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## Original Communications.

### NOTES ON SOME PECULIAR PHASES IN APPENDICITIS.\*

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FOR the purpose of jotting down a few notes on some of the peculiar phases of appendicitis I have gone over my list of cases and have picked out the salient points. It is not my intention to offer more than a few practical notes.

#### ETIOLOGY.

We are no nearer a conclusion as to the cause of appendicitis than we were some eight or ten years ago. The foreign body theory has been set aside by some authors. An effort has been made to find the origin of the disease in germs, but why germs should particularly pick out this vestigial structure is not explained by these theorists. Man, different from all animals except a few of the apes

\*Read before the Ontario Medical Association, Toronto, June, 1897.

and the wombat, has an appendix vermiformis that is very prone to inflame. In man the organ is developed to its highest degree. Its physiology is unknown; its histology is well known; the cause of disease in the organ is unknown. From time to time foreign bodies have been found free in abscess cavities surrounding this perforated appendix. It has been claimed by some that these foreign bodies were accidentally placed in this position, that is, that they had escaped from the interior of the intestine after perforation. It is easy to understand how the introduction of a foreign body into the lumen of the vermiform appendix can readily produce gangrene of the tip or side of the organ.

A few years ago I produced a lateral intestinal anastomosis on a dog, and, after having allowed the animal to live for some months, destroyed him. On making a thorough examination of the intestinal canal the anastomotic opening was found doing duty, but in the pouch of intestine left at the end of the upper segment were found several small gravel stones. None such were to be found elsewhere. I thought at the time that this pouch resembled closely the blind pouch of the cæcum surrounding the mouth of the vermiform appendix. Considerable pressure must be distributed over this blind end during defecation, as the ileo cæcal valve prevents regurgitation into the ileum. Under such circumstances it cannot be wondered at that occasionally foreign bodies will find their way into the mouth of the appendix. It is a wonder that they do not find their way into the appendix with much greater frequency. It is easy to understand how such bodies can produce inflammation, and it is quite as easy to understand how such bodies can evade the eye of either the pathologist or operating surgeon. Because they are not found is no argument against their presence.

It is scarcely probable that inflammation of the vermiform appendix can occur as a consequence of inflammation spreading from the fallopian tubes. The converse of this, however, is true. On two occasions I have seen pins in the appendix; each of these patients had a large abscess that formed in the neighborhood of the appendix. I have found foreign bodies in a number of cases; in one case, grape seeds; in another, an orange pit; in another, hardened fæcal matter around raspberry seeds. On one occasion I found the appendix dilated to the size of the little finger filled with fæcal matter, the walls so transparent that the fæcal matter could be seen through. In other cases the appendix is found diseased and distended with fluid. In such cases foreign bodies have nothing whatever to do with the production of the disease.

The disease is no discriminator of ages or persons. The proportion of men to women is as 89 to 21. The disease is of very frequent occurrence among children. I have seen it produce death at the age of three years and ten months; the oldest patient on whom I have operated was sixty-six years of age. She made an excellent recovery.

#### DIAGNOSIS.

It is a surprising fact that even medical men are unable to give us much information regarding the premonitory symptoms of appendicitis. One physician, on whom I operated, was taken ill at 4 a.m., with sudden severe pain in the abdomen. He became sick at the stomach and vomited. He rose in the morning and went out on his usual rounds. A doctor who saw him during the night thought that he was suffering from renal colic. When the pain abated the patient, feeling better, concluded that the diagnosis of renal colic was in all probability a correct one. After going around all day he was forced, towards evening, to take to his bed; in forty-eight hours he was dead. He died from perforation of the vermiform appendix and acute purulent peritonitis. In some cases a definite feeling of uneasiness may have been noticed for some time previous to the acute outbreak of the disease. Others suffer from lassitude. In one case I saw a large ulcer of the cæcum, together with a large abscess cavity, in a gentleman who died in a few hours after the symptoms of appendicitis set in. So much damage could not have originated in such a short period of time. I am satisfied, therefore, that in many cases the disease is progressing, a smouldering fire is hidden in the neighborhood of the appendix. But little is required to produce an acute purulent peritonitis. The acute symptoms in many cases will be similar to those of internal strangulation of the intestine. But, perforation of the appendix and acute peritonitis is a common affection, whereas internal strangulation is an extremely rare one. Though the two conditions give rise to very similar symptoms, these symptoms are generally dependent upon disease of the appendix.

The amount of pain suffered by some patients is much greater than that suffered by others. In one case in which the patient suffered severe colicky pains I found the appendix distended with fluid. There was no inflammation around the appendix, there were no adhesions. In some cases in which suppuration is going on, the pain is severe. The rigidity of the abdomen, especially on the right side, in the commencement of the attack of appendicitis is one of the most valuable symptoms. I am satisfied that the discovery of Mc-

Burney's point is of much clinical value. As a rule, however, if a healthy man is taken with sudden severe pain in the abdomen, together with rapid rise of temperature, he is suffering from an attack of appendicitis. In a woman the matter is somewhat different. Here we have the fallopian tubes continuous with the interior of the uterine cavity; they are very liable to inflammatory disease; such inflammatory disease on the right side will closely stimulate inflammation of the vermiform appendix. Acute inflammation of the peritoneum, in a large majority of cases, originates either in perforation of the vermiform appendix or from inflamed fallopian tubes.

Examination through the rectum is of great value in many cases. When the appendix occupies a deep position in the pelvis induration can be made out better through the rectum than through the abdominal wall. A diseased appendix may, however, be present in the abdomen and avoid detection during either single handed or bimanual palpation.

#### PROGRESS.

It is an amazing fact that patients may go around with a perforated appendix. A business man may be suffering from an ulcer of the cæcum and an abscess in its neighborhood and may suffer from no particular inconvenience. He will, perhaps, feel tired and chilly. After some sudden exertion has torn down adhesions, and has caused an escape of pus into the general cavity of the peritoneum, he becomes very ill. One of my patients was a man who rode into town every morning. He felt poorly for two or three days. Jumping down from his wagon one morning he noticed a sudden pain in the abdomen, but went all the way to town and back, and in three days he was dead. A large pocket of pus was found that had ruptured into the peritoneal cavity; an ulcer of the cæcum was also present, together with a perforated appendix. *I have met with one case in which a small ulcer of the cæcum existed, and the appendix was apparently in a healthy condition.* The previous attacks had, however, all the symptoms of attacks of appendicitis. A second perforation was only prevented by the adhesions of the ulcer to the abdominal wall. In a short time, no doubt, these adhesions would have given way as a natural consequence of the reparative process, and the ulcer would have again become pervious.

I have met with femoral phlebitis as an accompaniment of appendicitis. There is no doubt a form of the disease in which the veins of the mesentery of the appendix are inflamed, and septic material is poured into the blood in a large quantity; as a

consequence terrible rigors are produced. Though such cases are dangerous, they are not necessarily fatal. These chills are as severe as any met with in practice.

Sometimes the disease takes a peculiar chronic course. In one such case the side was as hard as a board and cartilaginous as a consequence of septic infiltration of the muscles. Pus pockets were opened up in four or five different localities; these pockets extended from the lower border of the liver to Poupart's ligament. The whole abdominal wall was brawny, and the cartilaginous portion cut through was in places nearly an inch in thickness. This disappeared, the abdominal wall became thin and flaccid, but the patient died from pulmonary tuberculosis some months later.

One elderly gentleman, sixty-one years of age, had had fifteen years of an interval between the attack for which the operation was performed and the previous attack. It is astonishing to see the ill-health that may be produced by a pus-bathed appendix. In several cases this ill-health continued without definite recurrences of the disease; the temperature had, however, been continually elevated. In some the temperature remains elevated to about the same point, while in others it jumps up much higher and falls lower. These patients never regain their normal robustness; they suffer from creepy sensations and a chilly feeling. The tongue shows no indication of ill-health; the bowels may perhaps move naturally. There seems little tendency in many of these cases for the pus to increase in quantity. *It is just a little pool from which the lymphatics drink.* They take up just enough poison to produce a deleterious effect upon the red blood corpuscles. Leucocytosis, as a consequence, is likely to be produced. In spite of tonics and stimulants, the condition persists, just as it does in cases of pyosalpinx as a consequence of the absorption of pus shut up in the fallopian tubes.

This condition of ill-health was well exemplified in one case of a little girl. She had been very robust, but never recovered from the primary attack of appendicitis. For eighteen months the parents were kept in suspense by her constant ill-health. Several recurrent attacks of the disease occurred. The parents were somewhat opposed to operative interference. At the operation I drew up a mass in which I found omentum adherent to a distended and club-ended appendix. After considerable difficulty the appendix was peeled off from the cæcum. The mesentery of the appendix in this case was turned inwards towards the median line—a very unusual position. This was tied off and the appendix removed in the usual way. From six to ten drops of pus were found at the tip of the appendix, around

its outer surface. In the interior was an orange pit. The patient has never had a day's illness since her recovery from the operation.

There are but few situations in the body in which such a small amount of pus will produce such a great effect upon the system.

Secondary rupture of the abscess wall into the peritoneal cavity usually takes place about the seventh to the tenth day after the commencement of the acute attack. In one case this happened about three weeks after the original perforation occurred. The gentleman was about three hundred miles away from home. He returned home during what was supposed to be a period of convalescence. He drove out with the physician, under whose care he was, and during the drive was suddenly seized with abdominal pain. The pain continued, the pulse and temperature became rapidly elevated, the abdomen became distended. I operated in the middle of the night; washed out thoroughly. An old abscess cavity was found in the neighborhood of the appendix, and a newer septic fluid was found in the general peritoneal cavity. The bowel was opened to relieve the distension. Even after operation has been performed, and after the distension has entirely disappeared, the patient may still succumb to the effects of the terrible poison introduced into the system. In some cases in which the poison is very great, the pulse and temperature remain low. The bowels become, as a consequence of inflammation, like a leaden pipe, they will absorb nothing. Towards the termination of the disease, the patient's pulse becomes rapidly elevated, and death ends the scene.

#### OPERATION.

Operation is performed in the acute stage of the disease, in the chronic stage of the disease, in the intervening stage of the disease, and also for the repair of damage subsequent to the subsidence of the disease.

First, let us consider operation during the acute stage of the disease. I have frequently seen cases that were apparently hopeless recover without operation, but I have yet to see the first case operated on, when in that condition, recover. This condition, in my mind contra-indicates operation in the light of our present knowledge. Damage to the peritoneum has already been great and operation cannot in any way assist us in averting the harm done. The shock of operation is thus added to the terrible prostration resulting from the disease. The cases to which I refer are those in which vomiting is excessive, perhaps stercoraceous and black, in which the abdomen is enormously distended, in which

hiccuph is present, together with a subnormal temperature and a pulse that ranges from 140 to 160. It is not even necessary that the pulse rate should be very high. The large majority of these cases succumb either with or without operation; once in a while, even when *not* operated on, to the surprise of every one, the patient may recover. After operation on such cases death ensues more rapidly than when they are left alone. Adhesions are disturbed, and the absorption of the septic material is facilitated. The condition dreaded after all abdominal operations is already present in the abdomen, and nothing at present known will save life. I have on several occasions opened the abdomen in two situations, namely in the median line and also over the site of the disease. I have washed out the abdominal cavity as thoroughly as possible, packed in gauze, and have also drained with tubes, and still the patients have succumbed.

In my earlier experience I endeavored to save some cases suffering from peritonitis following operative procedures, by re-opening and washing out the abdominal cavity, but without avail. It seems to me that in the future the only method by which such cases may be successfully attacked is by means of serum therapy. The poison that has entered the system is a very deadly one. The washing of so many coils of intestine alternately empty and then distended with gas, cannot prevent the recurrence of this absorption. Nothing but running water passing over the bowels so as to touch and wash off every portion can prevent reabsorption. The application of this running water is an impossibility according to our present belief. It might perhaps be possible to submerge the body of the patient in a bath of warm water after his abdomen has been split open from ensiform cartilage to pubic bone. I have not as yet had the courage to try it. The water would require constant or frequent changing. The intestines would be extruded from the abdomen. The theory of the shock of this may be a myth, and not a reality.

Even after operation has been performed and all distension has disappeared, the bowels still fail to move. The intestines become like a lead pipe, nothing is absorbed by them. In one instance I injected milk into the bowel through an opening that was made in the colon to relieve the distension. The milk, though peptonized, came back unaltered. Food taken into the stomach by the same patient was washed out by the stomach tube three and four hours after in an unaltered condition. The poisoning is so great in these cases that in spite of abdominal operation and the relief of disten-



sion, in spite of the fact that the patient's pulse may not exceed 100 beats to the minute, in spite of the fact that the temperature remains normal or subnormal, the patients die at the end of two or three weeks. The whole system is so intensely poisoned that the fatal issue cannot be warded off.

In one case, after making the incision, I found the appendix perforated and gangrenous, and evidently so gangrenous that a ligature would not hold. The parts about were invaded with septic material, thickened, angry, and reddened. There was no abscess cavity, and no pus was found. I concluded that as the appendix was extremely rotten it was not wise to attempt to remove it, and therefore packed the cavity with iodoform gauze to keep it open and permit the deleterious mass to escape externally. By this treatment the dangers of laceration of the intestine, of internal rupture, and of the introduction of septic material into the general peritoneal cavity, were avoided. The patient made an excellent recovery.

I have concluded from my later experience that in a certain class of cases it is wiser to make a simple incision through the abdominal parietes and do nothing more. The wound is kept open by iodoform gauze packing. Such an incision relieves the tension, and lessens the danger of an intra-peritoneal rupture of any localized collection of sero purulent fluid. The free incision favors an external rupture of such a collection. Every disturbance of the parts below endangers the patient by a further distribution of the poison. It occasionally happens that one operates on a case in which septic infiltration is so great that the intestines, peritoneum and omentum, look as if their tissues had been injected with a solution of gelatine. It is impossible to separate them from one another; they tear readily as a consequence of the friability of the tissue. In these cases a mere packing with gauze will prove of great value. A certain amount of irritation will be produced, and absorption of the inflammatory products stimulated. Convalescence is usually slow, but in many cases is ultimately perfect.

#### CHRONIC WITHOUT ABSCESS FORMATION.

I mean by this cases in which there is not a true abscess formation, but a few drops of pus situated somewhere around the inflamed and adherent appendix. It is not always necessary to find pus in these cases. Without pus formation I have found the health very much impaired.

In one case, that of a young lad, he had suffered from several attacks. I found the appendix firmly fixed over the iliac vessels,

with adhesions so dense that their separation would have endangered very greatly the continuity of the blood vessels. As a consequence it was impossible to remove the offending organ. On further examination the lymphatic glands were found enlarged in the mesentery, extending in a chain four or five inches in length, and simulating the glandular enlargement found in cases of malignant disease. A few adhesions were broken up. After the operation the patient's condition improved, and he is rapidly regaining his health. A few drops of pus may perhaps have been present in this case, and may have been overlooked.

#### OPERATION WITH ABSCESS FORMATION.

In opening into collections in the right iliac fossa, I always endeavor to keep my incision well out toward the bone, and to reach the pus accumulation from behind. Oftentimes the operator is led to believe that bowel lies in front of the mass, but the tympanitic note is often due to the presence of gas in the abscess cavity; the gas is particularly fetid. Though one abscess is opened into there may be another deeper in the loin. This may be overlooked, and should always be suspected if the temperature continues elevated after one abscess has been entered by the surgeon's knife.

I have washed out such abscesses with bichloride of mercury solution, per oxide of hydrogen solution, and carbolic acid solution, but have never washed out the general cavity of the peritoneum with anything but plain water. The simple drainage of these abscess cavities is all that is required. Two pieces of rubber tube are placed side by side, one perforated and the other unperforated. The water is washed down through the unperforated tube, and finds its way out through the one with the perforations. Although tubes are used, it is wise to assist drainage by packing gauze around them. It is unwise to make an opening for the purpose of drainage and then to close it.

In the majority of cases the appendix will be found to lie behind and toward the inner side of the sac wall. In cases in which there is pus formation in any considerable quantity it is wiser to leave the appendix *in situ*; an attempt to remove it endangers the rest of the abdominal cavity. These cases recover and remain well without removal of the appendix. If one is anxious to prevent the danger of a recurrence, the appendix may be removed in the intervening stage when the patient is in good health, and after all the inflammatory swelling has subsided.

I have opened an abscess communicating directly with the ap-

pendix just under the lower border of the liver, and also to the left of the median line, and in a third case just in front of the bladder about an inch and a half above the pubic bone. In these cases the appendix is found in an abnormal condition, or is found to be abnormally long. I have seen the appendix about four and one-half inches in length. In several cases I have found it to be almost entirely intra-pelvic. In such cases the pus will have a tendency to burrow downwards. The amount of pus found varies very much. In some cases the abscesses will burrow into the loin until they reach the diaphragm; in other cases but a few drops of pus may be found. I have seen a pus pocket freely moveable in the abdomen. This pocket was found in the centre of a small mass consisting of adherent omentum, appendix, and intestine. These adhesions produced a lump that could be readily moved from side to side. Had it not been that the attending physician had vouched for the original presence of appendicitis, I should certainly have been inclined to look upon the enlargement as a neoplasm. The elevation of temperature present in such cases should assist one in distinguishing between inflammatory disease and new growth. Two cases of malignant growth in the interior of the cæcum gave rise to a moveable nodular hard mass in the same locality.

