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## THE OPERATIVE TREATMENT OF APPENDICITIS USING A NEW FORM OF SUTURE.\*

By T. SHAW WEBSTER, M.B., M.D., C.M., Gynaecologist Toronto Western Hospital.

**T**HE discussion of appendicitis has ever been before us during the last decade, but its great importance makes it unnecessary for me to offer an apology for introducing a subject so threadbare on the present occasion.

The distressing illness of our most gracious king gave a new impetus to it last year, and yet opposite opinions are held by accurate diagnosticians and skilful surgeons regarding important questions connected with this fashionable disease.

For example, Edebohls asserted and proved to the satisfaction of many that he could usually palpate the normal appendix.

On the contrary, Senn states positively that the normal appendix can seldom be outlined by palpation.

Another school teaches that an elongated body can sometimes be felt that is mistaken for a swollen appendix, and that this body is a phantom due to muscular contraction. When vertical it is said to be produced by contraction of the outer fibres of the right rectus; and when oblique, the more usual position, it is due to contraction of the fibres of the internal oblique or transversalis muscle. I have doubts, perhaps ill-founded, regarding these statements. Could not a ridge on the outer side of the rectus be traced down to the origin of the muscle on the pubic bone? Is it possible to have part of the rectus contract without the whole muscle undergoing the same change? Would not the contracted fibres of the internal oblique or transversalis in front of the iliac fossa, where they run nearly transversely, produce a transverse tumor, and could it not be traced to the crest of the ilium or Poupart's ligament where these muscles arise? A considerable number of us have never recognized such conditions, and, as we always examine just before making an incision when the muscles are relaxed by anæsthesia, we

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\*Read at the Ontario Medical Association, June, 1903.

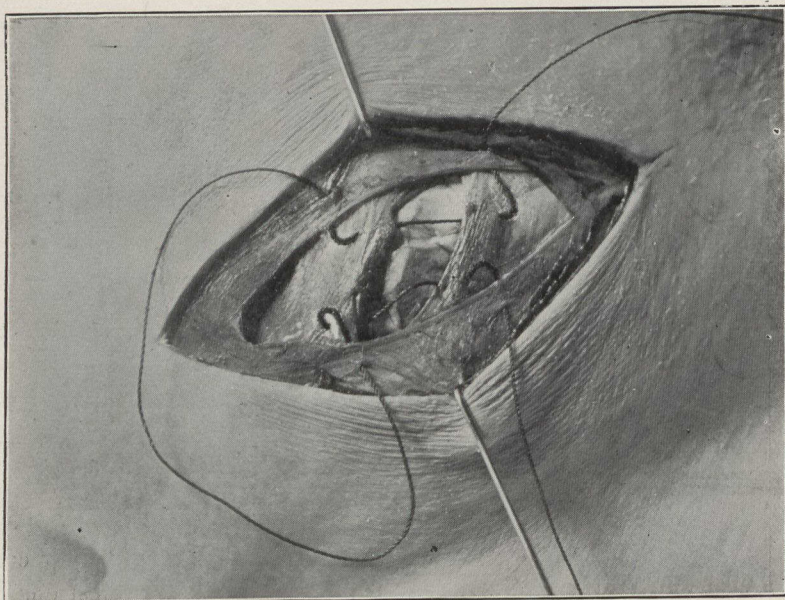


FIGURE SHOWING THE SUTURE INSERTED BUT NOT TIGHTENED

hope not to be misled by such phantom tumors. It is obvious that this vestigial organ cannot be felt during an acute attack of appendicitis, when the abdominal muscles are contracted by severe pain; but it is also true that many of us have found it possible to map out the appendix when normal or during the quiescent interval when diseased. In fact, careful continued search, under such conditions as overcome abdominal tension, is rarely unrewarded. Not infrequently the surgeon's efforts flag before the abdominal muscles are relaxed, and the examination gives negative results. In nearly all cases, pressure upon the appendix causes a sensation more or less intense, to dart across the abdomen, above and to the left side of the umbilicus. If the surgeon fancies he feels the appendix, and the patient complains of the sensation mentioned, the latter affords valuable corroborative evidence of the former.

