kidney. As a rule, however, the kidney tissue has an appearance of its own, just as placenta has an appearance of its own and enables us to distinguish it from a piece of beefsteak. If the kidney is thoroughly examined before any incision is made into its substance, the operator should be enabled to diagnose between fluid collections and malignant growths. Tubercle produces a peculiar appearance resembling the arbor vitæ; on the surface the tubercular kidney is mottled with these patches. A kidney containing pus fluctuates in either one or more places and is enlarged. An exploring needle should always be used, if there is any doubt, before the scalpel is inserted. I pass the scalpel and then push in a pair of artery forceps, open the blades and draw them out so as to tear an opening through the kidney structure that allows a free escape of pus. If a stone is found in the centre of the abscess it is removed. If cheesy *debris* or tubercular material is present, the abscess cavities are scraped. The operator must endeavor to enter all abscess cavities. Unless this is done the fever will continue and the patient will not convalesce rapidly.

If the kidney be hydronephrotic an effort should be made to ascertain the cause of the trouble. If nearly all the kidney structure is destroyed it is wise to remove the kidney. If, however, a large portion of kidney structure still remains, partial removal of the organ is in order, or the sac may be fastened, as in pyonephrosis, in the wound and drained. Before this is done it is advisable to catheterize the ureter. If the ureter has been blocked by a stone the stone should be removed. The urine then passing by the natural channel into the bladder, the healthy structure of the hydronephrotic kidney may still be of great service to the patient in his subsequent lifetime.

The tendency of all operators should be conservative. There was a time when the kidney was removed because it was movable. Such an operation, at the present day, would not for a moment be considered.

The advisability of draining a hydronephrotic kidney, temptingly movable and easily removable, was impressed upon me by one of my cases. A young girl had a tumor in the right loin which was supposed by some to be an ovarian cyst, by others to be hydronephrosis. I operated through the loin, feeling satisfied that the tumor was one of the kidney, tapped the tumor and drew it out; with it came the kidney. A ligature could have been thrown about the pedicle with the greatest ease, and the whole kidney could have been removed, but, imbued with the force of Mr. Morris' statement, that we should grow more conservative in these cases than we had been in the past, I decided to fasten the cyst wall in the wound. Several of my confrères thought that I should have performed nephrectomy. Two weeks after the first operation, the temperature became elevated and a swelling appeared over the other kidney, and abscess formed in it. This had evidently been forming coincidentally with the one on the right side. I opened and drained this abscess and was now satisfied that the disease was tubercular, although at the first operation I thought the cyst was scarcely of tubercular origin. The patient has since succumbed to pulmonary phthisis.

We must always remember that in operations on tubercular kidney, there is a danger that the other kidney is already affected. Up to the present time I have always refrained from removing the tubercular kidney as a primary operation, unless it was entirely disorganized at the time. On two occasions the kidney was so disorganized that nothing but a shell was left, with no secreting structure, and immediate nephrectomy was performed. The patients recovered from the operation; one is still living and the other has succumbed to pulmonary phthisis.

In all the other cases of tubercle simple nephrotomy has been performed, and the kidney has been taken out at a subsequent period when the patient has recovered from the emaciation and loss of strength consequent upon the septicemia, when the strength is much better able to withstand the shock of the more serious operation. Even though the tubercular kidney is removed, we must take the risk of acute tuberculosis and this tuberculosis may set in after a nephrotomy before the convalescence is completely established.

It is marvellous to note the improvement of these patients after the pus has been drained from the kidney. They put on many pounds in weight, and begin to look robust and hearty.

It is much more difficult to remove a kidney after it has been nephrotomized. If hemorrhage is troublesome after nephrotomy, it can usually be controlled by means of packing, together with a pad in front of the loin and a firm bandage. If the hemorrhage is arterial, forceps may be applied on the bleeding vessels, and left *in situ* for twenty-four hours. I have con-

cluded that it is always possible to control hemorrhage in these cases if the kidney be properly exposed, and the proper means to control the hemorrhage be adopted. I have left six or eight forceps hanging out of the wound just as we leave forceps in the vagina after the performance of a vaginal hysterectomy. Forceps can be applied where it is difficult to fasten a ligature. But surely, with forceps and catgut ligatures and packing, no patient should be allowed to bleed to death, nor should nephrectomy become imperative.

It is not necessary for me to delay you with the subsequent details of this operation. A drainage tube is usually placed into the lower part of the wound, outside of the kidney, and another into the different abscess cavities. These may or may not be irrigated, according to the leanings of the surgeon in charge.

Death rarely results from nephrotomy *per se*, but results as a consequence of the gravity of the disease that is present.

PARTIAL EXCISION OF THE KIDNEY.

Portions of the kidney may be cut out. This has been done on many occasions. A V-shaped piece may be taken out, containing a tubercular focus, and the edges and deeper structures may be brought together by means of catgut sutures to check the hemorrhage. Catgut can always be applied to renal vessels without producing any nucleus for the subsequent formation of stone. The catgut is absorbed and disappears.

Many of these cases on which such operations have been performed, have healed without sinuses. In injuries of the kidney it may be possible to perform partial excision. When innocent growths are found they may be removed.

NEPHRECTOMY.

The technique of this operation is difficult in some cases. When the operation is performed through the abdominal cavity, the peritoneum is incised over the tumor, and stripped backwards, so that the kidney lies free. The vessels are then isolated, the ureter is tied off or removed if diseased; if not removed, some operators prefer to bring the end of the ureter into the wound so that there may be no septic nucleus left behind. The vessels are then ligated, either by means of a blunt aneurysm needle carrying the ligature around them, encircling them *en masse*, or they are tied individually, while the pedicle is compressed by forceps. The loose portion of the peritoneum that formerly covered the growth, may now be allowed to drop back with or without suture of its edges by running catgut sutures. The blood that may clot in this

pouch should be removed, and any actively bleeding vessel should be controlled by ligature to prevent a subsequent deposit of clot there.

When the operation is performed through the loin, the incision must be freely extended downwards and inwards as previously described. Wide retractors are needed to hold back the peritoneum and the enclosed intestines. The kidney can be brought well out on the surface of the loin. Care must be taken not to exert too great tension on the pedicle. The vessels are isolated by means of dressing forceps and the handle of the scalpel; the ureters are also isolated and ligated or removed.

The operation is a very difficult one to perform if old abscesses have been discharging through sinuses and, as a consequence, much septic material has been deposited in the surrounding tissues. As a consequence of this septic infiltration, the tissues become cartilaginous. The mouths of the capillaries seem to remain open, and they pour forth blood freely. The bleeding is a considerable factor to be dealt with. Nothing but a rapid operation, under such circumstances, will save some of these debilitated patients. When the pedicle has been reached, the kidney tissue and the surrounding tissue supplied through it, ceases to bleed. The pedicle, in many cases, is found friable and infiltrated with septic material. In ligating it, a large-sized ligature should be used in order that pressure may be produced, and that the tissue may not be cut into. After the kidney has been removed, if the fatty capsule still remains movable and normal in appearance so that it can be drawn forward, it should be stitched to the skin. In this way a pouch is formed that may act as a guide to the stump in case any secondary hemorrhage supervenes. All actively bleeding vessels should now be controlled before the wound is finally closed. This precaution should not be neglected. If the fatty capsule forms the above-mentioned pouch, any infection produced by the ureter is likely to find its way readily to the surface. Sometimes infection produced deep down in the lower part of the wound by a contaminated ureter, may be troublesome. I have seen such suppuration burrow down to the pelvis, and produce a prolonged and tedious convalescence.

The shock of a nephrectomy, as a rule, is great. The pulse drops to 45 in a minute, and the patient must be rallied by stimulants. Stimulants should be ready, as well as hot water bottles to place about the patient during the performance of the operation. I believe it is wise, under such circumstances, to place the patient's feet in hot water.

To do a nephrectomy on one kidney while the opposite organ holds a calculus puts the life of the patient in great danger.

The nephrectomy may, however, be carried out after the stone has been removed from the other kidney.

I have already said that nephrectomy should not be performed for hydronephrosis except in certain cases. As a primary operation for injuries of the ureter it is unjustifiable. If the patient cannot be relieved by plastic operations then a nephrectomy may be the final resource. Of late I have said that conservative surgery advises the fixation of a movable kidney and not its removal, the thorough irrigation of a pyonephrosis with curettage, or even partial excision, rather than a nephrectomy.

In placing the ligature on the pedicle the novice should be careful to thoroughly isolate the vessels. I lost one patient owing to neglect of this precaution. The tumor was a large sarcoma of the kidney. I had never removed a kidney. It was difficult to reach the upper portion of the tumor owing to the fact that the ribs and the liver were in the way. I sometimes have thought that we get better control of our tumor through the lumbar region than by the transperitoneal incision. A small wedge-shaped portion of the tumor was included in the ligature. I saw this and endeavored to remedy the defect, but the ligature slipped and the woman was almost bloodless within a few seconds. I grasped the vessel with my fingers, mopped away the blood, placed forceps when I could see the stump, placed the ligature and returned the patient to bed. She was almost pulseless. Owing to the hasty and imperfect technique, septic infection of blood clot collected in the space formerly occupied by the kidney set in, the patient developed septic diphtheria of mouth, throat, rectum and vagina, and died.

Several patients from whom I have removed tubercular kidneys are still in the enjoyment of good health. I doubt whether the conclusion that has been drawn, that the mortality of primary nephrectomy is greater than that of secondary nephrectomy, is based upon sound statistics. If primary nephrectomy is performed upon patients, debilitated as a consequence of pus absorption, the mortality will be very high. But, again, the risk of operation is very much increased as a consequence of the fixation of a kidney bound down among septic sinuses. I scarcely think, however, that the one risk counterbalances the other. For my own part I have found it better to do primary nephrotomy and secondary nephrectomy with its accompanying difficulties. A large portion of the weight of responsibility hangs upon the shoulders of the surgeon. If prepared to cope with these difficulties rapidly, carefully, and with the skill acquired by long experience, he can save most of his patients.

Careful estimation of the quantity of urea eliminated should be made before nephrectomy is undertaken. If this is well up

to the average, the operation is attended with much less danger than if the quantity is much diminished.

NEPHROLITHOTOMY.

The surgery of stone in the kidney necessitates a knowledge that enables one to diagnose the condition. There is nothing that disorganizes a kidney more than the presence of a calculus. This disorganization takes place gradually, and if the stone is recognized early and removed, the disorganization is prevented. Operators have been too timid in the past, and it is only in late years that bold surgical procedures have been carried out for the relief of this condition.

Diagnosis.—Tubercle has a tendency to confine itself for a considerable time to the genito-urinary organs on the same side of the body. Stone in the kidney has a tendency to confine itself to one side for a considerable time. As the stone may pass down into the ureter and obstruct it, and as tubercular disease may also descend, the two conditions simulate one another still further.

Morris says that when stone or tubercle of the kidney is suspected in the male, careful examination, per rectum, of the prostate and vesiculæ seminales should be carried out. The presence of minute worm-like threads of mucus, visible to the eye, in the urine, feebly acid, neutral or even alkaline, points to prostatic disease. Urine containing a large quantity of pus and unusually acid, without the presence of these worm-like threads of mucus, points to tubercular disease of the kidney. Such quantities of pus are scarcely likely to be found in the urine if stone in the kidney is present unless considerable disorganization of the organ has taken place. If the stone is in the pelvis of the kidney, the kidney is more liable to become pyonephrotic and more pus, as a consequence, is found in the urine.

Mistakes in the diagnosis are more likely to be made in women than in men, because neurasthenia is more frequently met with in females, and neurasthenic patients are very liable to complain of pains that may simulate closely stone in the kidney. One of the most important signs of stone in the kidney is pain on deep local pressure over a small area below the last rib. When the urine is examined there may be only a microscopical show of blood. Pus, in such cases, is frequently present, and, if present, is found only in a small amount. After exercise such patients may pass a considerable quantity of blood in the urine. If it is now found that the hemorrhage is reduced by rest and brought on again by active exercise, we may be assured that the patient is suffering from stone in the kidney. I have seen such hemorrhage after exercise in cases of stone in the

bladder. This must be eliminated by means of the sound. If no stone is found in the bladder there is likely to be one in the kidney.

We frequently see cases of renal calculus, or its ally, renal tuberculosis, that have been treated for cystitis. Morris is strongly of the opinion that there is no such thing as reflected pain, reflected from one side to the other, and he lays it down as an axiom that the kidney, which ought to be first explored, is the one on the painful side. If both sides are affected, the last side affected should be the one first operated on.

In women an attempt should be made to examine the ends of the ureters digitally. The stone is likely to be on the side on which there is pain or tenderness, or swelling, or a hard contracted condition of the abdominal wall.

One authority states that when calculi have been previously passed, when well marked attacks of renal colic occur, and crystals of uric acid or calcium oxalate are frequently found in the urine, and when the urine is intermittently mixed with a good deal of blood or persistently contains a microscopic quantity, there are the strongest *a priori* grounds for thinking that a stone is present.

It must be remembered that some cases of stone in the kidney are accompanied by nerve symptoms, with or without elevation of temperature. Many of the conditions produced are obscure.

Treatment.—In every case in which a stone is believed or known to be present, the best course is to explore the kidney and remove the stone. This is the opinion of many of the best authorities. Morris says that when, either by accident or systematic examination of the urine, we have cause to suspect the presence of a calculus, we should recommend its immediate removal regardless of the fact that it is not causing renal or transferred pain. He considers that a quiescent calculus is as dangerous to a patient as an unsuspected calculus, and that it ought to be removed. And, further, that the old exploded teaching, that a renal calculus if causing only mild symptoms, should be treated on the expectant plan, should be discarded as unsound in theory and dangerous in practice. We must not wait for these calculi to become encysted or spontaneously expelled.