Death as the consequence of internal hæmorrhage from ulceration into a blood vessel in the neighborhood of an inflamed appendix is a rare occurrence. One patient on whom I operated died from hæmorrhage from perforation of one of the vessels in the meso-appendix or meso-colon. I opened an abscess in the right iliac fossa. The patient was a young woman who had been ill for a week or ten days, and had all the symptoms of appendicitis. After the operation she did well for twenty-four or forty-eight hours when blood was poured out through the gauze packing. This hæmorrhage continued in spite of the injection of astringents into the abscess cavity. At the post-mortem examination it was found that a blood-vessel had given way. One of my confreres had a similar experience; his patient died from hæmorrhage from an appendiceal abscess.

Gas and pus frequently escape from these fæcal abscesses and in a short time fæcal matter may come away. A fæcal fistula is thus formed which usually closes without operative interference. When gas is present I have generally considered it to indicate a perforation. In one case I removed double pus tubes together with an inflamed, adherent, and perforated appendix that was surrounded by a few drops of pus, and, in the same patient, opened into a second-

ary phlegmon on the left side of the abdomen. This secondary phlegmon had remained after the original attack of acute general peritonitis from which the patient almost lost her life. It was formed by very much thickened omentum that was adherent to the the anterior abdominal wall. Packing was introduced, after the appendix was removed, into the incision in the median line and also into the incision into the secondary phlegmon to the left of the median line. The two were made to communicate with one another so that solutions injected into the one opening found their way out through the other. The patient recovered and is now in perfect health.

In another case I found a large fibroid tumor in the pelvis and to the right a large pus tube curled across toward the left side. In front of all was a mass from which pus exuded, and on exploring it more carefully I found that a diseased appendix had caused this intra peritoneal abscess beneath the omentum. On the left side the fallopian tube was somewhat enlarged and adherent. Both tubes and ovaries were removed, the abscess was peeled off from the bladder after a sound had been introduced into that organ to act as a guide to the external finger and the site of the abscess was thoroughly packed with iodoform gauze. The omentum was tied off by interrupted sutures, the abdomen washed out, and the patient made a good recovery.

#### OPERATION IN THE INTERVENING STAGE.

I have never yet lost a patient as a consequence of operation performed in the period intervening between the attacks. For these operations I endeavor to put the patient in first-class health. Such a patient rode to my office one evening on his bicycle and asked to have his appendix taken out next day. He went to the hospital direct from my door and next morning I operated. The vermiform appendix was found fixed with old adhesions and was removed. He has been in first-class health since. Previous to operation he suffered from several attacks, and in one of them nearly lost his life. The condition that we find at these operations does not indicate the severity of a previous attack.

I have met with one case of cystic distension of the appendix. The patient suffered from appendicular colic. The fluid contained in the cyst looked like mucus. It was not stained with bile. The wall of the appendix was like that of a fallopian tube when distended in the disease known as hydrosalpinx. The name *hydrops processus vermiformis* may very properly be applied to this condition.

I have found the tip of the appendix almost entirely separated from the rest of the structure and obtaining its nourishment from its new attachment. From my experience I have come to the conclusion that no surgeon can say that one case should be operated on and another should be left unoperated on after a primary attack of appendicitis. Those who operate the most will be easiest convinced that this assertion is correct. As in one case related above nothing may be found standing between the patient and the grave but a few adhesions of a cæcal perforation to the abdominal wall and yet there may be nothing to indicate the condition present. I have recorded one case in which there were fifteen years of an interval between two attacks. The physicians who discussed the case during the first attack had in all probability passed away before the second attack occurred.

#### OPERATION FOR REPAIR OF DAMAGE SUBSEQUENT TO THE SUBSIDENCE OF THE DISEASE.

Four conditions may exist after operation. First, fæcal fistula; secondly, an unhealed sinus; thirdly, prolapse of the bowel through an unhealed ulcer; and fourthly, a hernial protrusion of the abdominal contents. The fæcal fistulæ heal, as a rule, without operative

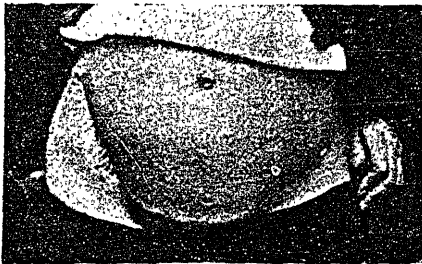


interference. Small sinuses are usually due to the presence of an infected ligature, and they may not heal until the ligature is extruded. Prolapse of the intestine is a rare complication. I have seen two cases. Of one of these I show photographs, which were kindly

made for me by Dr. Weir, of the General Hospital staff. The patient was operated on on five different occasions. She suffered originally from an attack of appendicitis ; abscess formation occurred. This was not opened, and she lay for some months without any surgical interference, and during this interval became profoundly septic. I



opened the abscess after her arrival at the hospital. Fæcal matter poured out together with pus. After a time the abscess wall disappeared, but sinuses were found running towards the pubes and up into the loin ; they were opened and scraped and packed with gauze. Patient was then allowed to return home. Three ulcers in the cæcum and ascending colon still remained, and all her evacua-



tions took place through the loin. An attempt was made to close the perforations ; one healed, the other two did not. She very nearly succumbed on the table owing to her weakened condition and the effects of the anæsthetic. After a year at home her weight increased

from 100 to 135 pounds, and she then returned for the final operation, looking healthy and strong. The operation was one of considerable magnitude. The ascending colon was torn away from the abdominal wall and two large ulcers were closed. The prolapsed intestine is well shown in the accompanying photograph. The suture of the skin was difficult owing to the contraction produced by the shrinkage of the scar tissue left from previous operations. The result of the operation was perfect. The young lady has returned home relieved from all her terrible discomfort.

In another case of a little child I closed a large ulcer of the cæcum through which all evacuations were occurring. Not wishing to disturb the parts any more than necessary, I carefully closed the opening into the intestine and then closed the abdominal wound. The patient did not do well and died. She was in a wretched condition at the time of the operation, and to prevent shock I endeavored to remove her from the operating table as quickly as possible; by doing this another ulcer of the colon on its posterior surface was overlooked. The ulcer was found communicating with a small abscess cavity near the spine. During the performance of the operation a disturbance of the adhesions had taken place and an escape of enough pus to set up a general peritonitis was permitted.

The lesson learned was that a thorough examination of all the intestines in the neighborhood of a perforation should be made so that a second opening may not be overlooked.

## INTRACRANIAL SYPHILIS.—TWO CASES WITH REMARKS.\*

BY ALEXANDER MCPHEDRAN, M.B.

Professor of Medicine and Clinical Medicine, University of Toronto, etc.

PETER M., æt. 35, a teamster. Twelve years before this illness he had a hard chancre, followed by mild secondary symptoms for a year afterwards. He received irregular treatment during this time, and then ceased taking medicine. He observed no further symptoms. He was well until the summer of 1894, when headache became troublesome, worse at night, but he was able to continue at work. He had lost appetite. About a month after the headache began he woke up one morning to find his left side partially paralyzed. He was able to move about a little. His face and tongue were somewhat affected. In a few days he began to improve, and in a week he thought he was nearly well. Then his right side began to grow weak, and in three days was almost completely paralyzed. Speech was much affected, but he was able to make himself understood. Next day he was brought to St. Michael's Hospital. Potassium iodide was given freely and inunctions of unguentum hydragryri daily for two weeks, when he was able to go about well and make some use of the right hand. He improved somewhat for a few weeks and then his condition became stationery. Later the arm and leg became increasingly spastic as always follows destructive lesions of the motor tract in the internal capsule. He left the hospital at the end of six months in this condition, and without hope of further improvement.

Case 2.—Mrs. J., aged 53. Her personal and family history is good. She has had four healthy children, all living. In the summer of 1894, epithelioma appeared in the right shoulder. It was removed by application of pyrogallic acid, 10 per cent.

In February, 1895, she began to be troubled by pain in the temples lasting 2 or 3 hours. Some days she was free of pain. In

\* Read at the Meeting of the Ontario Medical Association, held at Toronto, June 2 and 3, 1897.



March the pain recurred daily, but without regularity as to time, or degree of severity. On some days it was extremely severe. In April the attacks began with chill with some of which there were marked rigors. Sometimes there were two chills in a day, usually in the afternoon or at night. After the chills the temperature would sometimes rise to  $104^{\circ}+$ , but there was no regularity in its range. It always fell to normal soon after the chill, and remained so, at least until the next chill occurred. The urine was always of low specific gravity (1010—1012) but otherwise normal.

In May a slight swelling formed on the left frontal eminence, and as this indicated a syphilitic origin, potassium iodide was given freely, and the chills and pain were promptly relieved and the frontal swelling disappeared.

After careful enquiry as to the history the husband recalled the fact that seventeen years before this time, when their youngest daughter was a babe, his wife had nursed a neighbor's infant out of charity and to save its life. In a short time a sore appeared in the nipple requiring two months to heal. The family physician told him it was syphilitic, but this was kept secret from his wife. She was treated for some time, and she had no secondary eruptions or other trouble until the head symptoms developed in 1896—seventeen years after infection.

These two cases illustrate, each in its own way, the striking features of intracranial syphilis. In the first one there was syphilitic endarteritis, with temporary interference with the circulation in the right hemisphere, causing sudden paralysis of the left side. The disturbance in the left hemisphere a week later was of more grave character, thrombosis no doubt occurring, leading to degeneration of the internal capsule, resulting in some permanent paresis of the right side of the body. Endarteritis may follow as early as four months after syphilitic infection, but usually it develops between the fourth and eighth years, although it may occur as late as the twentieth or even the thirtieth year.

The second case represents a less common variety of intracranial syphilis. In it the meninges appear to have been affected either with simple inflammation or the formation of gummata, or more likely by both. Such lesions form about the same time as the endarteritis, but are much less frequent.

In a third class there is chronic diffuse sclerosis of the brain, as occurs in paralytic dementia or general paresis; if the disease invades the spinal cord the posterior columns are affected and tabes dorsalis results.

The first and second groups include the great majority of cases of intracranial syphilis, and in neither of these is the nerve tissue primarily the seat of syphilitic disease. In the first the brain cells and fibres suffer only as the endarteritis cuts off their blood supply, causing them to undergo degeneration from lack of nourishment. In the second group the nerve tissue does not suffer until the gummatous or inflammatory exudates attain such a size as to press upon the brain and arrest the blood supply to the tissue in contact with the exudates.

Thus, as syphilitic affections invade the brain by way of the arteries or the meninges, it follows that the process is at first wholly outside the nerve elements themselves. If these suffer later they do so in the first place from compression by the gummata, or from the inflammation adjacent to the gummata, as they would from any rapid growth; in the second place they suffer from the syphilitic disease in the arterial walls interfering with their blood supply, terminating it may be, as in this case, in thrombosis. In either case the degeneration of the nerve cells and fibres is secondary to the interference with the blood supply.

If by treatment we can arrest these processes in the vessels and meninges and remove the exudates—inflammatory and gummatous—that have been produced before any nerve elements are destroyed, a complete cure is effected. In some cases these processes are of very rapid development, especially when occurring early after infection in younger persons; usually, however, the processes are developed comparatively slowly, and, the brain accommodating itself to the altered local conditions, symptoms may not present themselves until advanced changes have occurred, changes that cannot be removed without permanent damage at least to arterial walls or meningeal tissue.

If nerve elements have been injured by the exudation whether inflammatory or gummatous, removal of the exudation can do no more than permit the recovery of the injured structures; if they are injured beyond recovery, removal of the exudation can do them no good. In other words damaged tissue may be wholly restored, if the cause of damage is removed before the vitality of the elements is lost; in structures that have undergone destruction, restoration is of course impossible, as it is anywhere else in the body, and the effects of the loss of tissue remain where compensation cannot be effected.

Our aim in treatment is to secure removal of the irritation and the exudate resulting from it, and thus allow the injured tissue to

return to its normal condition. This is the most that we can accomplish ; we are powerless to promote the repair of the injured tissue. This is, of course, true of diseases elsewhere as well.

Probably most of the affections of the brain occurring in the secondary stage of syphilis are due to disease of the blood vessels, but no distinction can be drawn between early and late lesions as to their histological characters, although the early lesions are usually more acute, and give rise to symptoms more acute and general. Some of these cases rapidly develop stupor and pass into coma, from which they may rouse up and become violently delirious with convulsions and paralysis, terminating fatally. This is, however, rare.

The liability of the intracranial structures to become diseased after syphilitic infection seems to be quite as great when the early symptoms have been mild as when severe ; some believe the liability even greater. Possibly this greater liability, if it exists, is due to the less thorough and persistent treatment that the mild cases usually receive.

The general prognosis in cerebral or intracranial syphilis may be fairly stated in the following propositions :

(1) The longer the period of incubation the worse the prognosis, the usual period being between five and eight or nine years. It may be as early as three or six months after the initial sore, or as late as twenty-five or even thirty years. Cases in which the symptoms of cerebral disease do not appear until after the twentieth year probably never get well.

(2) The longer the cerebral symptoms have existed before vigorous anti-syphilitic treatment was begun the worse the prognosis. If five or six months or longer has elapsed, no good can result from treatment.

(3) Cases that manifest *general symptoms*, such as headache, vertigo, and epileptiform convulsions, are generally more favorable than those with *focal symptoms*, as paralyzes of certain nerves, hemiplegias, etc.

(4) The worst prognosis is in those presenting such general nervous affections as tabes, and general paralysis of the insane.

The relation of treatment to the prognosis is important. There is marked difference in opinion as to the possibility of preventing lesions of the intracranial structures by the most careful and thorough antisiphilitic treatment, carried out under favorable conditions. Some believe that not a few cases of syphilis are incurable, and of course such cases are liable to cerebral lesions. There is no

doubt, I think, that a relatively large number of cases of intracranial disease occur among those with mild so-called "secondary" symptoms, if they do not escape such symptoms altogether. This has, however, been attributed to the want of proper treatment in many of these cases.

In support of the theory of the incurability of some cases of syphilis there is the fact that it is not rare to meet with cases in which the more usual symptoms are wholly uninfluenced by treatment. As in other diseases some are much more susceptible to the cause of the disease, so in syphilis some offer much less resistance to the virus, and even with treatment are unable to overcome its power. So that I am quite with those who look upon the disease as essentially incurable in certain persons. In a large number, again, the disease is curable if efficiently treated, while probably in a much larger number the disease disappears spontaneously because the virus, a micro-organism doubtless, has not possessed sufficient virulence to overcome the resistance of the tissues.

Prophylaxis against cerebral invasion is of the utmost importance, and should be accomplished, as far as possible, by thorough and long-continued treatment after infection. It is the part of wisdom to follow such treatment by two or three short courses of potassium iodide annually for many years, in order to anticipate any affection of the meninges and arteries of the brain.

For the removal of symptoms of intracranial syphilis, potassium iodide is our most potent remedy. It is more powerful in the removal of inflammatory and gummatous exudates than mercury, but the latter is also useful. In view of the importance of arresting the disease in the vessels and membranes of the brain, and of removing all exudates that have been formed before the nerve elements suffer, our treatment should be prompt and vigorous. If there be delay or inefficiency in treatment, irreparable damage may be done to brain tissue.

On the first symptoms of the coming disaster presenting themselves treatment should be begun as, *e.g.*, mild recurrent headache, for which a definite cause cannot be found. Such a headache may be the precursor of a grave intracranial lesion. The iodide should be given freely beginning with 10 or 15 grains and increasing rapidly until 40 or even 60 grains are given three times a day. It should be given with an abundance of water; it is often best borne in aerated water.

Objection has been taken to such large doses of iodide of potassium as likely to increase the liability to thrombosis in the diseased

vessels as it increases the fibrinosis of the blood, but it is very probable that the great benefit to be derived by such free administration will much more than counterbalance this doubtful risk.

After three or four weeks of treatment the iodide should be omitted for two or three weeks, as the tissues become tolerant and the continuance of the drug ceases to have effect. By intermitting its use, however, marked benefit is often observed to follow when it is again resumed. In these intervals mercury, either internally or by inunction, should be resorted to, in order to leave no resource untried that may aid in preventing damage to the cerebral tissue.

# A PLEA FOR THE RADICAL OPERATION FOR HERNIA AMONG THE INSANE.\*

BY A. T. HOBBS, M.D.

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THE mechanical displacement of normal parts of the abdominal wall, the protrusion and progressive prolapse of abdominal viscera, the sequential formation and elongation of its covering of peritoneum, make up the history of the advent and growth of a hernia.

Concurrent with its development are discomfort and pain, often so severe as to disable the patient from pursuing any active employment. This and the consciousness of the ever present danger from impaction of the contents of the hernial sac and its consequent strangulation tend to make the future of the affected individual an unenviable one.

Hernial protrusion of the inguinal type is the prevailing form of abdominal rupture, affecting the male sex more frequently than the female, no doubt because of certain inherent defects of the larger and more patent male inguinal canal; and, also, because of the difference in vocation, demanding greater physical activity.