With regard to the proper time to operate, there is great diversity of opinion also. The safety of interval operations is admitted by all, but occasionally a life may be lost by waiting for the acute attack to subside. On the other hand, many patients have been sacrificed by surgical interference during an acute attack, who would have recovered sufficiently for a safe interval operation. A patient who has had an undoubted attack of appendicitis, in whom the appendix is found to be thickened and tender, cannot be considered out of danger until that

organ becomes a pathological exhibit. If it seems to have returned to its ordinary size and sensation—and we cannot deny its power to recover at times—it should be considered normal and left alone.

The preparation of the patient is quite as important as the operation itself; and, in this matter, surgeons of recognized ability differ greatly. This subject is too extensive to receive even a hasty review now. I wish, however, to enter a protest against excessive purging with calomel and salines. One or two free actions of the bowels, each day for two days, will insure the absence of distention; and this may be obtained by mild cathartics taken at bedtime. Purgation before operation causes paralysis of peristalsis after operation, depletes the fluids of the body, and produces excessive thirst, lengthening the period of convalescence, which should not be more than two weeks in uncomplicated cases and may be only five or six days, provided the patient has fairly good recuperative power.

The kind of incision and its position can easily be determined, if we can locate the appendix.

McBurney's muscle-splitting operation will suit nearly all cases. This incision can be enlarged by separating the muscular fibres in their normal direction behind the rectus muscle, almost to the median line, as suggested by Fowler. The smallest incision that suffices for satisfactory work, gives the best results. From  $1\frac{1}{4}$  to 2 inches, according to the thickness of the abdominal wall, is ample for uncomplicated cases, provided the appendix is located and the opening made immediately over

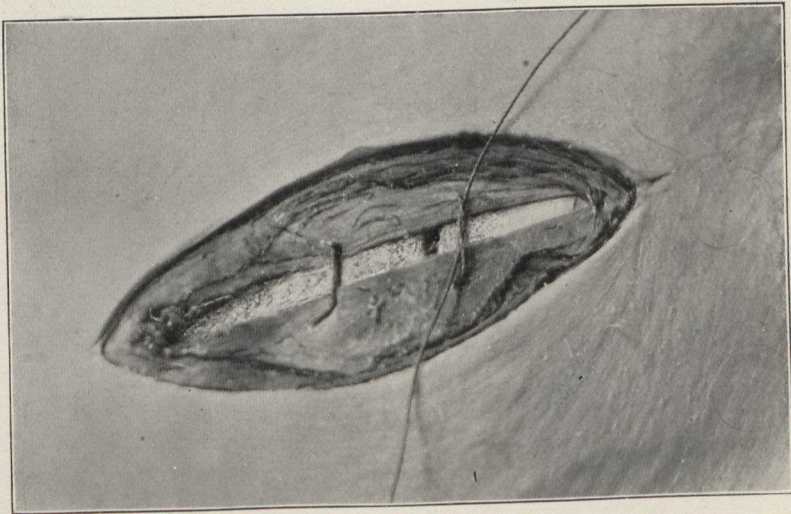


FIGURE SHOWING THE SUTURE PARTIALLY TIGHTENED

it. Roughly speaking, about one week in bed will be required for each inch of the incision. Loss of time to most people is an important consideration.

The accurate approximation of the several layers of the abdominal wall, with anatomical exactness, has much to do with shortening the period of convalescence.