Surely this is advice worth following, coming as it does from one of the greatest, if not the greatest, of living nephrolithotomists. We cannot be sure that the stone will become encysted, and if no encystment occurs valuable time is lost.

The mortality of these operations shows that a kidney that is not suppurating can be cut into with much greater safety than a kidney that is suppurating or, in other words, that danger

from operative procedures is increased after the disease has progressed to greater limits. Some operators think that it is advisable to rest the patient in bed for a time before submitting them to operation.

Calculus pyonephrosis is produced by long continued irritation. Progressive destruction of the kidney takes place. There is no reason why this should ever occur if physicians would recommend early operations for stone in the kidney. We do not leave stone in the bladder for any length of time after it has been diagnosed, and why should we vary this procedure and leave a stone in the kidney? The failure to find a stone is not a failure of treatment, because there are many curable morbid conditions that simulate renal calculus. These conditions can only be discovered by an exploratory operation. Tuberculous disease may be found and treated; misplaced kidney may be fixed; a solid renal or perirenal tumor may be excised; a tense cyst may be punctured and drained; extravasated blood beneath the fibrous capsule, or in the interior of the kidney, may be let out; suppurating cysts may be opened; adherent kidney may be loosened up from its adhesions; unsuspected stricture of the ureter may be found. (Morris.)

All the authorities are of the same opinion, namely, that many cases in which nothing is found upon exploration are markedly improved. Many have permanent relief from their symptoms. Something beneficial is done by operation. Kendal Franks thinks this improvement is due to the fact that many nerves are divided during the operation.

NEPHROLITHOTOMY OPERATION.

The kidney is exposed and brought out to the loin for inspection. Needling has been advised, but has led many operators astray. The kidney may be opened and no calculus found. Tait says: "I would rather discover the failure with my finger tips than be led astray by prodding the kidney with a skewer."

If the organ is grasped with the thumb and finger before and behind it, so as to control the hemorrhage, it may be split from end to end along its convex border. If a calculus can be felt it may be removed by direct incision over it. This grasping of the kidney with the fingers serves a double purpose, it limits hemorrhage and prevents a small calculus from dropping into the ureter. It is immaterial whether a calculus is removed through the parenchyma or the infundibulum of the kidney. There is no greater escape of urine in one case than in the other if the opening in the infundibulum is properly closed with catgut sutures.

Many cases are recorded in which the kidney has been

explored for stone, and no stone has been found until a more thorough examination was instituted *post mortem*.

Bruce Clarke records an interesting case of this nature. He operated on a patient who had a very movable kidney. The symptoms were pain and a small quantity of blood in the urine. There had never been any pus found. The kidney was needled at the first operation and fastened to the side. Symptoms abated, but recurred, pain was excruciating. At the second operation the kidney was opened thoroughly and examined, but no stone was found. The kidney was removed and after a careful examination a stone, the size of a good sized pea, with prickly spines on its surface, was discovered imbedded in the kidney tissue. The patient's pain disappeared.

Surely this reminds us of the old saying that "the mountain was in labor and brought forth a mouse." It was unfortunate that the stone was not discovered before the kidney was removed. It teaches the lesson that every effort should be made to thoroughly examine the organ before anything further is done.

In all cases the ureter should be catheterized to determine its patency. If this cannot be done through the parenchyma of the organ, an opening can be made into the infundibulum, care being taken of course not to open a vein in mistake for the pelvis of the kidney. The catheter can be passed down through this opening and the opening can be subsequently closed by catgut suture.

By means of forcible pressure, good light, competent assistants and ligatures, together with the pressure of the thumb and finger on the pelvic border of the kidney, and through and through sutures of catgut, hemorrhage can be controlled both temporarily and permanently. When the two flaps of the organ are brought together and stitched firmly the smaller vessels cease bleeding; the larger vessels should be controlled before this is done.

Fenger has related a case of gangrene of the kidney following operation. This is a rare occurrence, but we must remember that it can occur.

HYDATID CYST OF THE TAIL OF THE PANCREAS.*

BY GEORGE A. PETERS, M.B., F.R.C.S., Eng.

Associate Professor of Surgery and Clinical Surgery, University of Toronto; Surgeon Toronto General Hospital; Surgeon to Victoria Hospital for Sick Children, Toronto.

E. I., aged 20, a native of Argentine Republic, South America. Came, in May, 1900, under the care of Dr. McKinnon, of Guelph, who furnishes the following history: For two or three years patient has had attacks of pain, obscurely located in the stomach and bowels. In August he had an attack of appendicitis, and was operated upon with a good result. At that time a tumor could be distinctly made out in the left hypochondriac region. The mass was rounded, tense, and slightly movable. It was somewhat tender, and at times was the seat of intense and persistent pain, probably due to pressure on the coeliac plexus (coeliac neuralgia).

September 20th, 1900, the pain became steadily severe, and the tumor seemed to increase considerably in size. His temperature was very variable, ranging from normal to 102.4, the pulse sometimes running as high as 110 or 120.

October 7th, morning temperature, 102°; evening, 104°; pain and distress very great. Dr. McKinnon aspirated the tumor, which he had correctly judged to be cystic, and removed twenty ounces of limpid fluid, faintly alkaline, odorless, free from albumen, and with specific gravity 1012. No microscopic examination was made. Very considerable relief followed the aspiration for some days, but the cyst slowly filled again, and the temperature and pulse showed a continuation of the disturbed health which was present before the operation of tapping.

October 29th, 1900. First seen by the writer, in consultation with Dr. McKinnon. The condition made out was as follows: Patient rather thin; confined to bed. Suffering from fever, with evening temperature reaching 104. Pulse generally over 100. Some sweating. The urine is normal.

Local Conditions.—A rounded tumor, about as large as a coconut, can be felt below the ribs on the left side, with its centre about midway between the nipple and sternal lines. The mass is tense to the feel, and elastic; but no distinct sense of fluctuation can be elicited.

Its relations to the pancreas are determined by the easy detection of stomach resonance above the tumor, and between it and

* Read at meeting of Toronto Clinical Society.

the liver, and of colon resonance below. For the purpose of clearly making out the line of the colon, air was injected into it, per rectum, as recommended by Kocher.

Stomach resonance can also be detected between the tumor and the normal situation of the spleen, while the kidney is excluded as the seat of the disease by the presence of colic resonance in the flank below the last rib, as well as between the normal area of renal dulness and the tumor.

By pressing the tumor very firmly from the front, it can be felt at the back, below the twelfth rib. The mass descends very slightly on deep inspiration, but is clearly attached to the posterior abdominal wall. No pulsation can be felt.

Having, by careful differentiation, decided that the cyst was connected with the tail of the pancreas, we determined to open it, if possible, from behind, according to the advice and practice of Cathcart and Caird, of Edinburgh.

Operation.—An incision, about three inches long, was made from the margin of the erector spinæ forward, about parallel to the twelfth rib, and curving slightly upwards around its end in the direction of the margin of the costal cartilages. On rapidly deepening the wound, the lumbar fascia was divided, the colon displaced forwards with the peritoneum, and the kidney, surrounded by its fat, was found lying in its normal position, and obviously quite healthy. The further dissection was done largely by the finger and the handle of the scalpel, keeping in front of the kidney and well clear of its vessels.

On pressing the finger, upwards, forwards and inwards, the cyst could now be reached when very firm pressure was made from the front. A long hypodermic needle was inserted, and a very peculiar, dirty-grey fluid was withdrawn. With the needle as a guide, the cyst was incised, with some difficulty, owing to its depth from the surface and the toughness and resistance of its wall. To one accustomed to dealing with hydatids I have no doubt that this condition of toughness would immediately have suggested the true nature of the cyst, but as hydatid disease is very rare in this country, this being our first experience of it, we did not recognize the parasitic character of the neoplasm until the hooklets were discovered subsequently under the microscope.

On opening the cyst, some three or four ounces of sero-purulent fluid escaped, in which were suspended shreds of yellowish-grey matter, which were, as we now know, probably disintegrated daughter cysts.

On passing the finger into the cavity it was found to have a thin but very dense and resistant wall, which was roughened by the presence of broken down material similar to that which escaped. A microscopic examination of the contents showed

numerous brood-cysts, with their attached embryos in varying degrees of disintegration, as well as multitudes of the characteristic hooklets. It is highly probable that the process of tapping three weeks previously had resulted in the death of the parasite, as frequently occurs.

Note on November 5th. The patient shows slow but progressive improvement since the operation. The pain has disappeared and the appetite is returning. The wound continues to discharge some pus, and the cyst wall is coming away in shreds. The evening temperature still reaches 102° - 103° .

January 1st, 1901. The patient has recovered sufficiently to leave the hospital and resume his work as a student, still, however, with a sinus, which discharges a small amount of fluid.

From his history, it is evident that the patient brought the parasite with him from the Argentine Republic. Nevertheless the disease appears to be quite uncommon in that country. Dogs appear to be almost the only animals in which the sexually mature form of the *taenia echinococcus* flourishes, while the herbivora and man act as the alternate hosts of the bladder form (the hydatid). However, there is very little sheep-ranching done in the district from which the patient hails, nor are dogs numerous or closely associated with man as they are among the dwellers in the more frigid zones.

Hydatid of the pancreas is extremely rare, though not unknown. In a series of 986 cases of hydatids in man collected by Neisser, the distribution is as follows: Liver, 451; lungs and pleura, 84; kidneys, 80; muscles and subcut. tiss., 72; brain, 68; sp. cord, 13; female organs and mammæ, 44; male organs, 6; pelvis, 36; organs of circulation, 29; spleen and bones, 28; eye, 3; pancreas, *none*.

However, Graham, the Superintendent of Prince Alfred Hospital, Sydney, Australia, who has had a very wide experience of hydatids, says in his excellent monograph on "Hydatid Disease," "The hydatid is sometimes found in the pancreas. I have observed it as a cyst about three inches in diameter, replacing the head of the organ. . . . The diagnosis of a hydatid cyst in the pancreas will depend on the size it has attained, and on its position in relation to the organ, and whether the organ has become sufficiently involved so as to have its function completely interfered with."*

The diagnosis of hydatid cyst of the pancreas in the case above reported is, of course, open to the criticism that there was no actual dissection to establish its location, but the clinical signs and symptoms seem to me to be sufficiently conclusive.

*Graham, Hydatid Disease in its Clinical Aspects. Young J. Pentland, Edin., 1891.

In regard to treatment of hydatid cysts, the very full discussion of Graham may be briefly summarized thus: Medicinal treatment by kamala, turpentine, iodide and bromide of potash, mercury, etc., is "absolutely without benefit." Practically the same may be said of electricity. Tapping has many advocates, and has scored some reliable cures; but the operation is not free from dangers of shock, peritonitis and hemorrhage, and a number of very sudden deaths are recorded.

By far the best results have followed direct incision with as complete an evacuation of the cyst contents as possible, and efficient drainage. Where it is possible to do so, the cyst wall should be stitched to the edges of the external wound at the time the incision is made, great care being observed to prevent escape of the cyst contents into the peritoneum or pleura. Where a cyst in the abdomen is so situated that its wall cannot be brought up to the anterior abdominal wall, one of two courses may be followed: (1) The operation may be done in two stages, aseptic gauze being packed at the time of the first incision in such a way as to excite adhesions, and thus create a sort of "coffer-dam" approach to the cyst, or (2) the cyst may be opened, as in this case, from behind.

In regard to the treatment of cyst of the pancreas, it seems to me contrary to the principles of surgery to approach it from the front if it can possibly be reached from behind. The pancreas is essentially a retro-peritoneal organ, and since in its enlargement a cyst of that organ almost always approaches the anterior abdominal wall by crowding the stomach upwards and the transverse colon downward, to reach it by a transperitoneal route involves dividing the peritoneum four times, viz., the parietal layer, two layers of the gastro-colic omentum, and the layer covering the cyst.

Moreover, it is easy and safe, by blunt dissection, to raise the peritoneum from the kidney and posterior wall of the abdomen, and I submit that any cyst of the pancreas which can be palpated from behind, or even *from the side*, can be opened and drained more effectively and more safely by that route than by the transperitoneal route. The difficulty would perhaps be greater where the cyst occupied the head of the pancreas, since the duodenum and the portal vessels would require to have due consideration given to their position. However, cysts of the head of the pancreas are rare, and though I know of no data on the matter, anatomical considerations would lead one to expect that the tendency of the cyst would be to crowd these structures aside, so as to allow it to be approached from the loin, as on the left side.

A CASE OF DYSTOCIA FROM UTERUS BICORNIS WITH CONTRACTED PELVIS.*

BY K. C. McILWRAITH, M.D., TORONTO.

Mrs. S—, aged 23, primipara. The history of pregnancy was as follows: She continued to menstruate for three months after the inception of pregnancy. She then, as far as she could remember, missed two periods. Menstruation returned twice, and was absent during the last ten weeks of gestation.

I saw her about noon on October 25th. She had then been having labor pains for seven hours. The cervix was not taken up; the os admitted one finger. The abdominal walls were not thick, but the presentation was, nevertheless, difficult to make out. I finally determined the following points: Head presenting, not fixed in the brim; back to the right; breech in the extreme left hypochondriac region. At the place where one should normally have felt only the arch of the back was a large mass extending up to the right hypochondriac region, where one would expect to find the fundus uteri. The mass was especially prominent during uterine contraction, of doughy consistency, not resonant on percussion, and over it the uterine soufflé was heard with especial clearness.