The percentage of hernia occurring among the male population of this northern continent has not been ascertained. In the Asylum for the Insane at London, with which I am connected, out of some five hundred male patients 7 to 8% have hernia. Taking this percentage as a basis and estimating the male insane population of similar institutions of Canada and the United States at 90,000 there exists at least some 6,000 patients who have the additional burden of a rupture to render more miserable their otherwise often hopeless condition.

The management of this complication in the insane by the ordinary palliative method as used by the profession at large, viz. : by the adjustment of a well made and perfect fitting truss and the constant application of such mechanical support is an

\* Read before the meeting of the Ontario Medical Association, Toronto, June 27.

almost entire failure. Many insane patients having little or no self control,\* finding a truss hurting or chafing them in the slightest degree, destroy or throw it away without the least compunction. Others again have an aversion to the truss and cannot be induced to wear one. Some who wear trusses tamper with them so that their original appearance is lost and their utility as a mechanical support is rendered null. One patient managed to adjust the head of his truss at such an angle that an opposite deformity was produced and instead of the usual protruding rupture, there appeared on the abdomen a large inflamed cavity. Another patient, having a mechanical turn of mind, thought he would improve his support. He enlarged the head and increased the band to such an extent that it became an instrument of torture instead of one of relief. The inguinal region presented such a mass of thickened and hypertrophied tissues that his was the only case in which it was impossible to follow out the steps of the Bassini operation and as a consequence the only hernia, which after operation, shows any tendency to return. Another who had a truss, but had thrown it away, tried to retain the contents of the hernia in its original cavity by adjusting a long woollen comforter, knotted and twisted, around his waist and thigh. Needless to say his ingenuity failed to overcome the difficulty.

Impaction of the contents of the rupture occasionally occur in these patients and prompt interference aided by anæsthesia is necessary to save them from strangulation. When you consider that a majority of these patients, although chronic and hopeless lunatics, maintain good physical health, and are likely to live to a good old age, and that many of them do useful work on the farm and gardens, and in the workshops of the institution, you will admit that some attempt should be made to relieve them permanently of this cause of annoyance, thereby rendering their existence a little more comfortable, and relieving them from this source of danger, which at any time might place their lives in jeopardy. In my experience you can confer no greater boon on these unfortunate fellows than by getting rid of such an incumbrance.

The question now presents itself as to the best method of treatment in these cases. The use of the mechanical support, as I have shown is a poor solatium. There remains then only one avenue of relief from the thralldom of rupture, that of surgical interference. The possibility of successful operation in

hernia on the insane is, I think, fully demonstrated by the good results obtained in thirteen out of fourteen cases that have been operated on in London Asylum during the past two years. The surgical method followed out in the thirteen successful cases followed closely the lines laid down by Bassini. Deviation from his method occurred only in some minor details that suggested themselves as improvements as the work progressed. In the earlier cases drainage from the lower angle of the wound was adopted for the first twenty-four hours. Latterly, however, better success has followed the complete closure of the wound after thoroughly drying out each layer before suturing, and then sealing by dressings which are not disturbed, unless interfered with by the patient, or because of temperature indication, until the removal of the superficial sutures at the end of the first week. Interrupted sutures of kangaroo tendon for the deep layer and a continuous suture, also of tendon for the middle layer were used in all cases, after tying off and cutting away the sac at the internal ring.

A résumé of the fourteen cases records the variation in hernial contents and the causation of any retardation in recovery:

Cases 1, 5, 7, 8, 10, 13 and 14 or 50% of those operated on were of the usual order and their convalescence uneventful.

Case No. 2 had a hydrocele of the cord complicating his hernia. The cyst was emptied and injected with iodine.

Case No. 3 had an empty congenital sac alongside the hernial one. He was very restless during convalescence and removed the dressings nearly every night, hiding them in his bed. Some pus formed in the upper angle of the superficial wound during the second week and had to be let out. Complete recovery rapidly followed.

Case No. 4, had an old hæmatoma filling one side of scrotum, complicating his hernia. The left testicle had entirely disappeared. The tumor was removed at the time of the hernial operation. Recovery was uneventful.

Case No. 6. The contents of the sac embraced some coils of the small intestine, the cæcum, and the appendix. These were returned into the abdominal cavity. Owing to the mesentery of the appendix and cæcum being attached to the peritoneum at the internal ring, the sac had to be opened up to the neck and a purse string suture applied to close off the abdominal opening. The after results were good, primary union in the wound taking place.



The only failure to carry out the technique of Bassini and the only case in which the hernia showed any tendency to return was in No. 9. This was the patient who had re-constructed his truss on his own ideas, with the result that he had injured the parts over the inguinal region and caused such an hypertrophy of the cord that it was found impossible to complete the operation on the same lines as were carried out in the others. The sac was tied off, removed, and the parts replaced in the normal situation and sutured.

Case No. 11 progressed favorably until the eighth night succeeding operation when from some unknown cause hæmorrhage occurred beneath the superficial fascia, elevating the skin, making tense the whole length of the wound, forcing its way out through the partially united incision, saturating the dressing and sheets. The patient, a very restless fellow, seemed indifferent to this state of affairs and it was not noticed until the day nurse attended to his wants. Then the superficial incision was reopened for three or four inches and a handful of clots removed and the wound packed with gauze. The cavity closed up rapidly and results are so far good. This was the patient whose truss had made a cavity for itself in the abdominal wall and which was taken away from him a month prior to the operation so as to allow the parts to regain as far as they would their normal contour.

The operation in case No. 12 seemed to point to complete success, but on the fifth day the temperature ran up to  $103^{\circ}$ , remaining elevated for two or three days, while some tenderness and hardness appeared at the site of the internal ring. It was thought advisable to put the patient under an anæsthetic and to re-open the wound at the upper end. This was done, allowing of the exit of a quantity of foul smelling pus which had collected in the neighborhood of the stump of the sac and had seemingly burrowed some distance into the wall of the pelvic cavity, simulating an appendicitis. Infection from some source must have been introduced at the time of the operation in spite of every care. Insertion of a drainage tube packed around with gauze was followed in a short time by closure of the abscess cavity.

These patients were kept in bed for at least three weeks succeeding operation. Œdema of the cord, varying in amount, occurred after each operation. This, however, gradually subsided in the course of a month or two, recovery being hastened by the use of a testicular suspensory bandage, when the patient was on his feet.

The fourteen cases were equally divided as to region, seven being left inguinal and the remainder right. The after treatment of these cases (as already detailed) required constant care and close supervision of trustworthy and intelligent nurses. Difficulties that at first seemed insuperable have, by patience and experience, been gradually surmounted. Age made no difference in deciding on operation, providing the patient was in good general health, and the functions of the body were in fair order. The ages in the fourteen cases ranged from 30 to 72. No mental improvement was expected as a result of the operation and none occurred.

The advances made in modern surgical technique and the perfection that aseptic surgery has attained make possible and practicable the operation for radical cure in at least 90 per cent. of all cases of hernia. By the operation physical comfort is greatly enhanced, as is equally the capability of the patient for useful work. I see no valid reason why operative treatment should not be adopted in all similar institutions to that at London which are devoted to the care of these national wards.

The principal lesson taught by our experience, as above given, is that, whether in the insane or sane, operative interference in these cases is attended with but a minimum of danger and may be so conducted as to be almost uniformly successful, and that in the vastly greater number of cases of hernia, and especially where this exists in the insane, it is much preferable to the old method of treatment by a truss.

#### ADDENDUM.

Since writing the above two more cases of hernia have been operated on for radical cure: One being a right inguinal and the other a left femoral hernia. The history of the latter emphasizes the need of early operation in these cases. On June 12th she was observed to vomit, once only, by her cottage attendant. No recurrence of the sickness being noted it was put down to an attack of biliousness. From this time up to June 16th no especial notice was taken of her as nothing unusual was apparent; but on the morning of that date the patient had an attack of syncope. Her medical attendant, Dr. Buchan, was immediately notified and on examination found a fair size tense tumor on the right femoral region, on the lower border of Poupart's ligament. She was at once transferred to the infirmary and in an hour's time operation was proceeded with.

The hernial sac was filled with a reddish serum and a distended coil of the small intestine about eight inches long which, at this time, was a dark purplish color. The constricting band was the neck of the sac itself and not Gimbernat's ligament. This band was incised and the protruding bowel and mesentery were gently drawn out, freeing the strangulated portion. For some thirty minutes a hot normal salt solution was poured on the injured section with the object of revivifying the stagnant circulation and re-inducing peristaltic action which was absent in affected part. At the end of that time the exposed viscera was replaced and the abdominal cavity filled up through the opening with a salt solution. The edges of the ring were united to Poupart's ligament by sutures of Kangaroo tendon and the wound closed with silk worm gut. She recovered without a bad symptom.

## Selected Articles.

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### SUBMAMMARY INFUSIONS OF SALT SOLUTION IN PRIMARY ANÆMIA FROM HÆMORRHAGE IN SHOCK AND IN SEPTIC INFECTION.\*

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BY J. G. CLARK, M.D.,

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#### HÆMORRHAGE AND SHOCK.

FOR the last two years we have employed in the gynæcological department of the Johns Hopkins Hospital submammary saline infusions in every case where there has been the slightest symptom of depression after operation, or of shock from the loss of blood in surgical or puerperal cases. The first case in which we had occasion to use this means of reviving a patient from the effects of a profuse hæmorrhage demonstrated its value as a certain and rapid stimulant. The patient was admitted to the gynæcological ward one afternoon, suffering with light labour pains and a slight hæmorrhagic flow from the uterus. Examination: Vaginal mucosa of a slight purplish hue; cervix soft and slightly dilated; uterus enlarged to size of a three months' pregnancy. Diagnosis: pregnancy; threatened miscarriage.

The patient was put to bed and a small dose of codeine administered in the hope that rest and sedative remedies might avert a miscarriage. The pains ceased towards evening and she slept well in the early part of the night, but was awakened about midnight with severe labor pains, which terminated, before an interne could be summoned, in the expulsion of the fœtus and a portion of the placenta. Immediately after the miscarriage the nurse observed a profuse flow of bright red blood from the vagina. By the time I reached the ward, twenty minutes after the miscarriage, the patient was in a very serious condition, her pulse being 140 and feeble, and there were many signs of severe anæmia. The cervix was dilated

\*Read before the Gynæcological and Obstetrical Society of Baltimore.

only enough to permit the introduction of the tip of the index finger. It was at once evident that nothing could be accomplished in removing the retained membranes without instrumental dilatation of the cervix and curettage, so the vagina and cervix were hastily tamponed and the patient was hurriedly transported to the operating room. No time was lost in the operation, but at its completion the patient was in extreme collapse. Her pulse was almost imperceptible, the respirations were short, jerky and irregular, and the mucous membranes were excessively blanched.

Previous to this case infusion of salt solution into the radial arteries had been used in offsetting the effects of hæmorrhage, but in this instance it could not be employed. The pulsations of the artery were so feeble that they could not be felt, and therefore no guide to the location of the vessel. After a tedious search the artery was found, but its lumen was so small that neither the infusion canula nor the smallest aspirating needle could be inserted.

In this extremity Dr. Edebohl's plan of infusing salt solution beneath the breasts came to my mind. An aspirating needle was inserted well under the mammary stand, and the reservoir containing the salt solution, 0.6 per cent., was elevated six feet above the bed. The pressure was not sufficient, however, to force the fluid into the tissues, and we forced air into the closed reservoir with the reversed aspirator. Seven hundred centimetres of solution were forced in under one breast, after which a similar amount was injected beneath the opposite breast. Within twenty minutes from the time the salt solution began to flow into the first breast the patient's pulse began to show a marked improvement, and in one hour and a-half her condition was so much better that we felt relieved of all anxiety about her.

The plan worked with such signal success in this case that Dr. Kelly at once abandoned the radial infusion, and we have now employed submammary infusion in 41 of the last 225 cases of abdominal section. In many of these cases there was very slight indication for stimulation of any kind, but the simplicity of the procedure and its freedom from bad results of any kind have so commended it that no patient is allowed to suffer from symptoms of depression or shock without its employment. Of the 41 cases thus infused none of them have suffered with so much as cellulitis.

#### PUERPERAL AND GENERAL INFECTION.

While our experience has not been extensive in the treatment of infectious cases with saline infusions, I think the following report

of a case, taken in conjunction with the recent favourable literature on the subject, especially in the French papers, points very strongly to it as a highly useful remedy. In observing the case, one of puerperal sepsis, there was no doubt in my mind as to its value from the time the first infusion was given, and each infusion thereafter only confirmed this opinion. The patient was a robust coloured woman, who had been a patient in the hospital once before when she was operated upon for a ventral hernia, which recurred soon after her discharge from the hospital. The hernia grew in size, and the patient again returned to the out-patient department, where she was examined by one of the junior assistants, who found a wide diastasis of the recti muscles, which was filled in by a hernical sac containing a pyriform tumour lying almost entirely outside of the peritoneal cavity. The case was sent into the hospital for further examination, and the tumour proved to be a five-months' pregnant uterus. The patient was given a supporting bandage and asked to return to the hospital for her confinement, as we wished to see what progress labour would make without the assistance of the recti muscles. She entered the hospital in December, 1895, and was delivered in a few days of a large, dead, macerated child which came in breech presentation. The great diastasis between the recti muscles, which prevented their active participation in the expulsive efforts, did not seem to retard the labour in the least. The placenta came away intact, but the uterus was still very large, the top of the fundus being situated above the umbilicus. The uterus did not show any tendency to contract for several days. The day subsequent to her labour the patient had a temperature of  $100^{\circ}$  F., which ranged for the next three days between this point and  $101^{\circ}$  F. and then suddenly ascended to  $104^{\circ}$  F. in the morning, but again went up to  $105^{\circ}$  in the afternoon. That evening the patient was taken to the operating room and anæsthetized. On examination the uterus was still found very large and the cervix easily admitted the index finger. A thorough digital exploration of the interior of the uterus showed it to be perfectly smooth, and there was not the slightest trace of pathological tissue detected. Consequently, with the exception of a very thorough irrigation with sterile salt solution (0.6 per cent.), nothing further was done. For the next two days a continuous current of sterile salt solution was kept flowing in and out of the uterus, in the hope that it might facilitate the elimination of the infection, but it did not seem to affect the temperature in the least and was discontinued. While the temperature would rise as high as  $105.5$  F., and at one time to  $106.5$  F., the

patient's pulse remained moderately good, considering the grave infection from which she was suffering. The seventh day after she was anæsthetized, however, it showed marked evidence of failure, becoming rapid and intermittent, very feeble and at times almost imperceptible.

By this time the patient's general condition had become very bad. She vomited all of her nourishment, her eyes were sunken, and she presented all of the appearance of impending death. At this time we decided to employ submammary saline infusion as a cardiac stimulant and for its diluent effect upon the toxins. A litre was first given, and the improvement was most gratifying. The patient felt much more comfortable and her pulse dropped from 100 feeble, intermittent beats to 76 good full regular beats. Little or no change, however, was noticed in the temperature, which continued high for three subsequent days, when it began to fall; but the relief was so perceptible, even to the patient herself, that she requested a repetition of the treatment. A litre a day was given for seven days, and each time a marked improvement in the pulse was observed. The patient from the first infusion began to improve and finally recovered perfect health.

My attention was called to the subject by a recent editorial in *The Medical News*, in which the work of Claisse\* and Bosc† was reviewed. I quote from the editorial in reference to septic infection cases as follows: "Take a patient suffering from severe infection—puerperal, for instance; all organs are affected and are working badly, the temperature is about 104° F.; in ten minutes 1,300 to 1,400 grammes of saline solution are injected subcutaneously. Before half that amount has been reached the improvement is manifest. The pulse becomes more regular, fuller, and stronger; respiration is deeper and less hurried, and possibly the temperature falls a degree at the end of the injection." "The patient feels better, is brighter, and possibly desires to urinate, but not any great amount. Usually, the patient now enters what is known as the critical stage, which comes on generally in four or five minutes, though it may be delayed to half an hour. There is a violent chill, with sensations of extreme cold, strong, rapid pulse, and a rapidly rising temperature." Following this the patient goes through a fevered stage, from which she emerges, the temperature falls, and she may have no further trouble."

In the case which I report, the symptoms correspond to those which Bosc narrates, with the exception of those of the critical

\* *Revue de Chirurgie*, 1895.

† *La Presse Medicale*, 1895.

stage, which we did not observe. The patient was so extremely ill that these symptoms may have been masked and thus escaped notice. Her temperature showed only the slightest signs of improvement at first, but the pulse became decidedly better after each infusion.

So far we have seen none of the toxic effects which can be produced in dogs by the injection of large quantities of saline solution, and I do not think they need be considered, as in the experimental studies very much more of the saline solution, compared with the bodily weight, is used than in the human being. Certainly there is no occasion for fear of untoward symptoms from the injection of one or even two litres of saline solution at one time.

Several theories are advanced to explain the beneficial effects following these infusions, but they are all hypothetical, and I will not quote them. An article in *The British Medical Journal*, July, 1896, reviews the reports of Duret, Sahli, Maygquier, Lejars, Chasseranny, Toffier and Proben, all of whom have reported cases of septicæmia, surgical shock and hæmorrhage improved by the saline solution.