This should be done with the least number of sutures requisite to secure the apposition of the margins of the separated structures, and they should be inserted so as not to strangulate the tissues along the line of incision, thereby interfering with immediate union. The mediæval "through-and-through" suture fails in all these particulars,

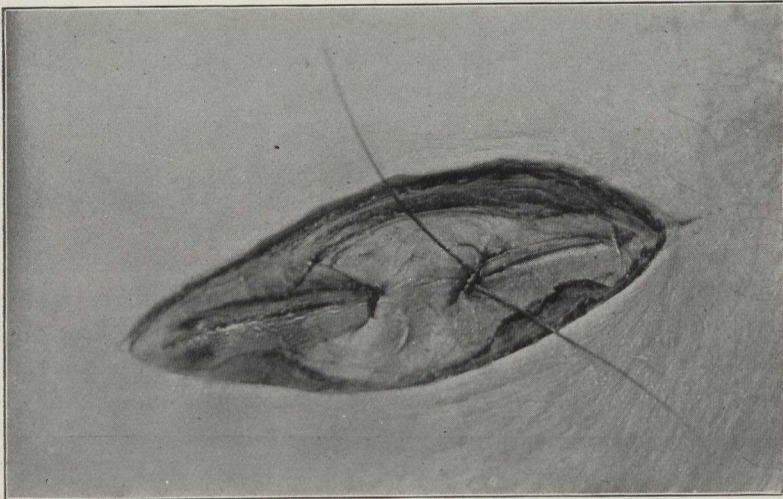


FIGURE SHOWING THE SUTURE DRAWN TIGHT

and can be recommended only to provide employment for the truss-maker, or material for plastic operations.

Layer suturing is vastly preferable, but is usually overdone. A continuous suture of fine catgut suffices for the peritoneum. The musculo-aponeurotic structures are the important parts, for defective union of these is followed by hernia. Single interrupted sutures will approximate accurately, but are likely to strangulate the vessels along both sides of the incision and prevent complete union.

Mattress sutures, as commonly used, do not strangulate, neither do they hold the edges together with anatomical exactitude, but tend to evert them, the everted edges having to be held together with single knotted sutures placed between the mattress sutures.

This double suturing leaves a double amount of dead material in the incision, an obvious disadvantage.

I now employ a modification of the mattress suture to approximate the muscles, and this suture leaves nothing to be desired. It is placed parallel to the fibres of the external oblique, instead of at right angles, as is the ordinary mattress suture. In closing a small incision, it is inserted through the inner edge of the external oblique aponeurosis, about half-an-inch above the lower end of the separation. The lower margins of the internal oblique and of the transversalis muscles are drawn up to normal position. The suture is

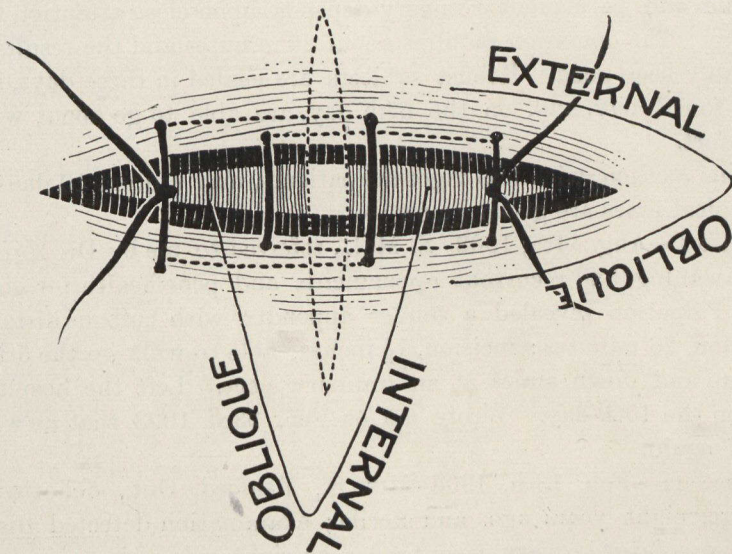


FIGURE SHOWING THE METHOD OF USING TWO SUTURES IN LONG WOUNDS

passed through them, carried along on the peritoneum and put through the same muscles from within outward, appearing upon the inner edge of the external oblique incision, half-an-inch below the upper end of the separation. Then it is carried across to the outer edge of the separation of this muscle and passed through the same structures in reversed order, from above downward, finally appearing on the outer margin of the external oblique, opposite the starting point. When this suture is tied, all the muscles are in normal apposition, so that it is difficult to discern the lines of division.