The pains continued all day, and by 10 o'clock at night the liquor amnii was coming away, the head was still freely moveable above the brim, the cervix was obliterated, but the os was only the size of a quarter dollar.

By noon the next day it had dilated to the size of a half dollar, and the patient was becoming exhausted, having now been in labor thirty hours.

I had the patient anesthetized by an assistant, introduced my hand partially into the vagina, and dilated the os manually. A posterior position of the occiput was easily made out, and as easily corrected by rotation. By means of the hand in the vagina I made out a slightly shortened conjugate. The question of forceps or version arose, and I determined to decide this by means of the measure recommended by Dührsen. The patient was drawn to the edge of the bed and her legs lowered into Walcher's position. I endeavored to force the head through the brim by abdominal pressure. This failing, I resolved on version, which was easily accomplished, as there was still some liquor amnii remaining, and the body of the child extracted. To get the head through the brim it was necessary to resort to traction with the fingers of one hand in the mouth and the fingers of the other over the shoulders. The child was resusci-

* Read at meeting of Toronto Clinical Society.

tated without difficulty. Manual removal of the placenta was required. On the introduction of the hand into the uterus a septum was found extending about one-third of the distance down the interior of the uterus. The placenta was adherent in the right cornu, which corresponded to the mass mentioned above, and the breech of the child had evidently been in the left cornu. The mother made an uninterrupted recovery.

The diagnosis of the condition per abdomen was of some interest. I have seen tumors, resembling this one on inspection, caused by intestine distended with gas prolapsing in front of the uterus. They, too, became more prominent on uterine contraction, but were resonant on percussion. Uterine fibroid was excluded by the soft consistency of the mass on palpation. Twin pregnancy was partially excluded by the fact that no fetal members could be made out in connection with the mass and no second fetal heart heard.

It was not easy to decide how to extract. In a flat pelvis the head engages with its antero-posterior diameter in the transverse diameter of the brim, and its bi-parietal diameter in the conjugate. Descent is accomplished by the anterior parietal bone sinking down past the symphysis, and then bulging forward beneath it, thereby allowing the descent of the posterior parietal past the promontory. Those who oppose the use of the forceps in these cases claim that the application of the blades to the head causes a bulging in the bi-parietal diameter and thereby increases the difficulty. Milne Murray* and Porter Mathew† have shown that this is the case if the blades be applied obliquely to the head, but that if one blade be applied exactly over the occiput, and the other over the face, that the parietals overlap the frontal and occipital, and the head increases in its vertical and *not* in its transverse diameters under the pressure of the forceps. Milne Murray has, therefore, constructed axis-traction forceps which are specially adapted for use in such cases. The blade is narrower than usual to favor this method of overlapping. He states, moreover, that the forceps with a pelvic curve of a seven-inch radius grasp the head nearer to the symphysis than to the promontory, and so favor the descent of the anterior parietal bone. The use of this instrument has given very good results in the minor degrees of contracted pelvis.

I did not have a pair of forceps of this pattern with me, and as the head would not pass the brim on pressure from without, I decided on version with the good results recorded.

* "Effects of compression on the fetal skull, with special reference to delivery in minor degrees of flat pelvis."—*Ed. Med. Journal*, November, 1888.

† "Clinical Observations on 2,000 Obstetric Cases."—London, 1898.

Society Reports.

TORONTO PATHOLOGICAL SOCIETY.

The first meeting of the year was held in the Biological Building, Queen's Park, on October 27th, 1900.

Dr. Silverthorne, President, in the chair.

Present: Drs. Oldright, King, Carveth, Clarence Starr, Bruce, Hamilton, Anderson, Greig, Goldie, MacKenzie, W. J. Wilson, Thistle, Rudolf, Primrose, Fotheringham, Peters, Parsons.

Visitors: Dr. Coutts, Dr. Macnamara.

Dr. Silverthorne delivered the presidential address.

Dr. A. T. Macnamara presented a specimen of carcinoma of the stomach, with notes and sections, as follows:

Carcinoma of the Stomach.

J. A., aged 69, farmer. For several years past has had occasional attacks of indigestion, which always yielded to treatment. Last February had another attack from which he partially recovered. Then again in May he suffered from pain in the stomach, anorexia, and loss of strength. The cachexia was marked and I suspected cancer, and asked for a consultation. Dr. McPhedran was called and pronounced it cancer in the lesser curvature of the stomach, which was correct, as the autopsy showed:

Vomiting occurred only once during the disease. No history of tarry stools. The temperature was sometimes elevated for a few days in succession. The patient died on September 4th, 1900.

Post Mortem Report.—The post mortem had to be made hurriedly, as the undertaker had injected the abdominal cavity with a strong solution of formalin. The stomach only was removed, the liver and pancreas being examined *in situ*. There was no appearance of secondary growths in the liver and pancreas, but some of the mesenteric glands were enlarged. The stomach showed a large growth involving nearly the whole of the lesser curvature, but neither the cardia nor pylorus was involved. On opening the stomach it was found to contain several ounces of dark fluid. The growth formed a fungating mass on the internal surface.

Microscopical Examination.—Section shows the growth to be a *columnar-celled epithelioma*. The mucosa shows a layer of normal columnar cells. Beneath the muscularis mucosæ is to be seen a group of cells in what is apparently a transition stage. There is some attempt at gland formation, but the cells are not well-formed, the nuclei being round and not oblong.

Then in other parts are groups or clumps of cells massed together, with a small amount of stroma. There is also an area richly supplied with blood-vessels, but the walls of the blood-vessels are not well defined and the area itself is apparently becoming necrotic.

Dr. Anderson, discussing Dr. Macnamara's paper, called attention to the clinical fact illustrated by this case, that vomiting and other gastric symptoms were usually absent or not prominent if the orifices were not involved.

Dr. Goidie, discussing Dr. Macnamara's paper, cites a case of carcinoma of pylorus, with thickening only, surface being quite smooth. On section showed direct invasion of the wall by small gland-like cells (pancreas), with but little attempt at gland arrangement with lamina, the lymphatic system being almost entirely free, only one gland showing in the gross or microscopically any sign of invasion. This case contrasts markedly with Dr. Macnamara's case, which shows a papillomatous condition in which the carcinoma cells retain their gland-like character with columnar shape, while the lymphatic system seems to be widely invaded, and the small nodes beneath the muscularis mucosæ being to my eye lymph nodes, invaded by slightly altered cells which line the spaces of the node.

Tumor Removed from the Sterno-Mastoid Muscle.

Dr. Primrose presented a tumor removed from the sterno-mastoid muscle.

The case gave rise to considerable discussion as to the causation or torticollis, and its relation with tumors of and hemorrhages into the sterno-mastoid muscle.

Dr. Clarence L. Starr, discussing Dr. Primrose's paper. The possibility of fibrous infiltration following hematoma, being cause of congenital torticollis is very unlikely. Of some fifty or sixty cases coming under my care, not more than two or three gave history of rupture of sterno-mastoid and subsequent hematoma. Rupture of muscle in other region gives no contraction, and hence we should expect none in this muscle.

Dr. Peters, discussing Dr. Primrose's paper. In regard to the question of atrophy or failure of development found on the depressed side in cases of wry neck, I believe the weight of authority shows that the asymmetry is a result of the malposition and not a part of it. In traumatic cases, though the asymmetry is not present at first, it will in the majority of cases become worked in the course of years.

Dr. Fotheringham, discussing Dr. Primrose's paper, reminded the Fellows of the common occurrence of asymmetry and undevelopment of bones, as well as muscles of face and neck on affected side, and asked them to note the bearing of this

fact upon the question of the connection between traumatic torticollis and that of central origin.

Dr. Oldright, discussing Dr. Primrose's paper, said he had used forceps very frequently, and had never seen a case of torticollis as a result. He had seen many cases in older children, and had not found traumatism in any of them.

Molluscum Contagiosum in the Field Sparrow (*Spezella pusilla*).

—DR. MACKENZIE.

The bird from which the specimen was taken was found fluttering in a ravine, unable to fly.

When examined, it was found to have on one wing a tumor about the size of a hazel-nut, with a somewhat smooth surface, containing a cyst-like cavity in its upper portion, the lower portion being quite solid. On the other wing was a similar tumor, but dry, black and quite hard.

The sections shown are from the first tumor, and an examination of them will show the typical appearance of molluscum contagiosum. The section, at its base, shows proliferate epithelium, with characteristic follicular arrangement; and, as we proceed to the free surface, we see all stages of degeneration of the cells, until at the periphery we find the typical molluscum bodies.

The sections show very clearly that the molluscum body is derived from the epithelial cell by a gradual degeneration of the cell. It begins almost in the lowermost layer by the appearance of a vacuole in the protoplasm. This gradually alters until there is a mass of hyaline-like substance, which stains strongly with acid dyes. The nucleus gradually undergoes degeneration, shrinking and becoming irregular in form, not being pressed back against the wall of the cell, as has been described in the development of the molluscum body in man.

These sections show peculiar chrysalloids in almost every cell, which stain deeply with picric acid orange or eosin.

One section shows very well the relationship of the tumor to the feather follicle, a small feather developing in the midst, with the various layers of the follicle definitely infected by the disease.

The section shows nothing which could be interpreted as being parasitic structures, and the gradual development of the molluscum body from a substance which is evidently degenerating protoplasm, would exclude the interpretation given it by Ziegler, Neurier, and others.

The infectivity of this disease in birds has been demonstrated by Croker, and the same investigator has experimentally demonstrated its identity with the similar disease in man.

Dr. Goldie, discussing Dr. MacKenzie's paper, presents two

specimens of molluscum contagiosa, one in adult and another in child, showing distinctly it is simply a degeneration, involving only the protoplasm in the case of the adult, while in the case of infant the degeneration is seen to involve the nucleus in nearly all cases. The same bodies may be found in keratosis follicularis.

Carcinoma of the Bladder.

Dr. H. B. Anderson presented four specimens of carcinoma of the bladder.

Dr. Greig showed specimens of typhoid bacillus, demonstrating the presence of flagella by special methods of staining.

The meeting then adjourned.

H. C. PARSONS, *Rec. Sec.*

MEETING, NOVEMBER 24TH, 1900.

The President, Dr. Silverthorne, in the chair.

The following members were present: Drs. King, Peters, McPhedran, Wishart, Starr, Meyers, McKenzie, Bingham, Bruce, Reeve, Primrose, Rudolf, A. Fletcher, Parsons.

Visitors—Drs. Wagner, Copp, and Ryerson.

Dr. C. J. Wagner was proposed for membership by Dr. J. J. McKenzie, seconded by Dr. G. Silverthorne.

Hydatid Cyst of the Pancreas.—DR. PETERS.

History.—Young man, aged 20. Spaniard, born in South America. In May, 1900, at Guelph, had attack of obscure pain in the stomach and bowels. Was operated on in August for appendicitis. A tumor was then made out. Pain was probably due to pressure upon the celiac plexus. Got worse in September. Tumor increased; pulse was up 20 points; temperature, 102° F., a.m.; 104° F., p.m. Dr. McKinnon aspirated. Fluid sp. gr. 1012, free from albumen, alkaline.

Cyst filled again, and seen October 29th for first time by Dr. Peters. Patient then had a temperature of 104° F.; pulse, 100. Sweats, urine normal, tumor size of a cocoon, stomach resonance above and between it and liver, also after air injected into colon it was outlined. Kidney was excluded. Firm pressure backward brought the tumor to the level of the 10th and 11th ribs. Diagnosed as cyst in tail of pancreas. Opened behind by Greig-Smith's incision. Cyst wall very tough and resistant; was extra-peritoneal. Fluid sero-purulent, oz. 4, with threads of grey matter. Some had hooklets, and were daughter cysts. There is no case recorded of hydatid in the pancreas. Miser, in 968 cases reported, gives liver, 451; lung, 84; kidney, 80; brain, 77; spleen, 28; pancreas, 0. Among other locations, the

tænia echinococcus was found in the dog in Iceland and the cold North; in the sheep in Australia. Dr. Peters exhibited the daughter cysts, and drawings of the echinococcus, and, under the microscope, a daughter cyst, showing the hooklets.

Discussion.—Dr. Rudolf said, Goodhead had said the cyst might be found in any abdominal organ.

Dr. King said: The first fluid was clear, limpid; the last, sero-purulent. Was this due to the aspiration?

Dr. Silverthorne said: If the dog and sheep, with man, completed the life cycle, how did the dog get supplied?

Dr. McPhedran asked if the cystic development was attained in other animals than man.

Dr. J. J. McKenzie said in Australia the shepherds were careful not to drink water because of the eggs.

Case of Cancer of the Uterus.—DR. PETERS.

History.—Age 32. Mother of 2 children. Three years ago, metrorrhagia and profuse loss characterized the periods. She sometime after passed a hard mass the size of an orange, oval, solid. For two and a half years was fairly well; then discharge became sero-purulent and bloody. Curette gave temporary relief. On October 20th, discharge was gangrenous in odor. Temperature, 103° F.; pulse, 120. Scrapings were gangrenous shreds; cancerous patches; did a vaginal hysterectomy.

Specimen.—Cervix abnormally long, three inches; breadth of fundus, four inches; on posterior surface a mass one-half inch in diameter, three-quarter inch long, covered by peritonæum, showing on section a gangrenous mass. Dr. J. J. McKenzie showed a section under the microscope.