#### METHOD OF INFUSING SALINE SOLUTION.

Graduated glass infusion jars of one thousand cubic centimetres capacity, made according to Dr. Kelly's designs, are used as reservoirs for the solution. The bottles are connected by five feet of rubber tubing to a long, slender infusion needle, the calibre of which is two millimetres in diameter, similar to an aspirating needle. The entire apparatus is sterilized and kept in a sterile envelope and is available for use at any moment. Before giving the infusion the breast is carefully disinfected, especially well in its dependent area. It is then grasped with one hand and lifted well up from the thorax, while the needle, with the fluid flowing from it, is quietly thrust beneath the gland. Usually, simple elevation of the reservoir is sufficient to force the fluid into the loose cellular tissue, and the breast quickly begins to distend until even a flabby and atrophied organ will reach the size of the puerperal breast, and in a few instances I have seen the fluid shot from the rubber when the breast is quite tense. The needle is quickly withdrawn and the puncture is closed with rubber tissue or adhesive plaster. If the fluid does not flow by its own pressure it can be effectually forced in by stuffing the tube. The hands and tube are well anointed with vaseline; the upper portion of the tube is tightly pinched, and from this point down the tube is gently stripped between the fingers of the other



hand, driving the column of fluid ahead into the tissue. The lower portion is then pinched between the fingers and the upper is released, allowing the water to fill the collapsed intermediary portion of the tube. Seven hundred cubic centimetres of solution may be injected under each breast. If care is observed in the cleansing of the breasts and the injection of the fluid no untoward results will follow, which certainly cannot be said of the infusion into the radial artery or vein.—*American Journal of Obstetrics*.

# Clinical Notes.

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## PARALYSIS OF BOTH ARMS, FOLLOWING ABDOMINAL SECTION.

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ON April 24th, 1897, I did a hysteromyomectomy for a fibromyoma which filled the pelvis and extended up to the umbilicus.

The patient was anæmic from repeated and prolonged losses of blood, but otherwise she was in a fairly good condition.

There was nothing unusual about the operation, except the difficulty of getting at the uterine artery upon either side, but by splitting the uterus, and shelling the tumor out the left uterine artery was reached with great ease, and the further steps of the operation, after Dr. Kelly's plan, readily accomplished.

On the second day the patient complained of weakness of the arms. Nothing was thought of this at the time, but on the third day there was almost a total disability of both arms, the arm could not be raised, and the fore-arm could not be flexed on the arm.

Upon thorough examination it was discovered that there was paralysis of the deltoid, brachialis anticus, biceps and supinator longus, and there was also very great impaired action of all the muscles of the fore-arm.

There was considerable pain at times requiring anodynes and anodyne ointments.

At the end of four weeks the right arm commenced to recover, and at the end of eight weeks the patient was able to lift a cup of tea to her mouth. The left has been much slower in recovery.

At the end of ten weeks there was only sufficient action of the deltoid to keep the humerus well up in the glenoid cavity.

Before that the atrophy of the deltoid and the general relaxed condition of all the parts about the joint gave one the impression of a dislocation.

The left is, however, gradually improving, and I do not think there is now much doubt about the complete restoration of the function of all the affected muscles.

The paralysis in no way seemed to affect the recovery from the operation. The abdominal wound was not looked at until the seventh day, when the sutures were removed, and the union found to be complete.

I had thought that the paralysis was caused by the Trendelenberg position, but have since heard of two other cases in neither of which the Trendelenberg position was used.

# Progress of Medicine.

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## MEDICINE

IN CHARGE OF

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### THE PATHOLOGY OF APPENDICITIS.

Dr. Robert Abbe, in the *Medical Record* of July 10, describes a new method of studying the appendix after removal. He distends the organ with 95 per cent. alcohol through the nozzle of a small syringe tied tightly into its cut end by a ligature, which is drawn tight as the syringe is withdrawn. The appendix thus distended is immersed in alcohol for 24 hours and is then sliced centrally from end to end. Even when the outside preserves the cylindrical form the interior will show one of several conditions.

1. A faecal concretion blocking canal.
2. Interior ulcerations.
3. Cicatricial strictures, often with pin-hole aperture only.
4. Multiple strictures with intermediate pockets containing suppurating and catarrhal products and confined by greatly hypertrophied muscular and mucous coats.
5. Partial obliterating appendicitis.

These five are subject to infinite variations. He assigns three distinct causes which may result in obstruction and lead to ultimate gangrene, perforation, or rupture following distension.

1. A catarrhal inflammation alone may be followed by stricture, as in the urethra. This form may attend or follow la grippe.

2. A flexure, due to an abbreviated point in its mesentery, may lead to an arrest of its fæcal contents, which become inspissated and grow into a concretion.

3. An otherwise healthy appendix may be the seat of circular ulceration from no apparent cause other than probably microbic origin.

The concretions are not, as it is so commonly supposed, limestones, but are uniformly composed of the inspissated remnants of the contents of inflamed appendices. A tight stricture prevents the shed epithelial cells from escaping into the bowel and they become a source of irritation and lead to pus-formation. The epithelial scales and pus cells, with perhaps bits of meat fibre and starch cells, all welded together by bacterial débris, form a typical concretion.

The development of a diseased appendix commonly passes through the following stages :

First, a catarrhal inflammation of the lining mucous membrane.

Second, irregular narrowing of the calibre with hypertrophy of muscular and mucous coats.

Third, strictures.

Fourth, imprisoned food, desquamated epithelium, and pus forming concretions.

Fifth, obstruction at the stricture, distension, perforation, abscess.

The cases resulting from simple flexion or internal ulceration are rarer.

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#### DISCOVERY OF THE MICROBE OF YELLOW FEVER.

Sanarelli, of Montevideo, in a public address delivered on June 10 (see *Medical Record*, July 24) claims to have isolated the germ of this disease. He calls it provisionally the "bacillus icteroïdes," and says it must be looked for in the blood and tissues and not in the intestinal canal, in which indeed he has never encountered it. Its isolation is for stated reasons possible in only about fifty-eight per cent. of cases. These reasons are that in the beginning of the disease it multiplies very little in the human organism, a very small quantity of its toxin being sufficient to provoke in man the worst type of the disease, and that its toxin facilitates in an extraordinary manner every sort of secondary infection. The bacillus is a little rod with rounded extremities. It is best obtained by placing a fragment of the liver of a fresh cadaver in the incubator at 37° C. for twelve hours. Cultures on agar-agar grown in the incubator at 37° C. present an appearance that does not differ from that of many other species of microbes. But if these cultures are allowed to

grow at a temperature of from 20° to 22° C. they appear like drops of milk, opaque, projecting, and with pearly reflections; in fact quite distinct from those grown at 37° C. This peculiarity is specific, and by this means a bacteriological diagnosis may be made within twenty-four hours. The microbe is a facultative anaerobe and is pathogenic for many of the domestic animals. The virus injected into the vein of a dog produces results which clinically resemble closely the symptoms of human yellow fever, and the lesions found after death are almost identical with those observed in the human cadaver; there is intense fatty degeneration of the liver, severe fatty degeneration of the kidneys with the lesions of acute perenchymatous nephritis, and the lesions of intense gastro-enteritis. The patient with yellow fever is menaced by three imminent dangers:

1. Specific infection with the virus of the "bacillus icteroides."
2. Secondary septicæmia.
3. Renal insufficiency.

The "black vomit" is due to the action of the gastric acid upon extravasated blood in the stomach, and the vomiting itself is provoked by the emetic action of the toxins of the "bacillus icteroides" circulating in the blood.

The disease may be transmitted experimentally even by the respiratory tract to rabbits and guinea pigs, so it is possible that the contagion may be transmitted to man by means of the air.

The virus possesses those chief pathogenic properties.

1. The steatogenous: the intense fatty degeneration of the liver cells produces an obstacle to the free course of the bile and favours its resorption—hence the jaundice.

2. The congestive and hæmorrhage producing properties—hence the black vomit and other hæmorrhages from mucous membranes, and the vascular congestions which are the cause of the headache, backache, and liverache.

3. The emetic properties.

The toxin obtained by filtering cultures in broth twenty to twenty-five days old was found to reproduce in the dog the same symptoms and lesions as the virus. Five injections of sterilized and filtered cultures were made under the skin and into the veins of man, and produced typical yellow fever. He made a curious and original observation which seems to explain the mysterious longevity and resistance of the "bacillus icteroides" on board ships—especially old, rotten and badly ventilated ones. The microbe is often incapable of multiplying on a layer of common gelatin; but if a mould is made to grow in its vicinity, scarcely has the mould begun

to grow when little colonies of "bacillus icteroides" spring up around it. He suggests that in localities where yellow fever takes hold with great vigor there may possibly be a mould, hitherto unrecognized, which favours the growth of the microbe. Moisture with heat represents the best condition for the formation of moulds and moulds are abundant in old damp and badly ventilated ships.

Another point of interest is the longevity of the bacillus in sea water which might help to explain the tenacious persistence of yellow fever in maritime localities afflicted by the presence of its specific agent. Finally, the hope is expressed, that it will soon be possible to apply to man a specific preventive and curative treatment.

# OBSTETRICS

IN CHARGE OF

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## EMBOLISM OF THE PULMONARY ARTERY IN THE PUERPERIUM.

Paul von Tiesenhausen (*St. Petersburger Medicinische Wochenschrift*, October 5, 1896) has reported three fatal cases of pulmonary embolism in the puerperium occurring in the St. Petersburg Maternity. These were the only instances met with during twenty-five years, out of 50,000 puerperæ. Two of these occurred in 1884 and one in 1895. In all three cases the symptoms appeared when the patient first got out of bed after labor. In one case this was on the fourth day, in another on the sixth, and in the third on the seventh. Death followed in two cases within twenty-five minutes, and in the third in ten minutes. A necropsy was performed in each case and the diagnosis confirmed. Von Tiesenhausen regards whiteness of the lips followed later by a cyanotic color as a very characteristic symptom. Prophylaxis consists in prolonged rest after confinement, and in cases of phlegmasia alba dolens rubbing of the leg should be forbidden. In the most recent case, hypodermic injections of ether and other means of treatment were tried without success.—*Univ. Med. Magazine*.

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## TREATMENT OF ECLAMPSIA.

Veit. It is impossible to recommend a uniform plan of treatment; there is, however, no doubt in the author's mind but that a large number of cases would and do recover without any and with every treatment. The claim that the prognosis is bettered through rapid delivery by accouchement forcé or Cæsarean section is as yet not sub-



stantiated, as are also the reported favorable results from venesection. The best method so far seems to be the administration of large doses of morphine. A rational therapy of eclampsia is not possible until the pathology of the disease is absolutely clear; it is not improbable that different cases have a different etiological basis. The hastening of labor by harmless means, rupture of the membranes, delivery after full dilatation, large doses of morphine for the suppression of the attacks, the non-administration of food, per os, to unconscious patients, and the induction of diaphoresis by external means, seem to offer the best chances to the patients. There is practically no reason why an attack of eclampsia in itself should be considered so grave as to justify radical operations, which may be safe in the hands of single operators, but which subject the patient to great risks if performed by the profession at large. In exceptional cases, however, exceptional operations are justifiable.—*Amer. Jour. of Obstetrics.*

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#### ORGANIC HEART DISEASE DURING PREGNANCY AND LABOR.

W. W. Lea, of Manchester (*Med. Chron.*, Oct., 1896), calls attention to the danger of organic heart-disease during pregnancy and labor, and reports seven such cases coming under his personal observation. Three of these patients died. It is known that there is a certain amount of dilatation in normal hearts during pregnancy as a result of the increased amount of blood and the greater blood-pressure. Valvular disease causes at times excessive dilatation and even fatty degeneration in the heart-muscle itself. In the periods between pregnancies the symptoms at times entirely disappear.

In the cases where heart-lesions exist there is always a marked tendency to abortion or premature labor. In cases of mitral stenosis the period of greatest danger for the patient is immediately after the birth and during the first few days of the puerperium; death from such conditions has, however, occurred as late as six months after confinement. When compensatory disturbances occur as early as the third month induced abortion appears to be indicated; the symptoms, as a matter of fact, rarely appear before the fifth month. Digitalis and strophanthus should be given in these cases, the dangers of induced premature labor being greater than expectant treatment. The duration of labor should be shortened as much as possible. In cases of marked cardiac weakness immediately after labor, nitrate of amyl is to be given; but in some instances treatment is of little avail. During the puerperium absolute quiet should be enjoined, and digitalis given as required.—*Amer. Med.-Surg. Bulletin.*

## THE ACTION OF SULPHATE OF QUININE AS AN OXYTOXIC.

Sulphate of quinine (Schwab, *L'Obstétrique*, February, 1897.) is considered by many authorities to have a distinct effect in increasing the contraction of the uterus during labor. Schwab states that in every case in which he has given it for uterine inertia contractions have rapidly come on. He records two cases in detail. In his opinion the drug is a powerful stimulant to the uterine muscle. It is only efficacious, however, during labor, and whilst contractions of the uterus are going on. It will not bring on labor or abortion. The contractions set up by quinine are intermittent, thus preserving their physiological character, and hence there is no additional risk to the mother or child attending its administration. The amount should be not less than 15 grains given in two doses, at ten minutes interval. The effect on the pains is produced in 20-30 minutes. It may be prescribed with benefit during the weak pains of the first stage of labor, and more especially in cases of premature rupture of the membranes. M. Schwab has also given quinine in cases of retention of the placenta after labor or abortion. In three cases quoted the placenta was expelled a short time after the administration of quinine.—*Medical Chronicle*.

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IMPORTANCE OF ABDOMINAL PALPATION COMPARED TO  
VAGINAL EXAMINATION.

Ahlfeld does not agree with the recommendations of Leopold to employ abdominal palpation exclusively as a means of diagnosis during the progress of labor. Abdominal palpation alone is not sufficient to recognize existing or impending dangers; intrapartum its execution is difficult, and if thoroughly performed, not free from danger. The obstetrician who manages a labor case without performing vaginal examination is largely trusting to chance. With proper asepsis vaginal examinations are free from danger. Both Ahlfeld and Leopold occupy extreme positions. Abdominal palpation and vaginal examinations are of great and unquestionable value, and used conjointly they enable us to make a correct diagnosis. Leopold in his first essays drew attention to the absolute neglect of abdominal palpation and pointed out its value as a means of diagnosis; he also showed that puerperal infection often follows vaginal examinations and that a decrease in the number of examinations decreases the dangers of infection. Whenever the physician is not positive that everything proceeds normally a thorough vaginal examination is certainly indicated. It would be bad obstetrics to wait

until actual complications have appeared, but the frequent and aimless vaginal examinations cannot be too severely condemned. Concerning the danger of abdominal palpation, we cannot recall a single case where an accident has followed its employment, nor can we imagine that such could occur except its execution had been most brutal.—*American Journal*.

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#### THE MANAGEMENT OF POST-ABORTUM PLACENTAL RETENTION.

Chaleix-Vivie points out (*Gaz. Hebdom. de Méd. et de Chir.*, December 27th, 1896) that the chief dangers of incomplete abortion are hæmorrhage, sepsis with a crowd of resulting morbid states, and the formation of deciduoma malignum. He shows how vaginal and uterine injections, the introduction into the uterus of caustic solutions or of sticks of chloride of zinc, the administration of ergot, and the plugging of the vagina, are all inadequate or dangerous means of arresting the hæmorrhage from placental retention. He advises digital or instrumental curettage; but, with regard to the latter, he insists that the performer shall be an expert in uterine surgery; failing this qualification, the physician ought simply to plug the uterus with iodoform gauze until operative interference can be safely undertaken. For the septic dangers, also, and even for the risk of the growth of a deciduoma malignum, Chaleix-Vivie regards curetting as the treatment of election.—*British Medical Journal*.

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#### DISTURBANCE OF LACTATION.

Angel Money (*Australasian Medical Gazette*, January 20th) maintains that the custom of weaning newly-born children is too prevalent, and too few attempts are made to correct the milk when at fault. A thorough investigation of mother and milk should be made, and the quantity and quality of the latter determined and the percentage of fat and proteid, which are the only variable factors, ascertained. Bad milk contains toxic matters, albumoses, and leucomaines, albumen being plentiful but of the wrong kind, while the percentage of fat is defective; colostrum corpuscles are present and may be numerous. The most successful milk is that of mothers desirous and confident of ability to nurse. Exercise can diminish percentage of proteids, and a moderate amount of beef or mutton can increase percentage of fats; these facts are seldom acted upon. A poor milk may be enriched by improving the maternal dietary, giving more meat and more milk, diminishing exercise, shortening intervals of nursing, and diminishing amount of liquids imbibed. Rich milk may be diluted

by lengthening the intervals of nursing, decreasing the amount of meat eaten, increasing exercise, augmenting fluid drunk; drinking rain or distilled water, Helidon, or Vichy water midway between the nurslings is an excellent practice. Colostrum corpuscles present after the first fortnight signify defective formation of milk. It is unjustifiable to diminish the water in poor milk by purgation, which may stop milk flow or may even cause the milk to contain toxic substances. The breast pump is not sufficiently used to improve the function of lactation; it should replace the baby while attempts are being made to improve the milk. The more perfectly formed the milk is, the more caseinogen and less albumen it contains; however great the percentage of caseinogen, it never in the stomach forms dense clots as formed by cow's milk. It is a mistake to suppose that stout or porter improves milk. Another error is the belief that beef-tea and chicken broth are good for nursing mothers. Excitement, fatigue, and overfeeding should be avoided; also highly-spiced, rich, or stimulating foods. The bowels should be regulated by proper dieting and massage or exercise rather than by laxatives, and it is highly desirable that there should be at night uninterrupted sleep for six hours for mother and child.—*British Medical Journal*.