This *longitudinal mattress suture* crosses over and holds down the edges of the incision, not requiring to be reinforced by interrupted ones placed in the intervals. If the incision is longer, two of these sutures

interlocked can be used, but it will rarely be necessary to insert more than two. I usually pass them with a sharply curved perineorrhaphy needle, inserted empty, then threaded with chromicised catgut, and withdrawn, carrying the ligature through one side of the incision, and then taking the other end through the other side of it in a similar manner. Cleveland's ligature carrier, when opened to receive the ligature tears the tissues and makes an opening much larger than required to pass the suture, thereby producing needless traumatism and giving a zig-zag result.

A subcutaneous catgut suture for the skin makes a neat finish.

This method of suturing I have given in detail, and offer no apology; for rapid and permanent recovery depends upon close attention to the minutiae. The operation requires about 20 minutes and the results have invariably been good. Robust subjects are healed in three days, sit up on the fourth day, and, on the fifth day, are able to go about without discomfort.

This method, with less vigorous patients, may require 10 days. A few typical cases are given below:—

Case I—Aug. 14th, 1902, S. McL., referred to me by Dr. McIntosh, Manitowaning, had recurrent appendicitis and poor health for about a year. Palpation revealed a tender appendix with bulbous distal end. Operation, 26 minutes; incision,  $1\frac{1}{2}$  inches, able to walk on the 5th day, going up and down stairs at an ordinary pace. Left the hospital for home on the 10th day. Wrote me on Feb. 23rd, 1903, that he was his old self again.

Case II—Feb. 13th, 1903, Mrs. S., Meaford, Ont., delicate since marriage, eight years ago, and sterile; examination detected diseased appendix, enlarged ovary, very tender on right side and muco-purulent discharge from cervix uteri. An incision 2 inches long was made between the appendix and ovary and both organs removed. The cervix was dilated and the uterus curetted. She was able to be out on the eighth day and was much improved in health when she called on me in May, 1903.

Case III—May 21st, 1903, J. S., Rocklyn, Ont. Recurrent appendicitis, appendix very tender, operation, 24 minutes; incision,  $1\frac{1}{2}$  inches, walking about the hospital grounds on the fifth day, went down town on the eighth day and left for home on the tenth day.



## HOSPITAL TREATMENT AND SOME CASES IN PRACTICE.

By ERNEST A. HALL, M.D., C.M.  
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*The Private Hospital.*

ELBERT HUBBARD has said that the Sanitarium bacillus is abroad in the land. This is an apt way of expressing the appreciation which the public is gradually experiencing as their knowledge of the private hospital is becoming more extensive. It has long been recognized that the private institution for the treatment of nervous diseases possesses advantages rarely found in connection with our large public hospitals. But in Canada the development of the private surgical home is a later movement. After one year's experience in our Burrard Sanitarium Hospital, with a success far beyond our expectations, I wish, through the medium of this article, to offer encouragement to those of our profession who have written letters of inquiry, and to point out a few of the advantages of such private hospitals. It is not necessary to say that the present status of medical science demands that hospital accommodation be within the reach of all centres of population of more than a few thousand, should they be without such accommodation. In the smaller places the private hospital, conducted by the leading medical man, is the ideal institution. Even in villages the private hospital can be made a success. I know of a little place in Washington, of not more than eight hundred, in which an enterprising young M.D. has conducted a private hospital most successfully. Having practised in Ontario some years ago I can give names of a dozen similar places in which a fully qualified M.D., and this includes our acquaintance with modern surgery, could successfully conduct a private hospital. The advantages of the private over the public institutions are many. The privacy which can be maintained; the more perfect control which can be had over both nurses and patients. We gain our patronage as much by some personal quality as by our skill. The private hospital being the external materialization of the surgeon's personality, will necessarily be a more suitable environment than any other institution planned and managed by another. The dominant mentality of one or two strong persons working in harmony with the nursing staff, in perfect unison, with no opposing psychic currents, is a factor of no small moment, and a matter which must be given a great consideration in the management of severe cases, especially those in which the neurotic element is dominant. This ideal environment is impossible where Dr. A. refuses to speak to Dr. B., or where a nurse