Discussion.—Dr. King asked why the cervix was elongated. Passage of a myoma would probably shorten it.

Dr. Bingham asked what were the statistics as to results of operation. No doubt that much pain was saved, and probably a fatal hemorrhage. He had removed a uterus from a woman aged 65, which had almost no cervix.

Reply.—Dr. Peters said he had not looked up statistics. They were unreliable, but there was no doubt as to the propriety of operation.

Two Cases of Duodenal Ulcer.—DR. PARSONS.

CASE 1.—History unsatisfactory. Female, 39 years, alcoholic. July 8th, at 10 a.m., taken into Grace Hospital, in state of collapse. Well the day before. On 9th, at 1 a.m., death occurred suddenly, resembling irritant poison.

Autopsy.—A quarter inch below the margin of pyloric valve was a circular, funnel-shaped opening. Loss of substance in inner coat, a half-inch in diameter; of outer coat, one-eighth of inch.

CASE 2.—Male, aged 29, laborer. At one time he was found in the water closet, having fallen from the seat. In the face was a large quantity of bright red blood, etc. *See report of history.*

Discussion.—Dr. McPhedran: These two cases illustrate the acute and chronic ulcers very typically. The pathology is uncertain quality. The circulation theory is denied by some men. Probably due to arrest of blood supply from any cause, traumatic injury of the mucus membrane and thrombosis of the vessel. Some believe the ulcer due to organism grafted on a localized gastritis in chronic cases. Referred to a case where the thickening in the wall of the stomach, with perforation, led to a diagnosis of carcinoma.

Dr. Peters asked how so much red blood escaped.

Reply.—The hemorrhage must have been very great. There had been no vomiting.

Dr. McPhedran said hemorrhage sufficient to produce collapse had been seen by him, with all the symptoms indicating duodenal involvement.

Dr. Peters: "Does this blood act as an irritant and purgative?"

Dr. King: "Blood drinkers say it is purgative."

Dr. Rudolf said duodenal ulcers were much more common in males; the gastric in females. Was there any explanation?

Dr. McPhedran said men with duodenal ulcers were usually stout men and large feeders.

Polyp Removed from Naso-Pharynx.—DR. GILBERT WISHART.

Dr. Wishart presented a polyp removed from the naso-pharynx of a man aged 26. It was attached by a short pedicle to a point on the septum, close to the level of the soft palate. The growth was lobulated, freely movable, hard, and yellow in color. There was no other pathological condition present, except hypertrophic rhinitis and an anterior deviation of the septum. Growths from the posterior end of the septum are rare. Lennox Brown mentions a lymphoma or polyp attached to the pharyngeal end of the septum, which is really an adenoidal remains. In this case there is no evidence or history of the presence of adenoids.

The specimen will be submitted to a microscopic examination, and reported.

Discussion of Dr. Wishart's communication.—Dr. Silverthorne said the rules ought to be suspended when fresh specimens could be shown. A tumor from the septum, growing anteriorly very rapidly, was malignant, and often recurred.

Dr. Reeve: "It will be interesting to know what it is. It is too hard for myxoma."

Dr. Rudolf was called to the chair.

Melanoma of Rectum, with Metastasis.—DR. SILVERTHORNE.

(To be reported later.)

Discussion.—Dr. Peters said the length of time was not incompatible. He related a case operated on seven times in twenty-five years.

Dr. Reeve said he had removed an eye for secondary glaucoma and melano-sarcoma of coroid. Patient enjoyed good health for fifteen years. Then a tumor of the orbit melanotic was removed from the opposite side. Patient lived two and a half years after second operation. The second was a distinct case from the first operation.

Dr. Peters said from his case secondary growths could take place after many years. He would be inclined to call Dr. Reeve's second tumor secondary, not two primary, as origin must be traceable to pigmented tissue.

Dr. W. McKenzie said under the microscope the cells in the liver did not branch; in the uterus very branched; has the "Habitual" (?) of carcinoma.

Dr. Parsons said it did not follow the rule of primary and secondary growths. Sarcoma in the rectum is pigmented, but in the liver was carcinomatous and less pigmented.

Dr. Reeve asked was it usual to have sarcoma develop on an ulcerative surface? Does Dr. Parsons allow for simultaneous occurrences of tumors in different locations? In a case of tumors in both eyes, both removed, and no intervening tissue involved; immunity for six years. This could not have travelled around by the chiasm.

Dr. King: "Is it inconsistent that there should be two growths in this case—the rectum primary sarcoma; the liver primary carcinoma?"

Dr. Peters asked if Dr. Reeve would say that the case reported by him (Dr. P.), and operated on seven times, was each a separate and distinct primary tumor.

Dr. Rudolf: "Is the distribution in the uterus confined to mucus membrane not very peculiar?"

Reply.—The growths from a tumor of fifteen years' standing were improbable in this case. It was much more probably a rapid growth of tumor, with rapid metastasis. The theory of two independent starting points was possible, but improbable. Sarcoma was probably grafted upon an old, probably syphilitic, ulceration. Sarcoma does not ulcerate. As to the shades of color. It was not uncommon to find shades of color. Why the extension went to the mucus membrane of uterus only he could not understand. Very great differences do exist the farther from the primary growth the extension existed.

Dr. Primrose exhibited two specimens: 1st. Evulsion of the

thumb, with 18 inches of the flexor longus pollicis ; 2nd. Fracture of humerus into shoulder joint, with evulsion of skin high up.

Dr. Parsons related a case.

Society then adjourned.

H. C. PARSONS, *Rec. Sec.*

TORONTO CLINICAL SOCIETY.

STATED MEETING, JANUARY 2ND, 1901.

The president, Dr. W. H. B. Aikins, occupied the chair.

Amputation at Shoulder Joint.

Dr. A. Primrose presented this patient and recited the history of the case. A man of thirty-five years, last fall, while crossing Queen St., was run down by street car, but the motorman did not know that there was some object under the car until he noticed that something obstructed the wheels. While searching for the obstruction, an arm was brought from the kerb, and then the man was found between the front wheels. The arm had been taken off above the insertion of the deltoid, and the tissues were completely cut through. The wheel of the motor had served as an excellent angiotribe, because he had not lost a teaspoonful of blood. When seen by Dr. Primrose at the Emergency Hospital, the arm, or, rather, stump, was a mass of pulpified tissue, the humerus being broken into three pieces. The upper fragment was fractured into the shoulder joint. The condition of the skin was interesting. There had evidently been an evulsive force, a tubular portion of skin being found in the arm completely separated from the soft tissues. The axillary artery was tied high up, and having done that, cut the nerves as high as possible, and then dissected out the upper fragment of the humerus from the shoulder joint. The patient made a good recovery. There was a small drainage tube in for a few days.

Ex-Ophthalmic Goitre, with Report of Two Cases.

Dr. W. B. Thistle reviewed the causes of this disease, and then reported two cases. The first occurred in a man aged 24 years, and the second in a woman aged 34 years. The woman consulted him for weakness and nervousness ; had for some time slight enlargement of the neck, which had recently increased. She was a tall, thin woman, married, having two children. Temperature was slightly elevated ; pulse in the neighborhood

of 120 ; prominent eye-balls. For some time had noticed palpitation, and had experienced fear and a sense of nervousness. The gland was punctured, and a dark brown fluid drawn off. A solution of perchloride of iron was injected. Recovery was complete in this case. The second case gave a history of having had Grave's disease some six years ago. Recovery was complete at that time. When admitted to the hospital this time, the patient showed every symptom of the disease. He had lost forty pounds. Temperature elevated slightly. Pulse varied from 130 to 160 ; no murmurs. Had several attacks of syncope ; also troubled with attacks of diarrhea. The treatment was rest in bed, with iodide of potash and belladonna. There was very little general improvement. The tumor which was present in this case was operated on by Dr. Peters, who removed it, as well as a portion of the gland. The patient is now quite well.

Foreign Body in the Eye with Skiagraph.

Dr. G. Stirling Ryerson reported this case, and exhibited the skiagraph. It is very seldom that we have a foreign body in the eye that it is necessary to take a skiagraph of. This was the case of a man doing work, and it was supposed that a portion of a chisel broke off and struck the eye. . . . It was not certain that the portion of steel was in the eye or not ; and it was a very important question, whether the eye should be removed or not. The injury of the eye was not visible through the ophthalmoscope. The skiagraph was entirely successful, and showed where the body was, and also showed its comparative size and shape to some degree. Immediately after the skiagraph was taken, the eye was removed, and it was found that a large portion of steel was firmly imbedded in the eye, and lying somewhat to the inner side of the optic nerve.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. M. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

Relation Between Tuberculosis and Neuropathy.

Rossi states (1) that there is an important relation between nervous diseases and tuberculosis. These diseases influence one another, follow one another, and alternate one with the other in the same family. Tuberculous patients have neurotic antecedents in 28.6 per cent. of the cases. Nervous patients have tubercular antecedents in 22.6 per cent of the cases. (2) The reason of the relation between neuropathy and tuberculosis must be sought for in the vaso-motor disturbances, and in the disturbances of nutrition, which the changes in the nervous system produce in the organs, thus predisposing the organism to tubercular infection. (3) This relation can be explained by the state of the vagus, which influences nutrition, the functions of the lungs and infection. (4) Perhaps the antagonism, which is said to exist between tuberculosis and cerebral hemorrhage, has no existence. According to Rossi, apoplexy is seen with a frequency of 9 per cent. in the families of the tuberculous, and out of 111 cases of tuberculosis with neurotic antecedents, 35 presented cerebral apoplexy in their families, that is to say, in 31.7 per cent. of the cases. Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

Complete Anuria Without Uremia.

Rénon has observed a case of complete anuria lasting seven days, terminating fatally without uremic symptoms. The patient was an old man, 69 years of age, suffering from right hemiplegia with secondary contracture and weakening of the faculties. His arteries were atheromatous, the heart was enlarged, the aortic orifice dilated, etc., etc. After having had some wandering pains in the right lumbar region, he presented complete anuria without uremic symptoms. The patient died with signs of pseudo-bulbar paralysis on the third day of a second crisis of anuria. At the autopsy, the kidneys were found large and filled with uric acid calculi, the liver cirrhotic, the heart hypertrophied, with atheroma of the mitral and aortic valves; and two foci of softening, one in the left cerebral hemisphere, the other, smaller, in the medulla. Notwithstanding the existence of all these lesions, the patient resisted his

anuria for seven days without presenting the least disturbance. This case supports Widal's ideas as to the complexity of the factors of uremia.

Merklen states that only after eight or nine days does anuria determine uremic symptoms; that therefore we must not be surprised if these symptoms were not found in Rénon's patient, as the crisis of anuria disappeared after the seventh day. Translated from *Giornale Intern. delle Scienze Med.*, by HARLEY SMITH.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF J. CAVEN, W. GOLDIE, AND J. AMYOT.

The Justus Blood-test for Syphilis.

Jones (*New York Med. Jour.*) has recently made a study of the test for syphilis first described by Justus in 1895, and later elaborated by him in 1897. Since that date the only confirmatory report that has been published is that of Cabot and Mertins in 1899.

The test depends on the asserted fact that a single inunction of mercury in all untreated cases of secondary, tertiary, and congenial forms of syphilis causes a reduction of from 10 to 20 per cent. in the hæmoglobin in about twenty-four hours. Justus states that the reduction follows intravenous and subcutaneous injections as well as inunctions, but that the administration of the drug by the mouth has no effect on the blood.

Justus obtained positive results in more than three hundred cases of syphilis. The test was negative in a large series of non-syphilitic cases. Cabot has in part confirmed the results obtained by Justus, although he obtained the reaction in two non-syphilitic patients—one, a case of tertian malaria, and the other a patient with chlorosis.

This test was obtained by Justus also in thirteen out of sixteen cases in which only a fresh chancre and inguinal adenitis were present. Both Justus and Cabot agree that so-called "latent" cases and cases which are subsiding either spontaneously or under treatment do not respond to the test.

During the last six months Jones has tried the test in fifty-three cases, thirty-five of which were luetic, the other eighteen being controls.

The syphilitic cases were subdivided as follows: (1) Seventeen cases of active syphilis not under treatment; of these the test was positive in thirteen and negative in four. (2) One case of active syphilis not under treatment; this case did not respond

to the test. (3) Two latent cases; these were both negative. (4) Eight cases of chancre with adenitis; two of these were positive and four negative. (5) Seven cases of chancre without adenitis; in only one case was the test positive, the others being negative.

The control cases—which included five cases of phthisis, one of typhoid fever, one of apoplexy, one of fractured rib, one Colles' fracture, one of drug habit, one of chancroid, and seven of acute alcoholism—were also negative to the test.

In carrying out the test the hæmoglobin was estimated by Hammerschlag's specific gravity method and sometimes controlled by Von Fleischl's hæmometer. The night before the second hæmoglobin estimation was made forty to sixty grains of unguentum hydrargyri were rubbed thoroughly into the breast.

As a result of his experience Jones concludes that the test is of value in the recognition of doubtful cases of syphilis, although it is not infallible. Further, the test often fails in two classes of syphilitic cases in which a diagnosis is especially desired, viz., in latent cases and in early chancre, and sometimes at the beginning of the secondary stage. He thinks that the reaction is of about the same value in syphilis as the diazo reaction is in typhoid; that is, its presence in association with other suspicious symptoms is of great value, whereas its absence does not by any means indicate that the disease does not exist.—*Amer. Jour. Med. Sciences.*

Papillary Cystomata of the Ovary.