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#### ANTIPYRIN IN LABOR.

Savitzky (*Vratch*, No. 22, 1896) as the result of seventeen years' experience, recommends antipyrin enemata as an obstetrical anæsthetic. He administers 1 gramme every two to six hours, occasionally combining the drug with opium (from 15 to 25 drops of Russian tinctura opii simplex, which contains 1 part of opium to every 10 parts). The pains are always relieved in fifteen or twenty minutes after the first dose. Frequently the patient soon falls asleep, which is especially beneficial in cases of spasmodic uterine pains and tetanic contraction of the os; hæmorrhage also diminishes. No untoward accessory effects were even observed by the author.—*British Medical Journal*.

# SURGERY

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## SENILE TUBERCULOSIS AND SUBCUTANEOUS (TUBERCULOUS) ULCERATION.

Howard Marsh, F.R.C.S. (Eng.), contributes an article on this important subject to the *Lancet*, of May, 1897.

Although Sir James Paget's original essay on senile scrofula was published in 1867, in some of the principal manuals of the present day, the subject is not even mentioned, while in others it is referred to in so cursory a manner as to convey the impression that it is of little importance in the practice of surgery. Marsh's experience leads him to believe that the opposite of this is, in reality, the case. The disease in its various manifestations is frequent rather than rare; its early recognition is often difficult; indeed, it is apt to be overlooked by those who regard it as a mere pathological curiosity. Prognosis is generally very unfavorable, and the treatment raises questions of considerable gravity from the patient's point of view. Among the cases met with have been the following:

CASE 1. Large double iliac abscess, probably dependent on Pott's disease. The patient, a man aged seventy years, was admitted into St. Bartholomew's Hospital about six weeks ago with two iliac abscesses of very large size: that on the left side was already pointing, and proved, when it was opened, to contain about two pints of pus. The cavity was scraped and drained. This abscess is now very nearly healed. The second abscess will be opened in a few days.

CASE 2. A woman, aged seventy-four years, admitted for an abscess of the right side. Here, as in the former case, there was no angular curvature or other conclusive evidence as to the precise

origin of the abscess; but it must be remembered that angular curvature may be absent, notwithstanding the presence of advanced Pott's disease in patients of middle or advanced life. In such patients the vertebrae are so massive and formed of such strong bone, that although excavation occurs their framework often resists deformity; while in other cases the disease takes the form of a spreading periostitis, and excavation is either absent or present to only a slight extent. It seemed probable that this patient and the patient in Case 1, were suffering from Pott's disease.

CASE 3. Last year a woman, aged sixty-nine years, was admitted to the hospital suffering from spinal disease. On examination she was found to have a very marked angular curvature at the level of the eighth dorsal vertebra. The spinous process of this vertebra was sharply prominent and the column above this point for eight or nine inches was perfectly straight. The patient said that for the previous twelve months she had suffered from pain in her back and round the sides of her trunk, and that the deformity of the spine had been progressing for nine months. She could now move and walk only with difficulty, and was obliged to lie down during the greater part of the day. This patient, who came from a distance, was supplied with a poroplastic jacket and discharged, and heard no more of. That the angular deformity in this case was due to tuberculosis seemed clear. The alternative view that it depended upon new growth—sarcoma or carcinoma—appeared to be negatived by the absence of severe pain and of paralysis, and also by the period over which the case had extended: for malignant disease of the spine is generally fatal in nine months, and this patient, although her spinal disease had existed for more than nine months, was still in very fair general health and condition.

CASE 4. A woman, aged seventy-two years, developed what was evidently tuberculous disease of her left ankle. The joint became the seat of a slowly increasing fusiform swelling involving it in all its aspects. In the course of three months suppuration occurred, and in spite of free incision, scraping and drainage, pus burrowed widely amongst the tendon sheaths of the deep muscles. Amputation was performed at the junction of the middle with the lowermost third of the leg. The stump healed favorably, but slowly. A year afterwards the lower third of the left ulna became the seat of extensive tuberculous periostitis, attended with dusky redness and œdema of the skin and considerable pain. Free incisions were made and the granulation tissue scraped away. The wound slowly healed and the patient remained

well for three years. At the end of this time, her right ankle became affected with what was obviously a tuberculous synovitis. Within two months the joint had become disorganized and the ligaments had been so far destroyed as to allow of free lateral movement. Suppuration occurred and as the tissues in the lower third of the leg were becoming oedematous, amputation was performed six inches above the joint. The patient, who was now seventy-six years of age, bore the operation well, and the wound soon healed. On dissection the joint was found to have undergone extensive tuberculous disease. The synovial membrane was converted into a thick layer of pulpy granulation tissue. The articular cartilage was almost destroyed, the bones in places somewhat deeply eroded, and the principal ligaments had in great part disappeared. Microscopic examination showed that the disease was beyond question tuberculous in character.

CASE 5. A patient, aged seventy-two years, who had been suffering for fifteen months from tuberculous disease of the outer and front portion of the left foot. On examination the metatarso-phalangeal joint of the little toe was found to be disorganized and occupied by granulation tissue, and a sinus led into the substance of the external cuneiform bone, which was in a state of rarefying osteitis.

CASE 6. Two years ago a man, aged fifty-six years, was under treatment for what at first appeared to be osteo-arthritis of his right knee. The joint had recently become a little swollen, stiff, and painful. There was some grating on movement, and the muscles of the thigh were markedly wasted. The knee, however, became more and more swollen, the synovial membrane was thickened and pulpy, and the skin over the joint was dusky and abnormally warm. Within three weeks of the patient's admission, and about two months after the commencement of the disease, the joint suppurated, and, in spite of complete rest, went from bad to worse, and was amputated three weeks later. On examination it was found extensively disorganized by tuberculous disease. The synovial membrane was converted into a thick layer of granulation tissue, the articular cartilages were eroded and reduced to thin, wafer-like plates, detached from the bones. The bones themselves were in some parts deeply ulcerated. The patient quickly recovered from the amputation.

I shall merely mention a few other examples of senile tuberculosis. A patient, aged sixty-five years, with tuberculous epididymitis; a man aged sixty-eight years, with enlarged and suppurating cervical glands; a man aged seventy-five years, with rapid disor-

ganization of the wrist joint, requiring amputation ; a woman aged sixty-seven years, with tuberculous caries of the metacarpal bone of the thumb ; a woman aged sixty-two years, with tuberculous disease of the axillary glands, imitating carcinoma ; and tuberculous disease of the kidney in a woman aged fifty-eight years.

The symptoms in senile tuberculosis are the same as those met with in the more severe examples of the corresponding forms in the young. The main difference between tuberculosis in the old and in the young is that while in the young, if adequate treatment is adopted early and properly carried out, recovery is the rule, in the old, in spite of the best known treatment, the progress of the affection is, in the majority of cases, from bad to worse. The unfavorable progress in the cases is so constant that I do not myself remember to have seen repair take place in a tuberculous joint in any person over fifty years of age. The best treatment, although it will often be found of little avail, is from the first to place the joint at absolute rest ; to secure the best conditions for preserving the patient's general health ; to open abscesses as they form, with the most rigid precautions against septic changes in the wound ; and to resort to amputation when it is found that the progress of the case is in a persistently downward direction. Amputation, if means are taken to prevent hæmorrhage, and if an aseptic condition is maintained, will be perfectly well borne in the case of all the smaller joints and often of the knee. The foregoing cases would tend to confirm Sir James Paget's statement that there are no structures which in the young appear to be "seats of election" of scrofula (or, as would now be said, of tuberculosis) in which the affection is not met with in people over sixty years of age.

He now gives examples of "subcutaneous tuberculous ulceration."

CASE 7. Boy, aged nine years, with a sinus on the inner side of his popliteal space and some ill-defined thickening over the internal condyle of the femur. These appearances suggested that the case was one of tuberculous disease of the lower end of the femur, attended with suppuration. On passing a probe, however, through the sinus, no bare bone could be detected, and, indeed, it was apparent that the probe nowhere passed through the deep fascia, but that it ran easily in various directions close beneath the skin, which, over the most prominent part of the internal condyle, was scarcely thicker than writing paper. The nature of the case as one of wide undermining of the skin by "subcutaneous ulceration" was clear. The whole of the undermined area was therefore exposed by



free incision of the skin; the flaps thus formed were raised and turned back; the granulation tissue was thoroughly scraped away by a Volkmann's spoon; the wound was dusted with iodoform, and the flaps were replaced and fixed by sutures. Sound healing by primary union occurred except in the immediate neighborhood of the original sinus. Here a second scraping was necessary, soon followed by sound healing.

CASE 8. Boy aged 10 years, with three sinuses, three or four inches apart, over the tibia. The orifices of these sinuses were filled with protruding granulation tissue, and their general appearance, together with some swelling of the soft parts, seemed to indicate plainly enough that the case was one of necrosis of the tibia. On proceeding to operate, however, I found that the deep fascia was everywhere intact; but the subcutaneous tissue for some distance around was converted into granulation tissue, so that the skin was completely undermined. In places it was very thin. Free incisions were made, the granulation tissue scraped away, and the flaps were replaced and sutured. The wound healed in about three weeks.

The explanation of this particular form of tuberculous disease appears to be the following. When the tuberculous process is established in the subcutaneous tissue it extends in a horizontal direction, because the subcutaneous tissue is loose, vascular, and easily invaded, whereas both the skin and the deep fascia, especially the latter, owing to their comparative firmness and toughness, tend to withstand infection. The same fact is illustrated by the ordinary undermining of the skin in superficial tuberculous ulceration. It is illustrated also by the fact that in rodent ulcer the process extends in the subcutaneous tissue further than it does in the skin itself, so that for the complete removal of this disease it is necessary to cut well beyond the limits to which the skin appears to the naked eye to be involved. In fact, in subcutaneous ulceration, as in other instances, the undermining of the skin is due to the fact that the process of infection spreads most readily in the direction of least resistance.

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#### THE SURGICAL TREATMENT OF RELAPSING APPENDICITIS.

In a lecture on this subject reported in the *Lancet*, May, 1897, George Heaten, F.R.C.S., Eng., says, that he thinks that relapses are more frequent than is generally deemed to be the case. Hawkins, from an analysis of 250 cases admitted into the wards of St. Thomas' Hospital found that in 23.6 per cent. there was a history

of one or more previous attacks. In almost all these relapsing cases it is the appendix itself which is the starting point of the recurrent attacks of inflammation. In one or two exceptional cases only have they been traced to ulceration in the cæcum itself. The principal morbid conditions which are found may be grouped under six heads: (1) An enterolith is imprisoned in the appendix with occasional distension of its blind end with pus (2) The appendix is surrounded by dense, inflammatory adhesions enclosing an encapsuled abscess. (3) The lumen of the appendix is destroyed by ulceration and its distal end is distended with mucus or pus. (4) The appendix is free but much thickened, resembling a mass of cartilage rather than a mucous tube (such an appendix is occasionally lengthened and unequally distended along its length). (5) The appendix is coiled upon itself or acutely, "kinked" and fixed in this position by adhesions. And (6) the appendix is surrounded by dense old adhesions, matting it to the cæcum, small intestine, bladder, rectum, or the abdominal wall. In some cases these relapses seem to become milder, in others more severe as time goes on; but a severe or even fatal relapse may follow a succession of very mild ones, and we cannot predict with any certainty the character of future relapses from that of the previous ones. For this reason the principle of treatment by removal of the offending organ during a quiescent period, advocated and carried out by Mr. Treves, cannot be too strongly insisted upon. But Mr. Heaten says he would go still further and make it a rule to strongly advise operation in all cases where there has been a single relapse after the primary attack. Careful dieting and medicine with prolonged rest in bed may in a few of such relapsing cases effect a lasting cure, but this is the exception, and in the majority of cases relapse follows relapse, producing in some cases a chronic state of invalidism, while each relapse adds to the difficulties and dangers of any operation which may ultimately have to be performed. He knows of five cases during the last few years in which a sudden fatal general peritonitis has followed the repeated warnings given by a succession of mild relapses, in which had this treatment been adopted after one of the earlier mild attacks, these lives would in all probability have been saved. The operation is as a rule simple, but it may be one of extreme difficulty owing to dense adhesions. The mortality, however, attending it in skilled hands is extremely small (Mr. Treves has published a brilliant record of 150 cases with only one death). The repeated attacks of inflammation have fortunately rendered the peritoneum both less vulnerable to injury and

less absorbent of poison ; and for this reason an amount of tearing and bruising which, with a normal peritoneum would almost certainly set up the most intense inflammation is frequently followed by little or no disturbance. Whenever possible the stump of the appendix should be provided with a serous covering. To effect this a circular flap of peritoneum should be turned back, the muscular and mucous coats ligatured with silk, cut through, and the stump touched with pure carbolic acid. The flap of serous membrane may then be stitched over the stump so as to completely cover it in. No drainage of the peritoneum is necessary in uncomplicated cases. It should be avoided if possible as the liability to a subsequent yielding of the scar and formation of a neutral hernia is thus considerably lessened. The rapid gain in weight and the quick restoration to robust health after the operation is one of its most remarkable features.

Mr. Southam, in the *Lancet* of June 5th, describes the pathological conditions found in twenty cases of recurrent appendicitis treated by operation. The youngest was ten and the oldest forty-four years of age. In 15 of the cases the patients were between fifteen and thirty years of age. In all of the specimens examined the appendix showed evidences of chronic inflammatory changes, its coats—mucous muscular, and peritoneal—being all thickened. In some cases its lumen was uniformly narrowed and almost obliterated ; in others it was partially or completely occluded at same point and dilated on the distal side of the obstruction, occasionally forming, when the occlusion was complete, a cystic cavity of same dimensions. In many instances it was much shortened, measuring only from 1 inch to 1½ inches, instead of from 3 inches to 4 inches, its normal length. It was frequently found to be bent in itself and bound down by adhesions, in one case the tip almost touching the cæcal end of the process. The contents of the appendix consisted either of clear mucus or of a muco-purulent fluid ; in two cases a hard fæcal concretion was present in its interior, and in another a concretion, which had ulcerated through its wall, was found in an abscess cavity external to it. In most cases the inflammatory changes, where not confined to the appendix itself, for evidences of appendicular peritonitis were generally found to be present, the peritonitis being usually of the adhesive character, the inflammatory exudation which had been pared out round the appendix having undergone organization and forming adhesions. These were often very firm and extensive, surrounding the appendix and fixing it to the parietal peritoneum, omentum, cæcum, or small intestine. In some cases they were present after a second attack, in other instances they were absent after many attacks. In one case, the third attack was

accompanied by all the symptoms of acute obstruction. On opening the abdomen the appendix and cæcum were found surrounded by an extensive mass of dense adhesions, included in which were several coils of small intestine, so firmly and so intricately matted together that it was quite impossible to liberate them. In some instances the peritonitis was of the suppurative character, pus having formed in the neighborhood of the appendix. This complication was met with in eight of the twenty cases. In six of these the suppuration was localized, an encysted intra-peritoneal abscess being present; in two cases the suppuration was general, there being well marked evidences of diffuse purulent peritonitis. Suppuration is often secondary to ulceration and perforation of the walls of the appendix, but it has been shown that without any perforation of the appendix, suppuration round it may be due to micro-organisms invading its walls and passing through them into the peritoneal cavity. In health, bacteria are almost constantly present in the interior of the appendix, as well as in other parts of the intestine, without causing any harm. If, however, the vitality of the walls of the appendix—as of any portion of the intestine—becomes impaired from any cause, as in the case of one which has become the seat of recurring attacks of inflammation, its resisting power is diminished. Under these circumstances the bacteria may invade and penetrate its coats, exciting peritonitis, which is often of the suppurative variety. As regards the cause of these cases, if left to themselves, the attacks of appendicitis may recur at intervals for years, and ultimately a cure may take place by a gradual process of obliteration of the lumen of the process and its conversion into a fibrous cord. Suppuration may, however, at any time occur; if an encysted abscess forms, after the evacuation of its contents, the appendix usually shrivels up, becoming obliterated and causing no further trouble. On the other hand, if the suppuration is diffuse, *i.e.*, if there is general purulent peritonitis—the result will probably be fatal. Of the various theories advanced to account for appendicitis, the most probable is that which regards the appendix as a diverticulum, which readily allows of the accumulation and stagnation of fæcal matter. This mingling with the secretion from its mucous lining and undergoing fermentative and putrefactive change sets up a catarrhal inflammation, which may be followed by ulceration and perforation or by thickening of its walls, the latter condition being the one most commonly met with in the recurrent form of the disease. The fæcal concretions found in its interior are probably the consequence, not the cause, of the inflammation, being due to inspissation of its contents; but once formed there, they no doubt tend to excite and keep up the recurrent attacks. Though foreign bodies rarely lodge in the appendix, in one of the above cases, after numerous attacks of appendicitis, an abscess formed and at its bottom was found a pin.

# LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF

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## ASEPSIS OF THE NASAL CAVITIES.

After an elaborate review of St. Clair Thomson's, Wurtz's, and Lermoyez's papers, Piaget relates the numerous experiments which he has conducted for the study of bacteria of the nose. In the normal state the nasal cavities are free from microbes, except the anterior part and vestibule. The culture of nasal mucus collected in the remote parts is sterile; the nasal cavities are normally aseptic. That asepsis is the result of the structure of the canal, of the ciliated epithelium, and especially of the bactericidal properties of the nasal mucus. That bactericidal action is absolute for carbuncle bacteria, very marked for Loeffler's bacillus, and less marked for staphylococcus. This asepsis explains to a certain degree the immunity of nasal operations.

Klemperer, of Strasburg, does not agree with the authors named, but maintains that in healthy noses, while it is true that bacteria are to be found in quantity only in the vestibule, still no part of the nose is germ-free. Let the anterior parts of the nose be thoroughly sterilized with perchloride of mercury and washed out with sterilized water; then wipe out the parts higher and deeper in with sterilized cotton-wool swabs. These (the swabs) always bring away a few germs, from which two, three, four, or more frequently six, eight, ten colonies can be cultivated.

Klemperer cannot confirm the statements of Wurtz and Lermoyez as to the bactericidal properties of nasal mucus. Unlike these authors, he experimented not with anthrax bacillus, but with the bacteria which he had previously cultivated from the nose whose mucus he was testing. At first they did not grow well, and even diminished to some extent in number, but soon grew accustomed to the mucus and multiplied in it. Extinction was never observed.—*Journal of Laryngology, November, 1896. University Medical Journal, November, 1896.*

## PROGRESS OF LARYNGOLOGY AND RHINOLOGY DURING THE VICTORIAN ERA.

St. Clair Thompson (*Brit. Med. Jour.*) gives a brief but terse outline of the advancement made during the sixty years of the Queen's reign. In 1837 laryngology was practically non-existent; as no suitable instrument had been invented for examination of the larynx. In 1840 Liston tried to examine the larynx with a dentist's mirror, but he had no laryngoscope. In 1844 Wården attempted to do the same thing by the use of prisms, but he was equally unsuccessful.

It was left to Signor Manuel Garcia, a Spanish singing master, to invent the laryngoscope. He is still living in London, a hearty nonagenarian. His discovery was made in 1854, but at the time was received with apathy by the medical profession. His investigations were all made upon himself with the aid of two mirrors. Czermak, however, saw Garcia's paper and his mirrors, and finally perfected the art of laryngoscopy, and presented it to the world in the *Medizinische Wochenschrift* in March, 1858. Czermak was also the first to demonstrate the use of mirrors in posterior rhinoscopy, which he did in 1863.

The progress of laryngology, to use St. Clair Thompson's words, "has probably been more rapid than that of any department of medicine during a similar period of time. Diseases of the throat and nose are no longer dependent on symptoms only, for diagnosis. The mirror reveals the mischief, and the hand guided by it, applies the treatment required." The first laryngeal growth removed *per vias naturales* in England was by Dr. Walker, reported in the *London Lancet* in 1861.

Perhaps the most noteworthy event in this department of medical science since the invention of the laryngoscope was the discovery of the anæsthetic properties of cocaine, by Koller, in 1884. In sparing the patient from pain during operation, and from discomfort during examination, this drug has been invaluable. In rhinology the benefits derived from it are even greater than in laryngology, as its power of constriction of mucus tissue greatly facilitates examination.

Laryngology in relation to medicine has made immense strides during recent years, as a single sign observed in throat or nasopharynx may throw important light upon obscure internal diseases. A syphilitic process in the post-nasal space, a tuberculous ulcer in the larynx, a paralysis of a vocal cord, when observed positively by

the eye, may clear away obscurity, otherwise difficult to remove. The discovery of suppuration in one of the accessory cavities of the nose, may account for headache, while the presence of adenoids may give the reason for deafness and ear disease.

Recent developments in this branch of science are too new to speak positively of the results. The autoscope may yet have a history worth recording. Intubation even now holds a secure position, and the Roentgen Rays have proved their efficacy by enabling the surgeon to detect and remove foreign bodies from the œsophagus.

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#### ESTHEOMENIC MENSTRUAL ULCER OF NOSE.

McNaughton-Jones (*Jour. of Laryngology*) reports a case of this exceptional disease. In Nov., '95, a patient consulted him relative to an ulcer on the inner column of the nostril. It was flat and covered with brown scab; edges slightly raised; red blush around it. The nose had been affected for several months, exacerbation always occurring at the catamenial period and marked by extension of the disease. At the cessation of the menses there would be improvement extending during the interval.

Many methods of treatment were tried, but ineffectually. Watson Cheyne and MacIntyre both saw the case in consultation. Microscopical sections were examined, excluding tuberculous and malignant disease. Finally, after many months of trial, the disease was subdued by the application of salactol and chinosal. Of salactol he used light applications for a few seconds to soften the crust. Then he saturated and inserted a cotton-wool plug of one in six hundred of chinosal. The treatment was repeated at regular intervals. From May to October he hastened the healing of the granulations by touching them occasionally with galvano-cautery. Internally thyroid extract was given. A year from the date of commencement of treatment the patient was quite well.

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#### ADENOID DISEASE.

Greville Macdonald (*Jour. Laryn.*), the president of the laryngological section of the British Medical Association, summarizes his views as follows:

I. "When there is middle ear disease of any sort, with or without symptoms, usually attributed to ankylosis, and whatever the age of the patient, every trace of adenoids should be removed, although necessarily, in many of such cases, one's prognosis must be extremely guarded."

2. "Whenever there is a constant tendency to cold taking, or there is chronic laryngitis or bronchitis, and the patient is under 30, we should not hesitate to operate, and that with a most favorable prognosis, should the obstruction be profound."

3. "Whenever—to come to the nervous symptoms—we have paroxysmal sneezing or hay fever, spasmodic asthma or laryngismus stridulus, headaches, chorea, or epilepsy, we need not scruple to operate, although hereagain our prognosis must be guarded."

4. "Finally, whenever there is distinct flattening of the lower part of the thorax on one or both sides, or depression of the costal cartilages, or prominence of the sternum, we should probably be right in operating, although there may not be much indication of general malnutrition."

Havilland Hall, in one of the Lettsomian lectures, delivered before the Medical Society of London, Feb. 1897 (*Jour. Laryn.*), lays emphasis upon the amount of chest deformity which is produced by defective nasal respiration. This, in early life, is almost always occasioned by the pressure of adenoid vegetations. Hence the importance of their early removal.

Gleitsman at the Lar. Sec., New York Academy of Medicine (*Laryngoscope*, June), dwelt upon the influence of adenoid growths, upon the development and configuration of the nasal septum, and upper maxilla. Many facial deformities, he stated, were produced by the interference of adenoids with nasal respiration. Among these were deflected septum, high arched palate, and V shaped upper maxilla, with the lateral teeth turned inwardly and the molars outwardly. The result is that the upper jaw, being flattened, projects pointedly forward.

Kahn (*Rev. Hebd. de Lar.*, Apr., 1897) gives four instances, in which a bony crest on the posterior wall of the pharynx interfered with the manipulations of Gottstein's curette. In two of these the instrument became temporarily fixed in the bone. In one case troublesome hæmorrhage followed.

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#### AUTOSCOPY OF THE NASO-PHARYNX.

Katzenstein (*Archiv. fur Laryng. und Rhinol.*) describes the method of examination. By it the posterior wall and roof of the naso-pharynx, the mouths of the eustachian tubes, and the fossæ of Rosenmueller can be examined. By its aid, also, adenoids can be removed.



# PÆDIATRICS

IN CHARGE OF

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AND

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## FOUR CASES OF GLANDULAR FEVER IN THE SAME FAMILY. ONE WAS AN ADULT.

Dr. A. E. Roussel, Philadelphia (*Medical and Surgical Reporter*, April 17th, 1897), reports four cases of Glandular fever. Jan. 20, '97—Sarah B., aged 5 years, was taken suddenly ill with vomiting. Temperature, 101; pulse 120, and headache. Movement of head was restricted, and there was slight but distinct glandular enlargement extending downward and forward from the angle of the jaw and behind the steruo-cleido mastoid on the right side. Throat exhibited a general diffuse redness, more marked on the right side, but no actual swelling. Scarlatina was suspected, and the child isolated. Next day constipation was present, and the glands were larger, but no rash. On the third, excessive perspiration was added to the other symptoms. This group of symptoms lasted for eight days, when the temperature dropped to normal; and a tedious convalescence was entered on, the child being pale, debilitated, with a tendency to excessive perspiration.

On the third day of the sickness of this child, a younger child was taken sick in a similar way. His illness progressed similarly, lasting twelve days, and then convalesced.

On the sixth day the oldest boy, seven years old, was similarly attacked, although the first case had been promptly isolated.

On the ninth day the nurse, 24 years old, was attacked.

All four cases followed the same course, and all had a lingering convalescence.

### WHAT IS THE CAUSE OF THE EXCESSIVE MORTALITY AFTER SUPRA-PUBIC CYSTOTOMY?

Dr. Orville Hormtz, Philadelphia (*Medical and Surgical Reporter*) explains that in Morrow's "System of Genito-Urinary Diseases" statistics are given of 744 cases of supra-pubic lithotomy. Of these 591 were in children under 14 years old, with 74 deaths, or 12.52 per cent. mortality.

Between 14 and 50 years the mortality was 12 per cent. Over 50 years, 33 per cent. The writer claims that he has performed supra-pubic cystotomy 70 times with one death. He gives the following probable causes of the excessive mortality:

- 1st—Want of proper preparation of the patient.
- 2nd—Over-distention of the bladder from a lack of knowledge of its capacity in its diseased condition.
- 3rd—Non-employment of the rectal bag.
- 4th—Over-distention of the rectal bag.
- 5th—Extensive and unnecessary dissection of the prevesical tissue.
- 6th—Lack of proper adjustment of a drainage tube of large calibre.
- 7th—Injury of the peritoneum by the knife.
- 8th—Loss of time at the operation from want of anatomical knowledge.

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#### RETAINED INTUBATION TUBES—CAUSES AND TREATMENT.

Dr. J. O'Dyer, New York. (*Archives of Pædiatrics*, July, 1897), explains that by retained intubation tubes we mean the necessity of continuing intubation long after the disappearance of the original diseases. The cause and seat of the obstruction is best explained by the three following rules:

- 1st—Traumatism, producing stenosis.
- 2nd—Injury by a non-fitting tube. (A well-made tube of too large a size; the right size for the age, but too large for the case; a well-made tube, not cleaned at proper intervals, or an imperfectly made tube.)
- 3rd—The seat of the lesion is just below the vocal cords, in the subglottic division of the larynx.

Why does a well-made tube of the proper size injure the larynx, and why is this lesion below the vocal cords?

Principally because when the membrane is sub-glottic the tube suitable for the age is too large for the passage. This portion of the

passage is surrounded by the rigid band of the cricoid cartilage, and as the membrane increases in thickness the tube is either expelled, or injury to the parts is done by pressure. In the early stages stenosis from this cause returns slowly when the tube is removed; but the interval gradually grows shorter until finally the skill of the operator is taxed to return the tube quick enough to prevent dyspnoea. Rapid asphyxia may also result from granulation tissue higher up in the larynx, from destruction of the cricoid cartilage, or from paralysis of the cords.

Destruction of the cricoid allows the soft parts between the thyroid and the first ring of the trachea to collapse and thus cause asphyxia.

The treatment of these cases is evident, viz., to reduce the size of the tube, etc., tracheotomy, in the author's opinion, should never be done, although it is done in Europe. (The author gives his reasons.) The chief cause of retained tubes is granulation tissue, caused by ulceration, produced by the lateral projection of the shoulder of a tube, either badly made, too large, and carrying calcareous deposits. The remedy for this is a tube with a built up head. For stenosis, due to destruction of the cricoid, tracheotomy is the only remedy.

Particulars of a case are given in which stenosis was produced by a mass of oedematous tissues, possibly mixed with granulations just below the chink. This was treated by coating the tube with hot gelatine, sprinkled with alum. The gelatine began to swell when the tube was introduced, and caused gradual absorption of the oedema.

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#### MULTIPLE CUTANEOUS GANGRENE OF THE SCALP IN A CACHECTIC CHILD.

T.H., æt. 2 years, was seen by me (A. Douglas Heath, M.D., London, *British Medical Journal*, July 3, 1897) Jan. 11, 1897. He was much emaciated after an attack of pertussis. A few dry rales were heard in his chest. Tongue dry and brown, and teeth covered with sudes. Temperature, 101.4. On the upper occipital region of the scalp was found a deep pinched out ulcer, as large as a five shilling piece, with edges sloping suddenly to a moist black slough on the floor. The ulcer was rather more than quarter of an inch in depth. Bare bone could not be felt, and the appearance resembled that of cancrum oris. The odor was sickening. About two inches away was a patch of skin the size of a shilling, black in the centre and purple at the edges. Another spot was also found,

over which the skin was of a pale pink color, with a slight silvery desquamation of the epidermis. This small spot had been the last to appear. The oldest and largest gangrenous spot had started as a large pimple three weeks previously, and soon after became exactly like the small pink swelling I had noticed. Before Jan. 18 five new lesions appeared, and at this date the temperature was 102°. The child died on the following day from septic intoxication. No post mortem was obtained.

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#### GANGRENE OF THE PENIS AFTER RITUAL CIRCUMCISION.

Oct. 10, a child nine days old was circumcised by the "mohel."

Oct. 11, hæmorrhage began, and was stopped by the "mohel" after four hours' work.

Oct. 12, Dr. Brothers sent for, and found the child feverish, whining, vomiting, and distinctly collapsed, with a distended bladder. The glans penis was in a condition of dry gangrene, and presented a black, hard, cylindrical mass three-quarters of an inch long. The penis was constricted by a narrow strip of gauze saturated with some styptic. The constriction was relieved, the dead tissue cut away, and immediately urine began to flow.

During the night convulsions began, and the child vomited incessantly.

Oct. 18, stump of gangrene came away in a lump.

Oct. 23, a large abscess over right scapular region was freely incised, and convulsions reappeared.

From this time on the child gradually sank, and died Nov. 15 from exhaustion.—A. Brothers in *Medical Record*, 1897.

# HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

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ASSISTED BY

**J. W. SMUCK, M.D.**

## REPORT OF PROVINCIAL BOARD OF HEALTH FOR JUNE.

Total number of municipalities in the province, 745 ; number which made returns for June, 546.

Table showing total deaths returned from the several contagious diseases for a population of 1,527,744 were 211, or at the following rate per 1,000 for municipalities which made returns, calculated on a per annum basis. (Total population of the province, 2,233,117.)

	Population	No. of deaths from and rate per 1,000 per annum.						Total.
		Scarlatina.	Diphtheria.	Measles.	Whooping Cough.	Typhoid Fever.	Tuberculosis.	
Cities .....	429,399	12 (0.3)	15 (0.4)	3 (0.08)	1 (0.03)	2 (0.06)	72 (2.0)	105
Towns and vil- lages reporting.	274,625	2 (0.08)	11 (0.48)	4 (0.17)	0	5 (0.22)	17 (0.74)	39
Townships re- porting.....	823,720	3 (0.04)	13 (0.18)	1 (0.01)	5 (0.07)	5 (0.07)	40 (0.58)	67
Population re- porting.....	527,744 (68.4%)	17 (0.1)	39 (0.3)	8 (0.06)	6 (0.04)	12 (0.09)	130 (1.02)	211

## FORMALDEHYD.

This new antiseptic is creating a great deal of comment, and if the reports are to be relied on it is sure to prove very useful.

F. J. C. Bird, in *The Pharmaceutical Journal*, gives a table of its uses and the strength. One part of formaldehyd in the tables repre-

sents two and one-half parts of full strength, or forty per cent. solution of commerce :

1.125,000 kills anthrax bacilli.

1.50,000 prevents the development of typhus bacilli, etc.

1.32,000 preserves milk for several days.

1.25,000 forms a useful injection in leucorrhœa, etc.

1.20,000 preserves wines, weak alcoholic liquids, and beer, also milk for several weeks.

1.4000 is recommended for moistening paper used to cover jam, etc.

1.3200 for rinsing dairy vessels, etc.

1.2500 destroys the most resistant micro-organism in one hour.

1.2000 for rinsing casks and vessels intended for liquids liable to fermentation.

1.500 for the irrigation of catheters, etc., and as a mouth-wash.

1.250 to 200 is a general disinfectant solution for washing hands, instruments, etc., in surgery, spraying in sick rooms, and as a deodorant.

1.160 to 100 hardens microscopic tissues, which should be immersed for a considerable time to give the best results.

1.100 in lupus, psoriasis, and skin diseases.

1.50 to 25 sterilizes surgical catgut, silk, etc., by steeping.

1.25 for quickly hardening and preserving for microscopical sections; longer immersion in a weaker solution gives better results.