attempts to influence Dr. A.'s cases to consult Dr. B. Again the nursing staff can be selected with this psychic future in view. We make it a point to employ no nurses unless they are mentally and sympathetically congenial. We are of the opinion that the furnishings of the patient's room should be as bright and cheerful as is compatible with perfect sanitation. Bright little water colors, vases of natural flowers, and good furniture, not all glass or iron, are factors not to be neglected in hospital management. We also provide occasional concerts when there are no cases that would be disturbed by the music. A piano and a large symphonium are also at the service of the occupants; it is in fact a miniature St. Cecilia's Guild.

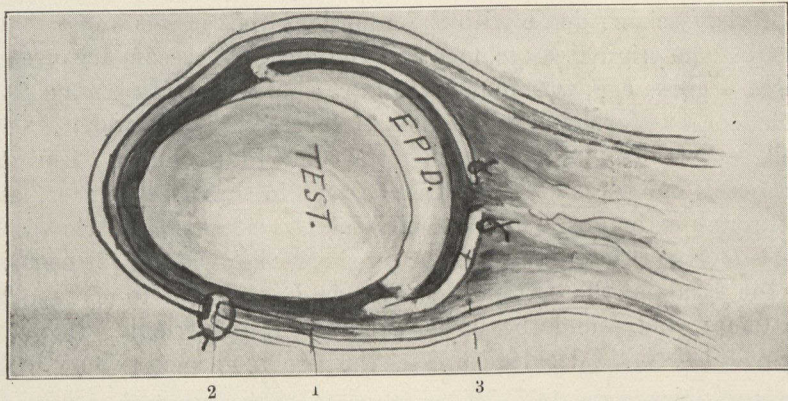
Under the conditions which obtain in this hospital, the comfort of the patient is increased to the maximum, and the influence of the physician materially enhanced. I am only voicing the sentiments of those who have had many years' experience in California, when I state that patients undergo severe manipulations with better results, when surrounded by an environment such as I have endeavored to describe, than when placed in the conditions which frequently are the lot of public and charitable institutions. A surgeon of more than local reputation, who has been associated with a private hospital in San Francisco, stated that patients recover from serious operations in the private hospital to which they would succumb if placed in a public institution. It is not beyond the scope of the imagination to suppose that the speaker's interest in such an institution might be somewhat responsible for the statement. But that as it may be, the too frequently neglected psychic factors in institutional management play a most important roll, and are to be carefully considered in order to reach the possibilities that lie within this sphere. The psychology of the hospital is yet to be written.

As an indication of the wide range of our work, I will give the cases that were at the sanitarium at the beginning of our second year.

Medical—Myelitis, muscular rheumatism, hemiplegia, bronchitis, uterine hemorrhage, intestinal catarrh.

Surgical—Inguinal hernia, adhesions following appendectomy, gastro-enterostomy, cholecystotomy, choledochotomy, hydatid cyst, uterine fibroid, hæmatoma of the ovary and cervical polypus, cirrhotic ovaries, iridectomy, retroversions with adhesions, three cases of wiring ununited fractures, hydrocele. A brief report of some of these cases will not be without interest.

Hydrocele—For some time we have been following a method of operating in this condition which was suggested by Dr. Marquis of San



SHOWING THE REFLECTED PARIETAL LAYER OF THE TUNICA VAGINALIS TESTIS STITCHED TO COMMENCEMENT OF CORD. 1—SKIN AND DUCTORS; 2—INCISION THROUGH SKIN; 3—REFLECTED TUNICA

Francisco. The results have been so satisfactory that I can recommend the procedure. It consists of opening the sac freely and turning the testicle completely outside the sac, and stitching the cut edges of the parietal tunica to the fascia at the commencement of the cord. The skin and fascia are then closed without drainage; only where the sac is greatly distended or very much thickened is it necessary to remove any of the tunica vaginalis.