Uffenheimer (*Munchener med. Wochenschrift*) concludes a paper on this subject as follows: Papillary cysts develop from germinal epithelium by a primary outgrowth of the latter in the form of pouches, the first development being purely epithelial. It has not yet been proved that papillary cysts can develop from the epithelium lining follicles.

The sudden appearance of ciliated epithelium in these cysts is in consequence of a metaplasia, which is readily understood by reference to ordinary embryological facts. Papillary outgrowths may grow spontaneously in superficial cysts, or may break through their walls and extend to surrounding tissues. Normal ova may be found in follicles whose walls are partially destroyed. Psammomata are found in the early stages of papilloma, and hyaline degeneration of the vessels is present.—*Amer. Jour. Med. Sciences.*

A New Method of Cultivating the Tubercle Bacillus.

W. Hesse (*Zeitsche für Hygiene und Infectiouskrankheiten*) has conducted experiments with plain agar-agar containing

“Nährstoff Heyden” in place of peptone. He has demonstrated a growth of the tubercle bacillus within a period of five to six hours. In cultures from tuberculous sputa the growth is sufficient for the demonstration of the tubercle bacilli in smears before the growth of other bacteria has masked the conditions. The growth in this short period is shown by the fact that the bacilli in smears from the culture have twice the dimensions of those in smears from the sputum.

He recommends the following technique: Pour 20 c.c. of the medium into a Petri dish, capacity 9.5 cm. in diameter. After coagulation invert the dish, keeping it in this position in the subsequent manipulations. The sputum should be collected in a sterile glass dish. With a platinum-wire loop pick up a drop of the purulent mucus and rub it in a circle over the surface of the medium near the border of the dish. From this circle distribute twenty to thirty flakes of the mucus over the surface of the medium. Place the culture in the thermostat for twelve to twenty-four hours. Sterilize a cover-glass in the flame of a Bunsen burner and place it over the mouth of an open reagent bottle. Remove the cover of the Petri dish and bring one of the flakes of mucus in contact with the cover-glass. Remove the latter by introducing a platinum-wire loop under one edge, tipping the dish toward that edge. The cover-glass will then remain hanging by the opposite edge, and may be removed with forceps. If the flake of mucus does not attach itself to the cover-glass touch the latter with a hot platinum-wire loop at the point where it is in contact with the mucus, in order to melt the medium slightly. Cultures should be kept in a moist chamber.

He gives the composition of the medium as follows:

Nährstoff Heyden	5 grammes.
Salt	5 “
Glycerin	30 “
Agar-agar	10 “
Normal sol. hydrate sol.	5 c.c.
Distilled water	1000 c.c.

The “Nährstoff Heyden” should be dissolved in a little water. After the other ingredients have boiled for about two hours it should be added and the boiling continued fifteen minutes longer. Filter.

Hesse considers the method superior to the inoculation test in many cases.

If the method will enable one easily to find the tubercle bacillus in the “purulent mucus” of tuberculous sputa, in which no caseous masses are present, it will be of much practical value.—*Amer. Jour. Med. Sciences.*

An Experimental Study of Oxaluria, with Special Reference to Its Fermentative Origin.

From a series of experiments upon lower animals, and from a careful study of the subject, H. Baldwin (*Journal of Experimental Medicine*) has reached the following conclusions:

1. As various amounts of calcium oxalate may be held in solution in the urine, conclusions based upon the presence or number of calcium oxalate crystals found therein are of no real value as an indication of the quantity of oxalic acid present.

2. Unless the utmost care is exercised, the results obtained by quantitative estimation of oxalic acid are subject to large percentages of error. This is especially true in the use of Neubauer's or Schultsen's methods, in which the calcium oxalate is precipitated in an alkaline solution.

3. An ordinary mixed diet regularly contains traces of oxalic acid or its salts.

4. A portion of the oxalic acid ingested with the food may be absorbed and reappear unchanged in the urine.

5. The normal daily excretion of oxalic acid in the urine fluctuates with the amount taken in the food, and varies from a few milligrammes to two or three centigrammes, being usually below ten milligrammes.

6. In health no oxalic acid, or only a trace, is formed in the body, but that present in the urine has been ingested with the food.

7. In certain clinical disturbances which in some cases were associated with absence of free hydrochloric acid from the gastric juice, oxalic acid is formed in the organism.

8. This formation in the organism is connected with fermentative activity in the alimentary canal.

(a) The prolonged feeding of dogs with excessive quantities of glucose, together with meat, leads eventually to a state of oxaluria.

(b) This experimental oxaluria is associated with a mucous gastritis, and with absence of free hydrochloric acid in the gastric contents.

(c) The oxaluria and the accompanying gastritis are referable to fermentation induced by the excessive feeding with sugar.

(d) The experimental gastritis from fermentation is associated with the formation of oxalic acid in the gastric contents.

9. The symptoms attributed to an oxalic acid diathesis, with the exception of those due to local irritation in the genito-urinary tract, do not appear to be due to the presence in the system of soluble oxalates, but are more likely to depend on other products of fermentation and putrefaction.

An Inquiry into the Role of the Domestic Animals in the Causation of Typhoid Fever.

Wm. Royal Stokes (*Maryland Med. Jour.*, Nov., 1900.) reviews the literature with regard to the occurrence of typhoid in animals of natural or experimental origin. He comes to the conclusion that the lower animals are insusceptible. He further concludes from his own experiments as follows:

"In our experiment we have endeavored to produce infection through the natural route and by natural means by simply allowing the various animals to take in very large quantities of typhoid bacilli in their daily food. Although at least 500 colonies from the feces were carefully tested, we were not able to demonstrate the presence of any typhoid bacilli in two chickens, two white rats, two rabbits, two guinea-pigs, one calf, and two pigs. Although we have not employed a large number of animals, we feel justified in expressing the opinion that the typhoid bacillus cannot, as a rule, maintain its struggle for existence in the intestines of the domestic animals. We therefore conclude that the dejecta of animals play no considerable part in the distribution of typhoid fever."

Results Obtained by Anti-Typhoid Inoculations in the Be-leaguered Garrison in Ladysmith. (*Gazette des Hopitaux*, July 27th, 1900.)

Men inoculated, 1705; typhoid cases, 35 (1 in 48.7); deaths, 8 (1 in 213). Men not inoculated, 10,529; typhoid cases, 1,489 (1 in 7.07); deaths, 329 (1 in 32). Officers inoculated, 44; typhoid cases, 9 (1 in 5); deaths, 2 (1 in 22). The difference in the results with officers and men, the writer thinks, may be due to inoculation of some of the former with anti-typhoid serum, and not with the vaccine consisting of a sterilized typhoid culture. The date and place of inoculation of five officers in the number attacked by fever are set down as unknown.—*St. Louis Medical Review*.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
H. C. SCADDING AND K. C. McILWRAITH.

Observations on the Obstetric Surgery of Pelvic Contraction.—

By DR. CHARLES JEWETT.

The opinion seems to be that pelvic contraction is very rare in this country. The author believes, however, that the frequency of this anomaly does not differ materially from that in the old world. It is present in from ten to fifteen per cent. of all parturients. There is urgent need of more systematic pelvimetry in our hospitals and in general practice. The minutiae of pelvimetry are considered. Among the more useful indications of pelvic contraction at labor are the following: (1) Failure of the head to engage during active labor. (2) Failure to engage the head by well-directed suprapubic pressure. This is a diagnostic point which may often be employed to advantage in the few weeks immediately preceding labor. (3) Failure of tentative traction with forceps. In partial engagement of the head, the latter should always be tried with the aid of the Walcher posture before resort to cutting operations. The methods of delivery in pelvic contractions, are (1) spontaneous delivery; (2) craniotomy; (3) the induction of premature labor; (4) symphysiotomy; (5) Cæsarean section. Each of these subjects is discussed in the article, and the usual text-book comments are made thereon.—*Brooklyn Med. Jour.*

Extra-uterine Pregnancy After the Fifth Month.

F. Jayle has observed in twenty-nine cases of tubal or intraligamentous pregnancy that the danger of serious complications diminishes after the first months of ectopic pregnancy. The death of the fetus at the ninth month is seldom followed by accidents. On the contrary, the patients who were not operated on at once, seemed to benefit by the delay, allowing time for retrogression of the placental circulation after the death of the fetus. In one of the instances mentioned in his article in the *Revue de Gyn.*, for January-February, the pregnancy occurred in the middle portion of the tube, simulating the position of a normal pregnancy. In another case the nine-months' fetus had been dead six months before operation, but the extensive adhesions proved no obstacle to the total extirpation of the sac.—*Jour. A. M. A.*

The Treatment of Placenta Previa by Cæsarean Section, with Report of a Successful Case.—By DR. FRANCIS D. DONOGHUE.

It would seem, if the author's deductions are correct, that section, in preference to other operative interven-

tion, is indicated in: (1) cases of complete previa; (2) cases of previa in primiparæ when signs of fetal or maternal exhaustion are evident; (3) when the condition of rigid os is present; (4) where there is a history of previous operative delivery; (5) in transverse positions and in cases of prolapsed cord, if the cord is not easily returnable. It is the easiest of celiotomies, and it is also an extremely safe operation, not only for the mother, but for the child. The author's case is given in detail.—*Boston Med. and Surg. Jour.*

Painful Menstruation.

R.	Acetanilidi	gr. iii	18
	Caffeinæ citratæ	gr. ss	03
	Sodii bicarb	gr. iii	18

M. Sig. At one dose. To be repeated in one hour if necessary.

Puerperal Diphtheria due to Löffler's Bacillus.

Dr. Andréodias (*Gaz. Hebdom, des Sciences Méd. de Bordeaux*, Sept. 9, p. 422). The production of vulvar or vulvovaginal membranes after confinement was supposed to be due to the streptococcus alone or associated with putrefactive germs, but recent observations show the possibility of puerperal diphtheria due to Löffler's bacillus. The writer cites eleven published observations in all of which the diphtheria bacillus was found. Diagnosis cannot be made clinically. Bumm has drawn special attention to the very bright, white color of the membranes, the extension over the whole surface of the genital tract, the complete absence of inflammation of the uterus or peri-uterine cellular tissue, the absence of consecutive ulceration and consequently of cicatrices.

The mortality in puerperal diphtheria is about 9 per cent., which is small compared to the average mortality in faucial or laryngeal diphtheria, either in adults or children. If the clinical signs in a suspected case are those of puerperal diphtheria, injections of antitoxin ought to be commenced without delay, even in the absence of a bacteriological report. Vaginal douches of perchloride of mercury ought also to be used.—*Med. Review.*

For Delayed Uterine Involution.

The *Clinical Review* for December says that a combination of ergotin, hydrastinine and strychnine, in such proportions as indicated by the case, is of marked value in tardy uterine involution following labor. The drugs are well taken in tablet form.—*N. Y. Med. Jour.*

Normal Saline Transfusion in Puerperal Hemorrhage.

Maygrier (Thirteenth International Medical Congress, Paris, in *Munch Med. Woch.*, Oct. 2, 1900) states that by means of intravenous injections of normal saline solution, about fifty per cent. of those women who, by reason of incoercible postpartum hemorrhage, are threatened with impending dissolution may be saved. He reports seven successful cases out of a total of fifteen occurring in his own practice. These injections are efficient only when given in massive doses—one to two quarts of a 1:1000 solution—but should be restricted to cases in which intracellular injection has proved insufficient, or when the patient's condition becomes precarious, or again, in cases which prove very serious from the start; and should be repeated if beneficial results fail to materialize and collapse reappears. In this manner several quarts of the solution may be injected in twenty-four hours. With the usual precautions and customary technique, these injections are innocuous, and Maygrier concludes that no woman should be left to succumb to puerperal hemorrhage without an attempt at saving her life by this heroic plan of treatment.—*Med. Age.*

Transverse Positions and Turning in Primiparæ.

G. Vogel (*Munch Med. Woch.*, Oct. 9, 1900, p. 141) says that transverse positions of the fetus are very rarely met with in primiparæ. Among the causes are numbered tumors, placenta previa, uterus bicornis, and scanty amniotic liquid. Among eighty-six cases of transverse position occurring at the Wurzburg clinic, eight presented in primiparæ. Five of the women were affected with uterus arcuatus, one with placenta previa, and six with a flattened pelvis. As regards treatment, Vogel recommends early cephalic version by external manoeuvres, and if unsuccessful combined cephalic version with perforation of the membranes. As a last resort, he advises podalic version, and only in extreme cases podalic version with the hand *in utero*, provided there be no impending rupture of the uterus.—*Med. Age.*

Ophthalmia Neonatorum.

Dr. John E. Weekes has an article in the November number of the *American Gynecological and Obstetrical Journal*. The treatment recommended is as follows: (a) Prophylactic. Dropping one drop of a 2 per cent. solution of silver nitrate in each eye immediately after birth. (b) Actual.

1. Frequent flushing with a 3 per cent. boric acid solution, taking care not to press the eye-ball, or abrade the cornea.

2. Pieces of linen laid on a cake of ice and then on the eye, to be changed as soon as they become warm. This treatment

to be carried out from one to four hours at a time three times a day. The object is to bring the local temperature to a point unfavorable to the growth of the gonococcus. It should be discontinued when the swelling in the lids subsides.

3. Antiseptics, applied once daily. Silver nitrate, $\frac{1}{2}$ to 2 per cent.; hydrarg. bichlor., 1-5000; protargol, 20-40 per cent.; formalin, 1-3000. The author's preference is for a 1 per cent. solution of nitrate of silver applied to the whole surface of the conjunctivæ once a day.