1.10 for hardening very firm tissues in pathological and histological work.

1.5 for hardening firm tissues in such work.

1.2½ for hardening soft tissues for the same purpose.

The fact that water absorbs it readily to the extent of a forty per cent. solution renders it easy of application as a disinfectant, and it is in this aqueous solution that it is found in the market, and is thus miscible with water to form any degree of strength desirable.

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#### FIFTEENTH ANNUAL REPORT OF THE PROVINCIAL BOARD OF HEALTH.

The fifteenth annual report of the Ontario Board of Health has just been issued, and in addition to the usual data regarding deaths, etc., from contagious diseases, several very practical papers are presented.

For the first time an effort has been made to collect reliable and comparative tables showing the deaths from six most malignant of

the contagious diseases. Tuberculosis is given the place it deserves, and the most surprising fact presented is that this disease carries off more annually than all others combined.

The province appears to have been exceptionally free from communicable diseases. There have been some mild epidemics in various parts. Physicians are evidently managing these diseases much better, thereby preventing the spread and reducing mortality.

Each year shows increased activity in developing waterworks and sewerage systems in towns and cities, giving thereby a correct index of the progress of municipal sanitation.

Progress has been noted along the line of meat and milk inspection. There is a growing public sentiment which demands guaranteed purity in these two important items of food supply.

An important work undertaken by the board, for the first time during the past year, was the systematic inspection of summer resorts—a work apparently much needed, if our northern districts are to maintain their reputation of the past.

The laboratory has been patronized to a greater extent than heretofore, showing that the efforts put forth in this direction are appreciated.

The secretary of the board, Dr. P. H. Bryce, sums up by saying:

“It may therefore be said that the year has been one in which progress has been made in the routine work which a public health department, organized to do work along the several lines which have been referred to, will from time to time be called upon to perform. That the results have advanced the general well-being and happiness of the people at large needs no demonstration, and that the appreciation both of the needs of public health work, and of the supplying of machinery for its extension and effectiveness, is slowly growing, is in several ways very evident.

“That Canada should maintain the position already gained is but due to her past history, and that Ontario, the premier province in so many other matters, should in public health work do herself equal credit is the task which this board has always set itself to perform.”

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#### PROGRESS OF STATE MEDICINE DURING THE SEMI-DECADE OF 1892-1896.

Dr. P. H. Bryce, Secretary of the Provincial Board of Health of Ontario, in report just issued, gives an very interesting chapter with above heading. He considers the matter under three divisions, (a)

Progress in the discovery in the causes of disease ; (b) Progress in the methods of cure of disease ; and (c) Progress in the prevention of disease.

The first section briefly epitomizes the knowledge we had of the causation of the various communicable diseases—excepting the true causes of tetanus—of septicæmia, of the plague or rinderpest, of the bubonic plague, and of several other animal diseases, have been well established. The cure and prevention of these diseases was at that time (1892) in its infancy. Professor Koch had given to the world the result of his investigation regarding “tuberculin.” The theory of the toxines was attracting attention, and Professor Behring has since given the result of his researches in the antitoxine of diphtheria. Tizzioni and others succeeded in curing tetanus. Yersin and Roux was able to definitely demonstrate the difference between true diphtheria, and the less harmful variety. Haffkine was doing his great work upon the causation and cure of the bubonic plague of India.

Septicæmia has been studied, and an antitoxine prepared to meet its effects, but probably the most remarkable activity in all branches, not only of human but animal sanitation, has been in studying tuberculosis. It is but recently that the disease, as found in cattle, was suspected to be the same as that found in man.

Prevention has had its share of thought, and the public are more and more coming to realize the importance thereof. In tuberculosis it has become a routine proceeding to diagnose by means of the sputum early cases, not only in order that steps may be taken for the proper treatment of the patient, but that precautions may be adopted for the protection of other persons exposed to such cases. In diphtheria we are enabled, so soon as the diagnosis has proven the disease to be real, to protect persons who have been exposed by prophylactic injection of the antitoxine.

In disinfection greater efficiency has been secured in perfecting apparatus and the use of some new methods, notably formaldehyde vapor.

Water filtration is receiving much attention, yet not more than it deserves. Many new avenues of prevention are opening, but great discoveries are only brought forth with infinite pains.



## Editorials.

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### THE ONTARIO MEDICAL COUNCIL.

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THE following sentence appears in the first editorial of our last number: "The discussions at certain sessions were decidedly breezy, but always commendable." The printer committed a very important error by leaving out the word "not" before "always commendable," as it appeared in the original manuscript. As a matter of fact, there appears to be a general impression abroad that there was less work and more talking done at the recent meeting than we have had for several years in connection with that corporate body. It is also freely stated that the tone of the discussions was far below what we have a right to expect in such an important deliberative assembly. Such appeared to be the opinion of the lay press, which to a large extent held the proceedings up to ridicule in a way that was rather humiliating to thoughtful members of the profession outside our medical parliament.

Never since the days of the "free fights" in the times of Berri-man, Dewar, Campbell, Wm. Clarke, etc., have personalities been hurled here, there, and everywhere, in a more reckless fashion than at this meeting. This may be accounted for partly through the fact that one of the most prolonged discussions took place over a motion which was entirely personal in its character, *i.e.*, the motion of censure on the conduct of Dr. Sangster in connection with a petition which was presented to the Ontario Legislature by a committee acting on behalf of the council. The proceedings of the meeting will be published in full, and the profession will then have an opportunity of learning both sides of the question. The fact that the motion was carried by a very substantial majority is a very serious one, and should impel the members of the college to read and consider carefully the details of the discussion, which will be found in the minutes.

## CANADIAN MEDICAL ASSOCIATION.

THE thirtieth annual meeting of the Canadian Medical Association will be held in Montreal, August 30 and 31, under the presidency of Dr. V. H. Moore, of Brockville, Ont. In the programme we find the following directions about travelling to and from the meeting :

“Purchase a ticket for Montreal from the agent at the place of departure, and get from him a standard certificate (which is a receipt for one full single fare). When registering at the meeting leave the certificate with the treasurer, and it will be returned, signed by the Secretary, on the morning of August 31.

This certificate, when presented to the station agent at Montreal, will entitle the bearer to a ticket to his destination, free of charge.

N.B. No 1. These rates refer to members, delegates and their wives travelling from points east of Fort William.

N.B. No. 2. Delegates west of Fort William will communicate with Robt. Kerr, C.P.R., Winnipeg.”

Those who are members of the British Association, or intend to become such, will probably find it more convenient and satisfactory to use the certificates furnished by Dr. Geo. E. Armstrong, of Montreal, as explained elsewhere in this issue.

In another column will be found the provisional programme, by which it will be seen that a certain amount of professional work will be done, especially in the way of clinical demonstrations at the Montreal General Hospital on Monday, August 30. Dr. Moore, the President, and Mr. Watson Cheyne, of London, England, will also deliver addresses on the same day. There will be a smoking concert in Windsor Hall on the same evening. On Tuesday morning, August 31, there will be a general session to receive reports of Nominating and other committees, to elect officers, and for general business.

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BRITISH MEDICAL ASSOCIATION, MONTREAL MEETING, AUGUST 31.

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WE desire to call the attention of all members or intending members of the British Medical Association to the following facts which will show how members may reach Montreal or take advantage of trips to any part of Canada, before or after the meeting, together with rates for such trips, etc.,

The names of all members of the Toronto branch have been forwarded to Dr. G. E. Armstrong, 320 Mountain street, Montreal who will send a certificate to any member writing for it, entitling him and any of his family to buy a ticket at any ticket office (railway or steamboat) in Canada to any part of Canada for half of one single fare, or return ticket for one single fare. He can purchase them at any time, to any point and as often as he likes. These rates are good from now till September 30.

If any one wishes to go to the Northwest before the meeting he can purchase a ticket from point of departure at same time, asking the local ticket agent to give a certificate saying he had purchased a ticket; if this certificate and the number of the certificate given by Dr. Armstrong is sent to Mr. W. F. Egg, 129 St. James street, Montreal, he will quote a price, and also send free passes over branch lines in Manitoba, Northwest Territories, and British Columbia, and over the C.P.R. steamboats. The price of such ticket to Vancouver is about \$70.45.

Or on receipt of the number of certificate given by Dr. Armstrong, Mr. Egg will quote price, send tickets and free passes altogether on receipt of money order for the amount.

It would be well for any of the profession, throughout the western part of the province, especially those who are not already members, but who wish to take advantage of all that the meeting affords, to make application for membership at their earliest convenience. It ought to be understood that only invited guests and members are admitted to the discussions and privileges.

Other information may be obtained by writing to Dr. Henry T. Machell, 95 Bellevue avenue, the acting secretary of the Toronto branch.

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ROBERT M. COULTER, M.D.

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**D**R. R. M. COULTER has been appointed Deputy Postmaster-General, and entered on the duties of his office August 1, 1897. He received his medical education in the Toronto School of Medicine, M.B. from the University of Toronto, and M.D. from the University of Victoria College, in 1882. In the same year he commenced practice in Aurora in partnership with Dr. Rutherford, and remained in these relations until the time of his appointment in the postal service. He soon attained success as a medical practitioner; and, as a Liberal, took a prominent part in politics, being

one of the best speakers and organizers in his party. He possesses exceptional ability, great tact, good judgment—in fact, a combination of qualities which are likely to make him an admirable executive officer. Notwithstanding Dr. Coulter's unfortunate Grit proclivities, which all good Tories, including the writer, must deplore, we feel confident that the Government could not have made a better selection. On the evening of July 27, there was held in Aurora a large and highly successful banquet, where Grit and Tory met together in peace and good will, with a desire to do honor to the popular and worthy young doctor and to extend their hearty congratulations and best wishes for his future success. At the same time his friends presented him with an address and a handsome cabinet of silverware. We desire to join the large body of well-wishers, and offer our cordial congratulations, with kindest wishes for many long years of health, happiness, and success to Dr. and Mrs. Coulter.

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#### LADY NURSES.

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THERE has been a good deal of discussion with reference to the merits and demerits of trained nurses in England. *The Practitioner* has said many things about them that are far from complimentary. In the July number it quotes from *The Hospital* as follows: "Many medical men, and those of the widest experience and highest authority, will confess that for private nursing they prefer the much abused 'housemaid' nurse, and that is a view which will be cordially echoed by those of the public who have suffered at the hand of her social superior, the 'lady nurse.' . . . It is a self-evident fact that ladies do not make the best private nurses, and one which few who have had experience in the management of a private nursing institution will deny." *The Practitioner*, on its own account, says: "Many people will continue to prefer the ministrations of an intelligent woman who does not disdain to put her hand to anything that will make them comfortable, and who, if she has not the accomplishments, is also free from the affectations of a lady nurse."

It is certainly unfortunate, and somewhat strange, if a lady or a gentlewoman in England cannot, by their system of training, become a good nurse. Experience in Canada has shown that only a limited proportion of women can be transformed into good nurses; but it has not shown that education, culture, and refinement are barriers to efficiency in a trained nurse. Is it not possible for a lady to be "intelligent" and willing "to put her hand to anything that will

make people comfortable," without those undesirable qualifications termed "affectations"? Is the woman who develops such "affectations" a gentlewoman, in the correct sense of the term, or was she ever such? Probably not.

Certain so-called lady nurses, who give themselves airs, and require extra servants to look after their comforts, are useless creatures—not ladies. It is difficult to give proper titles to such people; but, if they were males, they would be termed cads—a nasty but expressive term. Let us drop the word lady (a person in these modern days with new views difficult to describe) and choose for our ideal nurse a good, pure woman, who can talk and read English, who is kind and considerate, discreet and tactful, who truly loves nursing, and willingly subjects herself to the discipline of a good training school, and during her course exhibits those higher qualities which are so necessary for her vocation. Such a one is a jewel—hard to find—but she exists. Call her what you will, but speak no ill of her.

## Correspondence.

VICTORIA, B.C., August 1, 1897.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—It will be agreeable to you to hear of honors being paid to our former classmate. I refer to the presentations made to Dr. W. A. Richardson (Tor. '86), who for seven years has faithfully served us as resident physician of our city hospital and who now leaves us for the incomparable Yukon. During his term of service he has proved himself accommodating and efficient and has administered the affairs of the hospital with a view to effectiveness and extension.

On Thursday evening last the nursing staff of the hospital, ward maids, and other employees surprised the house surgeon by waiting upon him to say good-bye. The matron, Miss McMillan, with appropriate words expressed regret in parting with one whom they esteemed so highly, and presented him with a purse containing not a few pieces of gold as a slight token of respect from his co-laborers and as a foretaste of the many nuggets that awaited him beyond the mountains upon the golden Klondyke. The surprise to Dr. Richardson was complete. There are times when words fail to express. This was one of such times. A speech was out of the question. He thanked them all, and thanked them again.

The evening previous to his departure a representative gathering of the medical men of the city waited upon the doctor and presented him with an address and a complete outfit of surgical instruments. Complimentary addresses were delivered by all present. Dr. Richardson, in replying, thanked those who had thus exhibited such a kindly disposition towards him, and promised them a warm place in his memory when he reached the region of 72° below zero.

ERNEST HALL.

The following is a copy of the address :

To W. A. RICHARDSON, M.B., House Surgeon Provincial Royal Jubilee Hospital, Victoria, British Columbia.

We, the undersigned members of the medical profession residing and practising in the city of Victoria, desire to express our apprecia-

tion of the valuable services rendered us by you during your residence amongst us.

For the able assistance and valuable advice which, during the past seven years you, in your capacity of house surgeon to the Provincial Royal Jubilee Hospital, were at all times ready to give us, we are greatly indebted.

Under your care we felt that our patients were exceptionally well looked after, and your varied experience and keen powers of observation rendered your services invaluable.

We feel that both socially and professionally we shall greatly miss you.

Decided in your opinions, you have always had the courage to express your convictions in a frank and manly manner.

As one result of this the profession here are largely indebted to you for the privilege now afforded them of treating their own free patients in the public wards.

We ask you to accept and take to the remote regions of the Klondyke this case of surgical instruments; trusting that, although they are unsuitable for ordinary gold mining, they may assist you in working the professional bonanza we feel is waiting for one possessing your high professional abilities.

July 31st, 1897.

Signed, etc.

## Book Reviews.

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THE DISEASES OF THE STOMACH. By Dr. C. A. Ewald, Extraordinary Professor of Medicine at the University of Berlin; Director of the Augusta Hospital, etc., etc. Translated and edited with numerous additions from the third German edition by Morris Manges, A.M., M.D., Assistant Visiting Physician in Mount Sinai Hospital, Lecturer on General Medicine at the New York Polyclinic, etc. 600 pages. Profusely illustrated. Price ——. New York: D. Appleton & Company. Toronto: G. H. Morang, representing D. Appleton & Company, 63 Yonge street.

The second American edition of this work is at hand, and in it we find a considerable amount of new material. The last German edition (1893) is a complete revision of the former ones by Prof. Ewald, and this American edition is that edition complete, with the addition of all the investigations carried on since its appearance. The amount of additional matter added by the learned translator is exhaustive, and always of a very important nature.

That the first edition was exhausted so soon and a demand for a second established, shows what value the profession place on the work. It is undoubtedly the classic on diseases of the stomach. We reviewed the work in its former edition, and find that the present one contains so much new material that possessors of the former edition will undoubtedly purchase the new one. Those not possessing the work should have it at once in their library..

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NEW VOLUME OF HARE'S SYSTEM OF PRACTICAL THERAPEUTICS. Vol IV. *A System of Practical Therapeutics.* By eminent authors. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 1100 pages, with illustrations. Regular price, cloth, \$6; leather, \$7; half Russia, \$8. Price of Vol. IV. to subscribers to the *System*, cloth, \$5; leather, \$6; half Russia, \$7. Price of the *System* complete in four volumes of about 4,500 pages, with about 550 engravings, cloth \$20; leather, \$24; half Russia, \$28. Lea Brothers & Co., Publishers, Philadelphia and New York.

This volume is issued to bring the "system" absolutely up to date. We are glad to see the subject of therapeutics receive the attention that is now given to it. The treatment and prevention of disease is of vastly more practical importance to the patient than the morbid process in detail can ever be. Pathology to-day is doing a great deal to establish a scientific system of therapeutics in the future, but in the meantime we must look out and keep the subject of treatment as nearly as possible abreast of the other departments. This Volume IV. will do a great deal for the busy practitioner; it will present to him clearly and concisely, yet not too briefly, the advancement in therapeutics of the past two or



three years—and taken with the preceding three volumes make a compendium that one cannot well afford to be without. It is a practical impossibility to review each of the thirty-three articles, which cover 1,050 pages.

Dr. O. Edwin Solly has compiled the "Present Treatment of Tuberculosis" into a most instructive chapter. He deals with the subject of tuberculin as a means of diagnosis, and as a method of treatment. Maragliano, of Genoa, who in 1895 described his serum treatment, has received ample space, and the advantages of the method pointed out. Then nuclein, investigated by Dr. Vaughan, of Ann Arbor, is brought up to date. The antiseptic treatment, and treatment without drugs and climatic treatment, are all brought up to the ideas of the immediate present.