4. Constitutional treatment to improve the general health of the child.

K. C. M.

Bacillus Aerogenes Capsulatus in Puerperal Infections.

This subject is taken up by Welch in a paper on morbid conditions caused by bacillus aërogenes capsulatus, which appears in the September number of the Bulletin of the Johns Hopkins Hospital. The puerperal conditions due to this germ are:

1. Emphysema of the fetus dead in utero. The infection generally takes place after rupture of the membranes.

2. Puerperal endometritis, in which it is usually associated with other germs.

3. Physometra and emphysema of the uterine wall, the latter being much the more serious condition. In eleven cases of the latter affection, all were fatal.

4. Puerperal gas-sepsis. Gas bubbles found at an early autopsy in the heart and vessels, etc.

The author considers that most of the cases reported as deaths due to the entrance of air into the uterine veins really belong to this kind of infection.

We should conclude from the author's remarks that this bacillus causes an extremely fatal infection when it gains entrance to the tissues, but that it is not specially dangerous to the mother otherwise.

K. C. M.

Rupture of the Uterus.

In the November number of *Obstetrics*, Dr. H. Schmidt gives a report of nineteen cases of this accident from Schonta's Clinic at Vienna, nine of which were incomplete, and ten complete. The measures used in treatment were:

1. Drainage. The means of light packing of uterus and vagina with iodoform gauze. In complete cases the gauze was passed through the rent into the peritoneal cavity. The strips of gauze were removed one by one during the eight days following their introduction. Ice-bags over the pubis and analeptics were used during the puerperium.

2. Operation, consisting of laparotomy with supra-vaginal amputation, or Porro's operation and vaginal extirpation. The

results were as follows: (a) Incomplete ruptures, nine cases; seven treated by drainage; two deaths; one case died of hemorrhage while preparations were being made for laparotomy, and one of septicemia under expectant treatment. (b) Complete rupture, ten cases; the death rate was 50 per cent., being the same in the operative as in the non-operative cases.

The doctor then quotes 160 additional cases from literature, the results of which lead him to the conclusion that "except in those cases in which severe hemorrhage or extensive lacerations make operation imperative, better results will be obtained by conservative treatment. In other words, we should content ourselves with drainage, and limit operative procedures as far as circumstances will permit." This conclusion is in agreement with the treatment recommended at the Rotunda Hospital also.

In view of the increased favor with which Cesarean section is now regarded, it is interesting to note that one of his cases of complete rupture was due to the spontaneous giving way of the scar of a previous Cesarean section. K. C. M.

Anesthesia in Obstetrics by Means of Cocainization of the Spinal Canal.

This subject has given rise to much discussion in medical societies and many articles in magazines lately. The *New York Med. Jour.*, for October 27th, and November 3rd, e.g., contains two editorials, and three reported cases. The case at present may be summed up thus:

1. At the International Congress of Medicine, in Paris, last summer, deaths are said to have been reported from the use of this method.

2. Many failures are recorded, one gentleman recording as many as seven failures in twenty-five cases.

3. The after-effects, such as severe headache, vomiting, etc., are frequent and prolonged.

4. The anesthesia produced is of uncertain duration.

5. In contrast to the above, some experiments have had excellent results.

In view of the above facts we do not, as yet, feel justified in resorting to this method. K. C. M.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Sarcoma of Right Nasal Fossa, with Acute Sinusitis and Orbital Cellulitis.

P. G. Goldsmith (*Montreal Medical Journal*, October, 1900). Report of a case of sarcoma affecting right nasal fossa, and attending to autrum and right eye. Operative treatment only gave temporary relief. Microscopical examination proved it to be of the small round-celled variety.

Double Harelip, with Complete Cleft Palate.

W. G. Anglin (*Kingston Medical Quarterly*, July, 1900). The patient, male, aged 15, had complete double harelip, with flattening of alæ nasi, protrusion of os incisivum, with attached central incisors, and complete cleft of hard and soft palate extending through the uvula.

The first operation consisted in removing the protruded bone and suturing the palate. After freeing the labial levering with a scalpel, the os incisivum was separated from the vomer by bone forceps, bleeding being checked by thermo-cautery. To close the cleft in the palate, the margins were first pared throughout. Then the two sides of the soft palate, including the uvula, were united by horsehair sutures. For the closure of the hard palate, Langerebeck's method was adopted, lateral incisions being made on each side parallel to the cleft extending down to the bone. Then a periosteum elevator was introduced, and mucoperiosteal flaps raised clear through to the cleft. Interrupted silk sutures were inserted to retain the flaps in position. The result was fairly good, anteriorly and posteriorly, firm union being obtained, a small oval opening in the centre of half inch by quarter only being left.

The second operation was done a fortnight later. The central labial portion was pared laterally, making it V shaped. The lateral margins were next separated from the bones and freshened. The sutures used were silver-wire, silkworm-gut and horsehair. Primary union was obtained. Articulation became much more distinct. Very satisfactory photographs, before and after, were given.

Hemiatrophy of the Tongue.

L. A. Parry (*Lancet*, February, 1900), gives the history of a case occurring in a man aged fifty years. He had no other trouble, simply atrophy of one side. The only point in his personal history bearing on the case, was that some years

previously he had fracture of the base of the skull. As there were no symptoms of paralysis in any other parts of the body, nor of the presence of tumors, meningitis, caries, etc., the hemiatrophy was supposed to be due to injury of the nerve in its passage through the anterior condyloid foramen at the time of the fracture of the base of the skull.

Retropharyngeal Abscess.

Traver (*Revue Hebdom. de Laryngol. d' Otol. et de Rhinol.*, June, 1900), relates the history of a case occurring in an infant. At the age of seven months the glands of the neck suppurated and were incised. A large quantity of pus was discharged. Dysphagia and dyspnea soon followed, which gradually increased. Traver saw the child when it was eleven months old. It was pale and wasted, with head fixed and retracted. Respiration was stertorous and the glands of neck enlarged. A large tumor almost filled the pharyngo-buccal cavity. It was elastic and slightly fluctuant. The abscess was opened in the middle line at its most prominent part, and the child's head bent quickly forward. Still the gush of pus was so profuse that some entered the larynx and trachea, threatening asphyxiation. Rhythmical traction of the tongue, artificial respiration and heart stimulation were kept up for some time. The child made a good recovery.

Treatment of Toxic Paralysis of the Larynx.

Watson Williams (*Jour. Lar. Rhin. and Otol.*, October, 1900), after dealing fully with the pathology and treatment of these cases, sums up the latter under three heads.

1. The resort to appropriate general treatment of the infective disease, when that is the cause of paralysis; and measures directed to the removal of the poison in the circulation and tissues, in the case of organic or metallic poisons.

2. Intralaryngeal applications of the faradic or galvanic current, combined with the internal exhibition of strychnine in considerable doses, either by the mouth, or, when feasible, directly into the affected muscles.

3. The relief of dyspnea and threatened asphyxia, in cases of bilateral abductor paralysis, by intubation and tracheotomy—measures which have frequently been necessary in diphtheritic and typhoid laryngeal paralysis.

A Plea for Early Naked-Eye Diagnosis and Removal of the Entire Organ, with the Neighboring Area of Possible Lymphatic Inspection, in Cancer of the Larynx.

J. Noland Mackenzie (*Jour. Lar. Rhin. and Otol.*, October 1900), deals in a graceful and exhaustive manner with this

subject. He believes that up to the present time, the true importance of the views he advocates have not been realized. There are three methods of diagnosis in laryngeal cancer.

1. The naked-eye method, or diagnosis by direct inspection, supplemented by clinical phenomena.

2. Thyrotomy.

3. The microscope.

Notwithstanding the prevailing fashion of submitting every case of suspected laryngeal cancer to removal of a portion of the growth for microscopical examination, Mackenzie relegates this plan completely into the background. He says, on the other hand, that it is impossible to exaggerate the importance of naked-eye diagnosis; and that taken all in all it is by far the most practical of the three methods.

"Every resource and refinement of clinical diagnosis should be resorted to before an appeal to the microscope is made."

Mackenzie even goes further. He continues: "But suppose after weighing carefully all the facts of the case in our possession, a reasonable doubt remains as to the diagnosis, shall the next step be the removal of a portion of the diseased structure for examination?"

"In the face of all authority to the contrary, I say emphatically, 'No.' Before even considering such a proposition, the suspected growth should be examined from every point of view. This is best accomplished by the second method, thyrotomy; or, if necessary, even more extensive external division of the tissue of the neck." And only as a very last resort, does he consider the extirpation of the tumor admissible for the purpose of microscopic diagnosis.

The objections to the removal of a portion of the tissue are the following:

1. It subjects the patient at once to the dangers of the auto-infection at the point of incision and to metastasis elsewhere.

2. It stimulates the local growth of the cancer.

3. The method is often inconclusive, misleading, and sometimes practically impossible.

The first of these he considers of great and permanent importance, and in looking over the past he is appalled at the amount of mal-treatment which this cancerous larynx has heretofore received.

His conclusion is, that having once established the existence of cancer in the larynx, the use of the knife is the only means of cure. In a vast majority of cases, the whole larynx should be removed and with it all the tributary lymphatics and glands. Even when the cancer is small, and only one side is affected, he doubts the advisability of removing only one half of the larynx. It would be safer to remove the whole.

On the vexed question: "Shall the larynxologist call in the assistance of the general surgeon in operable cases of this kind?" Mackenzie utters no uncertain sound. His answer is: "We special workers in the field of laryngology must cast aside our pride, and recognize the fact that, while our achievements may be brilliant in the domain of endo-laryngeal surgery, when it becomes a question of extirpation of larynx and lymphatics, we must seek the aid and counsel of the general surgeon. We must work together, the one dependent on the other."

Ingestion of Hydrochloric Acid, Pharyngo-esophageal Eschar.

Le Gendre (*La Presse Med.*, June, 1900,) gives the history of the case of a young woman, who was brought to the hospital on account of hematemesis, apparently due to simple ulcer of the stomach. In a few days, diphtheritic patches were noted in the pharynx, from which a short bacillus diphtheriæ was cultivated. Subsequently false membrane was coughed up. A diagnosis of gastric ulcer and co-existing diphtheria was made. A fortnight later it was discovered that all the lesions were due to hydrochloric acid, which the patient had swallowed in an attempt to commit suicide.

A Case of Esophagotomy; the After-Treatment.

W. A. Mackay (*Lancet*, August, 1900). The mortality after esophagotomy has been estimated at 23 per cent. One of the most frequent causes of death is septicemia following sloughing of the edges of the wound. A difficult question to determine is whether to close the esophageal wound or leave it open. Jacobson says, "that sutures should only be used when the wound in the gullet is clean cut, not bruised, and when the body has been quickly removed. Usually nutrient enemata are administered, or food given by a soft-feeding tube.

In the author's case, a piece of bone had been lodged in the esophagus for six weeks. It was located just below the cricoid. The usual operation was performed on the left side, taking the cricoid cartilage as a guide, the aim being to expose its left lateral aspect. The skin incision was carried well on to the sternum, the platysma divided, and the omohyoid cut across. The inferior thyroid artery was ligatured and divided, and the posterior part of the left lateral aspect of the cricoid exposed. On the ivory knob of a probang, passed through the mouth, the esophagus was carefully opened. The left index finger was then inserted into the opening, and with a dressing forceps, passed along the finger, the bone was gently extracted. It presented three sharp points and proved to be part of the rib of a goat. It measured $1\frac{1}{2}$ inches in its longest axis and smelt most

fouly. The wall of the esophagus was infiltrated with pus, and was shedding small sloughs. After cleansing, the omohyoid was sutured, and the rest of the wound was brought together round a straight wide glass tube, which reached to the opening in the esophagus which was not sutured. The patient left the hospital one month later with the wound healed.

The patient found that if he sipped milk or chicken-soup carefully in teaspoonfuls, very little would come through the wound, so he was allowed to take his nourishment in this way. The glass tube was taken out after taking food, the parts dressed, and then the tube replaced in position dry, as long as its presence was required.

MEDICAL ITEMS.

It is stated that India has about half a million lepers.

Dr. Nicholas Senn has made a gift of \$50,000 to Rush Medical College.

By the will of the late Dr. Hunter McGuire, an estate of over \$150,000 is devised to his wife.

The trustees of Cornell University are building a new Medical College at a cost of \$125,000.

QUEEN'S MEDICAL BUILDING.— Queen's Medical College Kingston, is not large enough. The Senate are finding a remedy by adding one-storey, thus making it a three-storey building.

The third Pan-American Medical Congress was held at Havana, Feb. 4th-8th, inclusive. We understand that Dr. James F. W. Ross, of Toronto, and Dr. F. J. Shepherd, of Montreal, were present.

The graduates of the Woman's Medical College, Toronto, resident in the city, are anxious to have a special hospital built which will be under their control. We understand the Women of Canada will be asked to contribute 25c each towards the building of such an institution.

Plans for the new Jefferson Hospital, which will be erected at Tenth and Sampson Streets, Philadelphia, are now under consideration by the architect and trustees. When the building is completed it will be one of the most convenient and perfect structures of the kind ever built.

Fifty thousand dollars has been given to the College of Physicians and Surgeons of Chicago for endowment purposes by two Chicago physicians, who are members of the faculty. Dr. William E. Quine, dean of the school, gives \$25,000 to endow the college library, and Dr. D. A. K. Steele gives \$25,000 to endow the pathological laboratory.

Editorials.

QUEEN VICTORIA.

We in Canada loved Queen Victoria with a love that passed description. While we mourn for the loss of a grand sovereign, and a good woman, we are exceedingly grateful for the very kindly tributes to her memory which have come from foreign sources. Our neighbors south of us, through their press, have shown her memory as much respect as if she were their ruler, instead of being the Queen of Great Britain and the Empress of India. Friendly comments are to be found in the medical as well as lay press.

The *New York Medical Journal* speaks as follows: "There is probably no person in the world whose fatal illness could have caused the widespread sorrow and sympathetic reverence and respect occasioned by that of Queen Victoria. . . . But the efforts of those who were privileged to minister to her—privileged, not because she was a queen, but because, being a queen, she had been all that she was in every capacity of life—have been followed closely with the warmest prayers of the world at large in their support, and with its tenderest sympathies. For this reason the names of Sir Thomas Barlow, Sir Douglas Powell, and Sir James Reid will be preserved in history irrespective of their services to medical science in general, as those who cared in her last moments for the most universally beloved monarch that ever sat upon a throne. The medical profession in all countries will ever cherish the memory of a sovereign who constantly interested herself in the relief of suffering, who held medicine in high esteem, and who was the first British monarch to publicly recognize the importance of medical science by conferring a patent of nobility on a medical man."

We had not intended to mention the British press, but cannot refrain from quoting the *London Star*, a pronounced Radical journal. The *Star* quotes Wordsworth's lines, "A perfect woman, nobly planned," etc., and then goes on to say: "That was our Queen. Ah, how loving was the love with which we

loved her! How proud our pride! How we, her sons and daughters, all over the world, exulted in her as the most priceless possession of our race. How we wore her spotless name as a jewel on the forehead of our empire! How we trusted her! How we acclaimed her, with filial cries, when she came among us, with her simple, motherly smile, and her good grey head, bowing benedictions on the people that were her children! It is hard to think that she will never see us, that we shall never see her more. The thought of all she has been sends an ache through our hearts, and fills our eyes with tears, for too well we know that we shall never look upon her like again."

TOBACCO FOR THE SOLDIER.

Tobacco has generally been considered in the past, even by its fondest friends, as simply a luxury. It has generally been considered a nuisance by the non-smoking part of the community. We heard, however, a different story during the Spanish-American war, when newspaper correspondents freely stated that tobacco had become a necessity, for soldiers at least, and that in consequence it should be included in their regular rations. These statements, however, were, as a rule, not considered worthy of a second thought.

Experience in the South African war brings the subject again to the fore. So great an authority as the *Lancet* expresses views similar to those of the American correspondents already referred to. It states that we have learned through this war many things of greater or of less importance, not the least among them being the fact that tobacco plays a very important part in the soldier's existence. The *Lancet* goes on to say: "Whether this is to be reckoned as a great fact or a small one, there can be no doubt about the truth of it. Yet the Duke of Wellington's armies had no tobacco worth speaking of. If they did not forbid its use, at any rate the Iron Duke's officers were directed to advise their men strongly against it. What a curious contrast with the campaigning in South Africa, where marches and privations as long and as stern as any suffered by our great-grandfathers were borne by the volunteers and soldiers of to-day with a grumble only when their 'smokes'

failed them. We have it from many who took part in the forced marches leading to Paardeberg, to Bloemfontein, to Pretoria, and beyond, that when rations were but two or three biscuits a day, the only real physical content of each twenty-four hours came with the pipe smoked by the smouldering embers of a camp-fire. This pipe eased the way to sleep that might otherwise have lingered, delayed by the sheer bodily fatigue and mental restlessness caused by prolonged and monotonous exertion. It is difficult, then, to believe that tobacco is anything but a real help to men who are suffering long labors and receiving little food, and probably the way in which it helps is by quieting cerebration—for no one doubts its sedative qualities—and thus allowing more easily sleep which is so all-important when semi-starvation has to be endured.

“The cases of acute mental derangement in the course of campaigns, such as the present, are many. There have indeed been many in South Africa. It would be most profitable and interesting could medical officers have taken special note of the capacity for sleep previously evidenced by those who broke down, and also of their indulgence or non-indulgence in tobacco. We are inclined to believe that, used with due moderation, tobacco is of value second only to food itself when long privations and exertions are to be endured. Two features are to be noted with regard to the smoking practised on active service. It is almost entirely in the open air, and it is largely on an empty stomach. The former is always an advantage; the latter we generally reckon a most unfavorable condition. Shall we see in the near future patients with tobacco amblyopia or smoker’s heart acquired while the trusting friend of tobacco thought that he was enjoying unharmed the well-earned solace of a hard day’s march? We believe not, and that the open air will have saved what might have been the untoward results of smoking when unafed.”

PHILADELPHIA MEDICAL JOURNAL.

About three years ago there appeared a new medical journal, which was to be in all respects a paragon of perfection. It was somewhat loudly proclaimed that it was to be “A journal for

the profession, of the profession, and by the profession." The majority of the proprietors of the *Philadelphia Medical Journal* were physicians who did not intend to be under the control of "money-grabbing publishers." Dr. George M. Gould, who had for many years before that time been editor of the *Medical News*, was made editor by the trustees. In fact, it was generally supposed that the new journal was created largely, if not entirely, for the purpose of giving Dr. Gould an opportunity of showing how a high-class medical journal should be conducted.

Rumor has said lately that the new journal was not a success from a financial point of view. But this was not a matter of surprise to business men who know something about the cost of conducting medical journals. The real surprise came, however, a few weeks ago, when it was announced that Dr. Gould had been discharged from the editorship. We learn from the *Medical Record*: "The following editorial was written by him for his issue of the journal, December 29th, but was suppressed by some one who had more control over the editorial columns than the editor himself." The portion of the editorial, which we quote, was published by the *Record* at Dr. Gould's request:

"A Personal Word from the Editor.—Just as the last forms are going to press, I learn that the present number of the *Philadelphia Medical Journal* will be the last (except as to the Original Article Department of the next issue) for which I shall have editorial responsibility. I am unable to set forth the reasons why the board of trustees no longer wish my services as editor. I am in complete ignorance what such reasons may be. I have heard of no criticism upon their part of my conduct of the journal, and my communication, handed to the board in session on December 8th, expressing my desire to be retained as editor, has not been answered.

"To the thousands of friends, to all subscribers, who may read these lines, I can only here express my most profound regret at the sudden separation. In the endeavor to aid in establishing a great independent medical journal, utterly free from publishers' influences, from commercial bias, and from what is, if possible, still worse, an unprofessional spirit within the profession, I have given my labor and my life, all too freely. What mistakes I may have made, I trust may be excused in the belief that they were due to a sincere desire to devote every

line of the reading columns to the cause of professional truth and honor."

We know nothing about the other side of the case, and cannot therefore say anything as to the reasons which influenced the trustees in their course. We are sorry that a man like Dr. Gould should be subjected to such treatment. He certainly has great ability and a proper conception of respectable medical journalism; but we fear that he has certain peculiarities or idiosyncrasies of disposition and temper which make it somewhat difficult for any aggregation of ordinary mortals to live comfortably in the same house with him.

THE SOUTH AFRICAN HOSPITALS COMMISSION.

We have, on more than one occasion, referred to the committee appointed by the British Parliament to enquire into the treatment of the sick and wounded in South Africa. The chairman of this committee was Lord Justice Romer, and associated with him were two laymen, and two representatives of the profession. The commission was called into existence on account of the "sensational and hysterical statements" of Mr. Burdette-Coutts.

It is generally admitted that the sick and wounded were not always properly cared for, but, at the same time, it is generally denied that they were wilfully neglected. The difficulties of the situation were sometimes remarkable. Surgeon-General Hamilton referred to some of these at the last meeting of the British Medical Association. He said, "they must all remember that their troops, unfortunately, were bottled up on the river at Paardeberg, drinking literally diluted—he might almost say essence of—Boer and mule." The water which the soldiers drank for some time at that place was practically putrid. One of the witnesses stated before the commission that in one hospital, where there were five hundred beds, they had to care for eighteen hundred sick. One of the witnesses was Dr. Ryerson, of Toronto, who very emphatically denied the charges of neglect and inefficiency made by Mr. Burdette-Coutts.

The Royal Commission, after a very careful investigation, has recently issued its report, the tenor of which is that, review-

ing the campaign as a whole, it cannot properly be said that the medical or hospital arrangements broke down. It adds that there has been nothing in the nature of a scandal in regard to the care of the sick and wounded, and no general widespread neglect. All the witnesses of experience in other wars were practically unanimous in declaring that, taking it all-in-all, the sick and wounded were never so well cared for in any other campaign.

The commission did not pretend that the medical service was in all respects satisfactory. It was found that the army medical corps was not in a good state of preparation for a heavy campaign. In certain cases, a few of the orderlies in the field hospitals were found to be guilty of serious offences, especially in pilfering stimulants from the medical supplies. It is a great satisfaction for us to learn from the inquiry that the conduct of the medical officers, taken all-in-all, and especially considering the very serious difficulties they sometimes had to contend with, was simply magnificent.

DIAGNOSIS OF CANCER OF THE STOMACH.

Those who have been in practice for a number of years will readily assent to the statement that it is, by no means, an easy task to make a diagnosis of cancer of the stomach in every instance. Indeed, in many it is very difficult, and in not a few instances almost, if not quite, impossible. The writings of Brinton, Habershon, Wilson Fox, Ewald, Hemmeter, Martin, Fenwick, Welch, Osler and others, make it abundantly clear that the stomach is one of the most reluctant organs in the body to yield up its pathological secrets. We shall endeavor to state in concise form some of the signs and symptoms of gastric cancer.

The disease has usually a gradual onset. This, however, is not always the case. In perhaps about 20 per cent. of all cases the disease seems to come on suddenly, the cause being usually some indiscretion in food or drink. The disease may have been already in existence and only brought into notice by such circumstances; or, these causes set up some inflammatory condition that ended in cancer.

There is some difference of opinion in the writings of those who have studied the subject, regarding the frequency with which pain is present at some time; yet it might be laid down as about the truth to say that there is pain in at least 90 per cent. of all cases of cancer of the stomach. It is a remarkable fact that a small percentage of cases has no pain whatever. As a symptom, therefore, the presence of pain is of some importance. The pain is generally referred to the stomach region, in some cases, to the lower portion of the abdomen, while in a few it radiates through to the back. The pain may vary from slight and occasional in character to that of being constant and severe.

Another symptom of frequent occurrence is vomiting. To some extent this is met with in nearly 90 per cent. It is very well marked, frequent and severe in 50 per cent. of the cases. Usually it does not make its appearance so early in the disease as pain. In cases where there is considerable dilatation, the patients experience generally a good deal of relief from the vomiting. Undigested foods may lie in the stomach for days. Sometimes the vomiting is shortly after taking food, at other times it is at intervals of days, when the contents of the stomach have become very foul. Vomiting is least pronounced when the disease is on the stomach walls. The vomiting of blood is noticed in about 30 per cent. of all cases.

Dyspeptic symptoms, such as discomfort, belchings, fulness and weight, due to fermentation, catarrh, ulceration and dilatation, are always present when there are stomach symptoms. The appetite may remain good—it is sometimes increased—but the distress after eating restrains the person from indulging freely in food. Anorexia and indigestion are met with in fully 50 per cent. of the cases in their early stages, and in an increasing number up to 100 per cent. in later stages of the disease.

Loss of weight and strength are almost constant symptoms. In a few cases the strength is maintained to an advanced stage of the disease. In active cases, the loss of weight and strength are of early appearance and progressive in character. Even in the more latent cases there is loss of weight and strength, and finally the patients are compelled to abandon all work.

Fever is noted in about 60 per cent. of all. Some authors

give as high a percentage as 75, while others a much lower one. Taken in a large number of cases, the figure just given will be found practically correct. In many cases it is low in range, only a few points above normal, or 99° or 100° F. In a few cases it runs to 103° or 104° with chills and hectic symptoms. In these cases there are usually adhesions and pockets of pus, or abscesses in the liver. There will be about 40 per cent. of the cases with a normal or subnormal temperature.

Constipation is present in about 70 per cent. of the cases.

Of the physical signs the following may be noted as of importance in enabling one to make a diagnosis:

Much has been said upon the subject of free hydrochloric acid in the stomach. It is absent in over 90 per cent. of stomach cancer cases, and it may be said that free hydrochloric acid is only found in those cases of cancer that have arisen from gastric ulcer. In atrophic gastritis and achylia gastrica free hydrochloric acid is wanting; but there are other conditions present in such cases, and the usual signs and symptoms of cancer are absent, so that a diagnosis can generally be made. The absence of free hydrochloric acid is, therefore, a sign of much value.

With regard to lactic acid it may be said that it is present in about 80 per cent. of cancer cases. Its presence argues strongly in favor of the stomach trouble being cancerous, but its absence is of comparatively little value as evidence that cancer is not present.

Enlarged supraclavicular and axillary glands and metastasis to the umbilicus have been noted in a certain number of cases. The tissues of the umbilicus or linea alba become indurated and adherent to the integument.

To all the above, the stomach tube often brings up fragments of tissue that, under the microscope, reveals the true nature of the case.

Careful search should be made for any tumor that may be present. The entire area of the stomach must be examined by inspection, palpation and percussion, and an anesthetic may be required. It must be borne in mind that, as a rule, the existence of tumor cannot be discovered early in the disease, so that diagnosis by the presence of a tumor is usually a late diagnosis. In at least 20 per cent. of cases with tumor, it is not discovered during the lifetime of the patient.

CHICAGO DRAINAGE CANAL.