"The Present Treatment of Syphilis," by Dr. Edward Martin, is one of the most readable chapters in the volume; it contains all that is new and the good of the old. He advocates the excision of the initial lesion. This we are delighted with; it is the advanced idea undoubtedly.

The antitoxin treatment of diphtheria is thoroughly reviewed under the caption, "New Facts and Methods in the Treatment of Diphtheria," by Dr. William Hallock Park. A fact wisely pointed out is well worth noting. "If the inoculation with the antitoxin follows within a short time that of the poison or living germs, it will in greater amount still prove curative; but if the antitoxin is withheld until the animal is under profound constitutional poisoning, the antitoxin, without regard to dose, will prove valueless." This is true of animal experiments, and no doubt many reported failures are due to having allowed the disease to gain too great a hold before introducing the antitoxin. This is one of the most instructive chapters in the volume.

"Asthma, Bronchitis, and Whooping Cough," by Dr. Norman Budge, is well worth careful study. Many important points are brought out. In speaking of the treatment of whooping cough we do not think quite enough prominence is given to bromoform, which has yielded excellent results in our hands. The method of prescribing the same in water is not the best by any means, as the author says it does not mix. We administer it by dropping it on loaf sugar. The children eat the sugar readily. There is no danger by this method of giving a poisonous dose, as related in a recent issue of *THE PRACTITIONER*.

The chapter on "Typhoid Fever and Malarial Diseases," by J. M. Anders, M.D., LL.D., is very complete, although we miss from it an accurate description of the best methods of carrying out the antiseptic and eliminative treatment as laid down by Thistle and others.

Chapters on "Influenza," by Dr. H. A. Hare, "Scarlet Fever and Measles," by the same; "Pneumonia," etc., by Dr. J. B. Herrick; "Diseases of the Heart," Dr. F. P. Henry, etc., complete a most instructive volume, which, taken as a whole, is one of the best in the system, and deserves a very wide circulation. The presswork, binding, etc., are up to the usual good style of the Messrs. Lea Bros. & Co.



DISEASES OF EAR, NOSE, and THROAT, AND THEIR ACCESSORY CAVITIES—a condensed text-book. By Seth Scott Bishop, M.D., LL.D., Chicago.

This, as its name implies, is a summarized work, intended chiefly for the use of students, and for general practitioners who desire to obtain a practical knowledge of the diseases which affect the ear, nose, and throat. There is no

intention on the part of the author to compete with the many thorough and exhaustive works already in the hands of the specialist, but a marked intention to fill up a long-felt gap, and in this, in a great measure, he has succeeded.

Notwithstanding the epitomized character of the work, the author, after giving his reasons for so doing, treats several subjects rather exhaustively. Whether in each case this was a wise policy to pursue seems somewhat doubtful, as it necessarily forced the treatment of other important subjects within very narrow limits. The divisions referred to are: the serum therapy in relation to diphtheria, the medical and surgical management of mastoid disease, and the treatment of hay fever. In regard to hay fever, however, exhaustive treatment was both wise and expedient, as the wider knowledge upon the subject is scattered among the profession the better will it be for that large class of people who are, periodically, sufferers from this disease.

Dr. Bishop divides his work into four parts: 1. Diseases of the ear. What makes this section particularly valuable is the large amount of clinical material upon which he was able to base his conclusions. This also enabled him to make tables of the comparative frequency of the different forms of ear disease. For instance, out of a table of 15,300 cases, 4,741, or nearly one-third, were affected by chronic non-suppurative inflammation of the middle ear. The next in order of frequency were the cases of naso-pharyngeal catarrh, the number being 2,476. And the third, the cases of impacted cerumen, numbering 1,690. After this there was a decided drop for the remaining aural affections.

The author devotes a good deal of attention to instruments and special methods of treatment. He lays strong emphasis upon the advantages of a wise use of compressed air. For instance, he thinks the old method of Politzerization for inflation of the middle ear has largely had its day, and must give way to a fuller and easier inflation by compressed air carefully and judiciously controlled. A similar comparison is made also between the use of the latter and the eustachian catheter, as by it he avoids the bruising which the catheter may sometimes produce.

He speaks of deaf-mutism as a rare condition, only half of one per cent., of all the cases of ear disease that he has seen, being of that class. In reading his etiology of deaf-mutism, one is struck by the fact that pressure upon the eustachian tubes by adenoids, on which eastern writers place so much stress, is not even mentioned as a cause.

2. Disease of the nose. This touches upon all the points of interest which the general practitioner would find of value to him. The only fault lies in the brevity upon certain lines already spoken of. This is more particularly marked in reference to the space allotted to nasal polypi, deformities of the septum, and naso-pharyngeal adenoids—all of which occupy a large place in the work of the specialist. Still enough is said to give the reader a general idea of the methods of treatment.

The article on hay fever is an able one, and may help to throw light upon this severe and often intractable disease. Unknown to each other, he and Dr. Shaw Tyrrell, of Toronto, have for years been advocating the idea that hay fever, to some extent, owed its origin to the presence of an abnormal amount of uric acid in the blood. Dr. Bishop's method of treatment is to administer the salicylates for several weeks prior to the onset of the disease in order to eliminate the uric acid as it forms. Then to revert to acid treatment, the moment that symptoms of hay fever commence to manifest themselves, not to eliminate the

uric acid, but to prevent its solution in the blood. According to this theory, the formation and retention of uric acid in the tissues, does not produce hay fever symptoms, but the presence of uric acid in the blood does. By combining this method, with local and operative treatment when required, the author claims to have met with excellent results in dealing with a large number of cases.

In antral disease, Dr. Bishop, like many other writers, prefers to penetrate for drainage through the alveolus.

In adenoid disease of children the anæsthetic recommended is ethyl-bromide, and the instrument used Eottstein's curette, the work being completed by digital operation.

3. Diseases of the pharynx. Within this division diphtheria occupies several chapters. In connection with it, prophylaxis has a very important place. In examining patients, the author advises the medical attendant to remove coat and vest, and put an operating gown or sheet from neck to feet. He also approves of the physician holding a pane of window-glass between the patient's mouth and his own face. Complete isolation of patient and nurse is insisted upon. After a critical review of the various methods of treatment, including serum-therapy, he concludes by saying: "While the serum is a powerful remedy and may be capable of doing harm, the disease itself is so virulent that, in view of the great weight of testimony and statistics in favor of antitoxin, the physician should not fail to avail himself of this addition to thorough local and general treatment."

4. This last part is devoted to the larynx. The ground here is pretty thoroughly covered, with the exception that pachydermia laryngis has not been mentioned, and that *purulent laryngitis* has been given as a synonym of *adema* of the larynx.

In reference to the identity or duality of croup and diphtheria, the author considers it still a mooted question. He comes out strongly in the opinion of the duality of the disease. In other words, he believes that there are two varieties of pseudo-membranous disease—the one diphtheritic the other non-diphtheritic.

On the whole, the work is well adapted to accomplish the end the author had in view. It displays thought and care in preparation, and from its conservative tendencies should have a good influence upon the student as well as the physician, who may add it to his library. P.B.

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LIPPINCOTT'S MEDICAL DICTIONARY; a complete vocabulary of the terms used in medicine and the allied sciences, with the pronunciation, etymology, and signification, including much highly valuable information of a descriptive and encyclopædic character, prepared on the basis of Thomas's Complete Medical Dictionary. By Ryland W. Greene, A.B., with the editorial collaboration of John Ashhurst, jr., M.D., Barton Professor of Surgery and Professor of Clinical Surgery in the University of Pennsylvania; George A. Piersoll, M.D., Professor of Anatomy in the University of Pennsylvania; Joseph P. Remington, Ph.M., F.C.S., Professor of Theory and Practice of Pharmacy in the Philadelphia College of Pharmacy. Complete in one imperial octavo volume of about 1100 pages. Price, cloth, \$7.50; sheep, \$8.50; half Russia, \$9; or with Denison's patent index, 75 cents extra. J. B. Lippincott Company, publishers, 1897. Montreal: Charles Roberts, 593a Cadieux street, general agent for Canada.

The work is the result of an endeavor to make a practical and useful medical lexicon.

It has been the aim of the editors and publishers in producing an entirely new medical dictionary to bring the book abreast of the times, not only by presenting all that is latest and best in medical literature, but also by developing that material according to the most approved methods of modern lexicography. It was thought best not to trust the work to a single hand, but by selecting a corps of collaborators whose names are authoritative in their several departments to give the book a freedom from personal bias and an authority of statement which could not otherwise be attained. The medical profession generally will agree, it is believed, that a better selection could not have been made. The name of Dr. John Ashhurst, jr., Dr. George A. Piersoll, and Professor Joseph P. Remington are too well known to need special comment.

The plan throughout has been to give complete, accurate, and useful information concerning every medical term that a student, physician, or general reader would be likely to meet in the course of his study and reading. To cover this wide range of subject it is necessary to deal with two classes of words; first, those old words that had their origin with the beginnings and natural development of medical science, and second, those words that have been coined to meet the manifold needs of modern medicine. Of this second class all are more or less useful, and a book which intentionally omitted any of them would not fill the requirements of an up-to-date dictionary. On the other hand, many words of the former class have long since passed out of existence, and to incorporate them in a dictionary would but serve to swell its bulk without increasing its usefulness. Therefore, in making up the vocabulary of Lippincott's Dictionary the plan has been to include the thousands of words added to medicine during the last few years, as well as the familiar terms usually found in a medical dictionary, and also such obsolescent or even obsolete terms as one might meet in an extended research into the standard medical literature of past generations.

As the essence of a dictionary lies in its definitions, the utmost care has been expended in rendering this part of the work particularly excellent. The constant endeavor has been to make the explanation of each word distinct and full without verbosity.

The system of indicating or expressing pronunciation adopted in this work is new and original. It is based on the scientific principle of phonetics as recognized by the best linguists of this and other countries.

In the matter of spelling, a wise conservatism has toned down the radical tendency of the times into a moderate course, suited to a decent and literary use of the language, good usage and thoughtful consideration rather than a hasty enthusiasm being the guides.

There is one respect wherein medical dictionaries have heretofore been somewhat behind their fellows in other departments of lexicography, and that is in the preparation of the proof for the press. To this point the editors of Lippincott's Dictionary have given every attention. The work has received the benefit of the most expert professional proof-reading, and each editor has read the proof throughout and made the necessary revisions and additions to embrace the latest advances in medical science and literature.

We are immensely pleased with the dictionary, and know of no one-volume work that equals it. The binding and paper are substantial.

## Medical Items.

DR. THOMAS B. FLETCHER (Tor. 93) has been appointed an Associate in Medicine in Johns Hopkins Hospital, Baltimore.

WE are glad to be able to state that the custom adopted a few years ago by the authorities of the Toronto General Hospital of allowing all physicians and surgeons of good standing in the city to treat their own patients in the private wards has proved quite satisfactory.

DR. BAYARD, the able and genial veteran of St. John, N.B., completed sixty years of active practice August 1, 1897. We are pleased to learn that he is enjoying good health, and is still able and well qualified to continue his ordinary professional work. That he may long continue to do so is the earnest wish of his numerous friends in this part of the province.

DR. WM. KLEE, of Johns Hopkins, Baltimore, after spending a few days in Toronto, left for St. Andrews, N.B., where he is likely to remain until September, with the exception of a couple of visits—one to Toronto during the meeting of the British Science Association, another to Montreal during the meetings of the Canadian Medical Association, and the British Medical Association.

THE STAFF OF '92.—The eight resident physicians in the Toronto General Hospital in 1892 had a pleasant reunion in Toronto, August 4, when they dined at the Board of Trade. Dr. Charles O'Reilly, Superintendent of the Hospital, was also present. Of the eight, five are practising in Toronto, viz., Drs. J. N. E. Brown, H. B. Anderson, H. A. Bruce, H. Parsons, and F. Fenton. The remaining three are Dr. T. H. Middlebro, Owen Sound; Dr. A. S. Tilley, Bowmanville; Dr. H. Way, Chicago.

HOME FOR CONSUMPTIVES.—The treasurer of the Sanitarium Association acknowledges the receipt of \$10 towards the Muskoka Home for Consumptives from Mr. F. Rogers, Enniskillen. Friends of the Consumptive Hospital in Hamilton have started the idea of a Hamilton cottage, to be built adjoining the Administration building in Muskoka. Senator Sanford has given \$200 for this purpose. It is proposed to build a cottage for four patients, costing \$2,000, to be set apart for the use of patients from that city. Information is received that the people of Port Hope are proposing to make a jubilee offering in the same direction.

DONALD JOHN ARMOUR, M.B., M.R.C.P.—We are glad to hear of "Don" Armour's continued success in London. Shortly after he went to London, in July, 1896, he passed the examination for the double qualification of M.R.C.S. Eng., and L.R.C.P. Lond. At the examination in July, '97, he passed the examination for membership. So far as we know the only other Canadians who have received this qualification are Dr. Wm. Osler, now of Baltimore, and Dr. James E. Graham, of Toronto, and Dr. P. D. Goldsmith, of Belleville. Dr. Armour will remain in London for a few months and will then go to Germany. He will probably return to Canada in 1898.

TOO LATE.—An English woman recently met with sudden death during a visit to St. Petersburg, and at the request of relatives in London the body was immediately forwarded to England. When the casket, a magnificent affair, arrived at its destination, the lid was removed to give the sorrowing relatives a final look at the departed. But instead of the emaciated remains of an aged woman, the portly corpse of a Russian general, covered with decorations and in the full glory of a state uniform, met the gaze of the mourners. Frantic messages were at once despatched to the Russian capital, and in response to one of them the following message was received: "English lady buried yesterday with military honors. Please keep the general."

MISSISSIPPI VALLEY MEDICAL ASSOCIATION — MEETING AT LOUISVILLE OCT. 5, 6, 7, 8, 1897.—The Executive Committee met recently at Louisville, in conjunction with the local Committee of Arrangements, the following being present: Drs. Stucky, Grant, Mathews, Love, Holloway, and Reynolds. It was determined to make the coming meeting the largest and best in the history of the association, and everything points to a fulfilment of this endeavor. The railroads will make a round-trip rate of one and a-third fare, or probably one fare. The address on Surgery will be delivered by Dr. J. B. Murphy, of Chicago; the address on Medicine by Dr. John V. Shoemaker, Philadelphia. Title of papers should be sent to Dr. H. W. Loeb, secretary, St. Louis, Mo.

BRITISH MEDICAL ASSOCIATION, MONTREAL MEETING.—The British Medical Association which will meet in Montreal August 30, September 1, 2 and 3, unfortunately comes at a time when the hotels, lodging houses, restaurants, etc., in Montreal are taxed to their fullest capacity owing to American tourists who select this particular season of the year for the St. Laurence route. The reception sub-committee of the Association of which Professor Ruttan, McGill College, is Secretary, will be very glad to arrange for the accommodation of any Canadian members who will communicate with him stating the kind of accommodation required. He writes us strongly to advise everyone who purposes attending to secure rooms in advance. In addition to the hotels, lodgings have been arranged for in the neighborhood of McGill University, where rooms and breakfast may be obtained at moderate rates.

## MEETING OF CANADIAN MEDICAL ASSOCIATION.

## PROVISIONAL PROGRAMME.

*Monday, August 30, 1897.*—1 p.m., Clinical Demonstration, Montreal General Hospital. 3 p.m., General Session. (Synod Hall, No. 75 University st., cor. Burnside): Address by Chairman of Local Committee; The Reception of Visitors; Election of Members; Notices of Motion: (1) "That the number comprising the Nominating Committee be increased from ten (as formerly decided by By-law) to fifteen, the latter permitting of a more general representation."—T. G. Roddick, Montreal; (2) That the By-law relating to the Nominating Committee be amended to read: "That the Nominating Committee be elected by the association, on the first day of each annual meeting, by ballot, after nomination."—R. W. Powell, Ottawa. 4 p.m., President's Address, V. H. Moore, Brockville, Ont. 4.30 p.m., Address by W. Watson Cheyne, London, Eng.; Appointing of Nominating Committee; Appointing of other Committees; General Business. 8 p.m., Smoking Concert in Windsor Hall.

*Tuesday, August 31.*—9.30 a.m., General Session, Synod Hall; Report of Committee on Inter-Provincial Registration; Report of Nominating Committee; Reports of other Committees; General Business.

For further particulars address F. N. G. Starr, 471 College street, Toronto.

## OBITUARY.

EDWARD M. HIGGINS, M.D.—Dr. E. M. Higgins died July 18, 1897, aged 42. He was the only son of Major Higgins, of Kingston, and was born at Quebec. He graduated from Queen's University in 1877, and soon after became surgeon to one of the Allan line steamers, which position he retained about ten years. During this time he contracted rheumatism, from which he never fully recovered.

EGERTON GRIFFIN, M.D.—Dr. E. Griffin, of Brantford, died August 7, 1897, aged 68. He passed before the Upper Canada Medical Board in 1853, and received the degree of M.D. from the University of New York in 1854. In the same year he commenced practice in Brantford, where he remained up to the time of his death. He received the degree of M.D. from Trinity University in 1874. He was appointed Medical Health Officer of Brantford in 1885, and was also surgeon to the gaol. The cause of death was said to be abscess of the liver.