A year ago we described this gigantic piece of sanitation and announced its completion. The Chicago river had been made to flow back—to reverse its sluggish course—and the sewage of Chicago with a goodly admixture of Lake Michigan had been sent off towards the Gulf of Mexico, instead of slowly, very slowly, oozing in our direction.

We then pointed out that there were many conflicting interests—commercial and political as well as sanitary.

Some of these are looming up portentously, as witness the following press despatches :

“ Washington, Jan. 28.—The United States Supreme Court today rendered an opinion in the case of the Chicago drainage canal. The proceedings was brought by the State of Missouri against the State of Illinois and the drainage board, the end sought being to prevent the use of the canal because of its supposed pollution of the drinking water of St. Louis. The effect of the decision is to sustain the contention of the State of Missouri.”

“ Chicago, Jan. 28.—President Alexander J. Jones, of the sanitary district, said : ‘The decision is somewhat of a surprise to us, but, after all, it simply means that the case must now be tried on its merits. The sanitary district of Chicago has expended \$34,000,000 in the abiding faith that flowing water purifies by the principle of oxidization, and to prove this is to dispute what we contend is an acknowledged scientific fact, at least acknowledged by all scientists the world over, except those of St. Louis. The district will stand or fall by this principle, and we are prepared to face the issues in the United States courts of equity, which are now opened to the complaints of the citizens of St. Louis and the State of Missouri.’ ”

We may expect a pretty prolonged contest, and the collection of many experiments and analysis and theories; and we trust that the cause of science will be thereby advanced. With this hope in view we indulge the further one that experts will endeavor really to deal with the subject “on its merits,” as expressed above, and not be biased by “belonging” to one side or the other. Of course we know, and should in justice say, that men are apt to be chosen by one side or the other because their views are favorable to that side, but we ought to be careful, all the more careful, to see that the converse does not warp us.

W. O.

Obituary. Feb 1901

ALEXANDER CAMPBELL REID, M.B.

Dr. Reid, of Hamilton, died January 18th, aged 63. He graduated in the University of Aberdeen, 1865, and commenced practice in Hamilton in 1867. The deceased, who was unmarried, retired from active practice about five years ago.

JAMES H. KENNEDY, M.D.

Dr. Kennedy, at one time a practitioner of Guelph, died in Michipicoten, January 30th, after a short illness. He received his medical education at McGill and graduated M.D. in 1888.

MALCOLM RANNEY, M.D., M.R.C.S., ENG.

Dr. Malcolm Ranney died at his residence, Georgetown, February 1st, aged 69. He was educated in Scotland, and graduated M.D., University of Glasgow, in 1855. He was a resident of Georgetown for about thirty years, but was not recently engaged in active practice.

ISAAC RYALL, M.B.

Dr. Ryall, Medical Health Officer of Hamilton, died at his residence, January 21st, aged 70. He had lived in Hamilton over half a century, and was at one time one of the most active practitioners of that city. He was surgeon of the Thirteenth Battalion in the time of the Fenian Raid, in 1866, and retired some years ago, with the rank of surgeon-major.

CHARLES WESLEY PURDY, M.D., LL.D.

Dr. C. W. Purdy, of Chicago, died at his residence in that city January 21st, aged 54. It was stated in the daily press of Chicago that his death was the result of a complication of diseases, caused by overwork. He was born in Kingston, Ontario, in 1846, and received his medical education in Queen's University, where he graduated M.D. in 1869. During his student

days, he spent his summer vacations in the office of his brother-in-law, Dr. H. W. Day, who at that time practiced in Trenton. After graduating, Dr. Purdy practiced for a short time in the village of Hastings, in East Northumberland. From Hastings he went to Chicago, where he went into general practice. Very soon after settling in the Windy City, he entered upon the chief work of his life—the study of diseases of the kidneys. After studying for some years, he went to Great Britain and the Continent, where he continued work in his chosen specialty. He published a number of books on diseases of the kidneys, and for many years before his death was generally recognized as the first man in his own department on this continent. On account of his eminence as an author and practitioner, his *alma mater*, Queen's University, honored him by granting him the degree of LL.D. Dr. Purdy had many personal friends in Canada, especially in the Bay of Quinté district, where he was born and educated. His *confrères* in this country who knew him from boyhood until the time of his last illness, watched his career with great interest, and rejoiced in the marked success which attended his untiring efforts. This success was not so much due to anything like brilliant genius as to persistent and continuous hard work. The news of his death came as a sad surprise to the majority of his Canadian friends, who had not previously heard of his illness.

Personals.

Dr. T. Bruce Hewson (Trin. '99) has commenced practice in Colborne.

Dr. W. B. Thistle spent the holidays with his parents in Downie.

Dr. Herriman, formerly of the Hamilton Asylum, is now at Kingston.

Dr. William Osler, of Baltimore, paid a flying visit to Toronto on January 20th.

Dr. Graham, of Clinton, spent a few days in Toronto in the latter part of January.

Dr. Rennie is acting Medical Health Officer in Hamilton in place of Dr. Ryall, deceased.

Dr. Emily Stowe and her daughter, Dr. Augusta Stowe-Gullen, left Toronto January 24th for Florida, where they will spend the rest of the winter.

Dr. St. Charles, of the Orillia Asylum, has been appointed a resident in the Hamilton Asylum.

Dr. Wilson, of the Brockville Asylum, has been transferred to London, to replace Dr. Hobbs.

Dr. Frederick A. Hopkins, of Montreal, was killed instantly by a railway accident, Dec. 1st, age 34.

Dr. Sands has been appointed surgeon to the Kingston County Jail in place of Dr. Oliver, deceased.

Dr. George McDonagh, of Toronto, left February 3rd, on a two-months' trip among the West India Islands.

Dr. James F. W. Ross left Toronto, January 18th, on a six-weeks' trip to Nassau, New Providence Island, and others of the West Indies.

Dr. Allen Baines, of Toronto, had an attack of la grippe which confined him to the house from Jan. 4th to Jan. 7th.

Dr. D. McLarty, of St. Thomas, was elected President of the Elgin University of Toronto Alumni Association, which was recently organized.

Dr. D. G. Revell (Tor. '00) has been appointed Fellow in Anatomy in the University of Chicago, under Professor L. F. Barker, M.B. (Tor. '90).

Dr. A. T. Hobbs, who has been one of the resident physicians of the Asylum for Insane, London, has resigned his position and entered upon general practice.

Dr. J. T. Fotheringham, of Toronto, went to St. Catharines January 26th, to recuperate after a slight attack of influenza, and returned in a few days, much improved.

Dr. John E. Weeks has been appointed Professor of Ophthalmology of New York University and Bellevue Hospital Medical College, in the place of Dr. Noyes, deceased.

Dr. Kennedy McIlwraith, of Toronto, went to Hamilton January 31st, on account of the death of his mother, which occurred suddenly that morning, and returned February 4th.

Dr. Laidlaw, formerly assistant physician at the Asylum for Idiots, Orillia, and who has recently returned from active service in South Africa, has been transferred to the Brockville Asylum.

The members of the Toronto Camera Club presented Dr. Edmund E. King with a Cook lens as a token of their esteem, and as a mark of appreciation of the valuable services rendered by him to the club during the last five years, in which he was their President. The lens is said to be an admirable piece of workmanship, and a credit to the noted firm that manufactured it.

Dr. William Cuthbertson (Tor. '83), of Chicago, visited Toronto, January 4th. According to his report, the members of the Canadian contingent settled in the Windy City are doing remarkably well.

The New York *Sun* has published a number of articles on the last century as to its progress in great subjects. One of the most able and most interesting of the series is a paper on medicine by Prof. William Osler, of Baltimore.

We learn from the daily press that Dr. Chestnut, Medical Superintendent of the Winnipeg General Hospital, became suddenly blind, January 20th, while attending to his ordinary routine work. He had lost the sight of one eye some years before.

The able and genial President-elect of the Canadian Medical Association, Dr. Chown, sent New Year's greetings to all the members. We understand that Dr. Chown and his *confrères* of Winnipeg and vicinity will give a royal reception to the visiting members during the next annual meeting, which will be held in the latter part of August. Members are requested to keep Winnipeg and the meeting in view when making arrangements for their holiday trips during the coming summer.

Dr. I. J. Dwyer, of Toronto, is still engaged at post-graduate work in Europe. He went to Leipsic in August and remained there until the first week in January. While there he devoted much time to the study of the nervous system, working in Prof. Held's private laboratory. He also devoted considerable attention to medicine and pathology. He left Leipsic early in January and went to London, where he will remain about five or six months. He will return to Canada next summer, after an absence of more than a year.

Surgeon-major Osborne, who recently returned from South Africa, where he acted as one of the surgeons to the first contingent for a year, was the guest of honor at a banquet tendered by his fellow-doctors at the Hotel Royal, Hamilton. Dr. E. B. O'Reilly officiated as chairman, and the speeches included an interesting talk by Dr. Osborne on the military and surgical operations of the Canadian army in South Africa. Other toasts were "The Red Cross Society," associating the name of Miss Russell, which was responded to by her father, Dr. Russell; "The Army and Navy," to which Dr. Griffith responded; "Our Visitors," with which was associated the name of Dr. James D. Thorburn, of Toronto; "The City Hospital," with responses by Drs. O'Reilly, Morton, Mullin, and Rogers; "The Ladies," with Dr. Park as their champion; and "The City Council," with Alderman Dr. Langrill as their chief sponsor.

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Book Reviews.

Review of an American Text-book of Surgery. An American Text-book of Surgery, for practitioners and students. By Phineas S. Connor, M.D.; Frederic S. Dennis, M.D.; William W. Keen, M.D.; Charles B. Nancrede, M.D.; Roswell Park, M.D.; Lewis S. Pilcher, M.D.; Nicolas Senn, M.D.; Francis J. Shepherd, M.D.; Lewis A. Stimson, M.D.; J. Collins Warren, M.D.; and J. William White, M.D. Edited by William W. Keen, M.D., LL.D.; and J. William White, M.D., Ph.D. Third edition, thoroughly revised. Philadelphia: W. B. Saunders, 925 Walnut St.; Toronto: J. A. Carveth & Co.

We are more than pleased to bring before the notice of the profession and student body as a whole, this admirable work. For the practitioner it is an unexcelled book of reference, while for the student no better text-book could be imagined, as has been shown by the fact that it has been adopted as the text-book, *par excellence*, in over one hundred medical colleges. The work has been carefully revised, and there have been added many new plates and subjects, such as Krönlein's method of locating the cerebral tissues, Hoffa's and Lorenz's operations for congenital dislocations of the hip joint, lumbar puncture, the forcible reposition of the spine in Potts' disease, the treatment of exophthalmic goitre, etc., etc. To us, the names of the authors are as much a guarantee of all that is best as the enormous sale of the former two editions (29,000 copies) must have been a source of gratification to them. They have our hearty appreciation of their work, and our best wishes for their well-deserved success.

Egbert's Hygiene and Sanitation.—A Manual of Hygiene and Sanitation. By SENECA EGBERT, A.M., M.D., Professor of Hygiene in the Medico-Chirurgical College of Philadelphia. New (2nd) and revised edition. In one handsome 12mo. volume of 427 pages with 77 engravings. Cloth, \$2.25 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

This is a pleasantly written, readable book, displaying much good sense. We are glad to find that the author condemns the want of connection with the outside atmosphere in the supply to hot air furnaces. Besides the thoughtless builder and householder, we have to combat the wiles of the furnace maker, who is ambitious to make a record of a high temperature with the least possible consumption of coal. We feel safe in saying that in more than 90 per cent. of our houses the same air is warmed and served up to us over and over again, with the very slight additions that have trickled in, in spite of double windows and such like. We are also pleased to see a chapter devoted to School Hygiene. In

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presenting the new views on filtration the author pays a well merited tribute to a work of the Massachusetts State Board. He appears to have overlooked the similar results of filters on the large scale under pressure such as the Hyatt filter. In speaking of quarantine stations and quarantine work, we would have liked to be able to say that he had remembered that there exists to the north of the United States of America, a co-operating neighbor, part of a great empire. We differ from our author where in speaking of the venting of traps in house plumbing he says: "If the trap is properly constructed, if the soil pipe is of proper size and height, and if the fixtures be placed as near the soil-pipe as possible, there will be but little danger of siphonage occurring." We could show him some "pathological" specimens which were put in before our present plumbing by-law came in force. On certain subjects, when the author has evidently been limited for space, he refers to sources where the reader may obtain further information should he require it.

UNIVERSITY OF TORONTO ALUMNI.—A meeting of the Alumni of the University of Toronto, for the county of Victoria, was held in Lindsay, January 18th. After the delivery of an address by Dr. McLennan, of University College, Secretary of the General Alumni Society, a local branch was organized for the county of Victoria.

FRENCH-CANADIAN MEDICAL CONGRESS.—The French-Canadian medical men of Quebec are organizing a medical congress of the French practitioners of North America, to be held next summer. It is probable that the outcome of the congress will be the creation of an association of French-Canadian doctors for the whole continent. The French practitioners of Louisiana have expressed their intention of attending. There are about one thousand French-Canadian doctors in the province, and five hundred in the United States.

THE SIZE OF LONDON.—An impression of the size of London is gained from the statement that in 1899 the killed and wounded in the London streets are said to have numbered 9,891, of whom 207 were killed outright. No battle in the South African War can show so large a total of losses as this list of casualties in the streets of London. The number of persons killed and wounded in the celebration of the return of the London volunteers equalled the losses of the British in any engagement those soldiers took part in.—*Boston Medical and Surgical Journal.*