Case. Mr. M., aged 34. Two years ago he underwent an appendectomy; there was some little suppuration in the wound; some six months afterwards he began to have pain at the seat of the incision, this at times would be intense, incapacitating him from business, and then would disappear for weeks. Upon re-opening, the cæcum was found attached to parietal peritoneum, along the whole length of the wound. Convalescence normal.

Case. Mrs., age 24. Referred by Dr. Newcome, of Ferguson, B.C. Anæmic from childhood. In Oct. of last year complained of acid dyspepsia, and gastric pain. A severe gastric hemorrhage, repeated next day, received well-directed treatment, and improved for a few weeks, when gastric pain returned. Posterior gastro-enterostomy, ligature over potato bobbin splint, uninterrupted convalescence, anæmia disappearing.

Case. Mr., age 24. Suffered from hydated cyst of lower abdomen which was tapped five years ago, and the sac injected with irritants, to cause obliteration. Four months ago an enlargement was noticed in the right iliac region, which caused inconvenient pressure upon the bladder. The former sac was thickened, and densely adherent to bladder, bowels

and pelvis, fascia so dense with the adhesions that it was impossible to determine the original attachment of the cyst. A secondary cyst, as large as a goose egg, was found within the old sac. During enucleation the bladder was torn, and the right vas severed. The bladder was repaired, catheter left in, and drainage tubes left in abdomen. Ten days after faecal matter came through tube, and in three days after, came also through catheter. Three bowel fistula formed, and all closed but one, bladder working naturally. After six weeks' waiting for nature to close the fistula at the bottom of the pelvis, I concluded to make a radical attempt, and found the bowel so adherent and friable with tubercular nodules, that I decided to resect the pelvic coil some twenty inches.

Case. Mrs., aged 44. Ill for 16 years, beginning with severe dysmenorrhœa, and culminating in nervous prostration, seven years ago, under doctor's treatment for three years, improved somewhat, but suffered from severe headaches, sense of impending loss of mental control. One year ago began to feel very nervous, had been treated by the usual tampon and glycerine. From this case of nervous exhaustion I removed a cervical polypus, uterine fungosities, the right ovary was transformed into a hematoma, with complete destruction of ovarian tissue, the left had developed a cyst, the uterus was also displaced backwards.

Comment is scarcely necessary. This is the type of invalids who too frequently drift into our asylums. When tampon and glycerine, with sound and swab, and all such tinkering uselessness, give way to rational therapeutics, hundreds of poor creatures who with difficulty "hang on to their reason," and are living on the verge of mental failure, will welcome the advent of brighter days.

Case. *Acute Anterior Poliomyelitis*.—Mr. K., farmer, age 25. Admitted Dec. 22nd. Two weeks before admittance, after exposure to inclement weather, girdle pains developed, shooting around body from upper lumbar vertebræ. Four days later bowels and bladder became paralyzed. Legs began to weaken from the onset, and by the end of second week both were completely paralyzed. Sensation was normal except for a slight numbness throughout extremities.

Treatment. Dry cupping was applied to spine every day for five weeks. Electric light baths were given to whole body for twenty minutes daily during first ten days; following this, one was given every other day for three weeks.

Motor power began to return to left leg one week after commencement of treatment and to right leg ten days later. Bowels moved without the assistance of an enema five weeks after admittance, and bladder

began to show slight expelling power about same time. Patient was discharged March 1st. The muscular power of legs was complete, except for a slight stiffness in right one. Bowels moved every second day without assistance. Bladder still weak, urine being expelled with little force.

The success in this very unpromising case, as such cases rarely recover, we attribute principally to the electric light baths, which must have greatly relieved the myelitis by their marked perspiratory and counter-irritant powers.

Case. *Talipes equinovarus*.—Boy, aged 18. Our method in this condition in adults has been the removal of a V-shaped mass of bone, from the convex of the foot, including neck of os calcis, cuboid, and a



LARGE GALL-STONE REMOVED FROM THE HEPATIC DUCT,  
WEIGHING 900 GRAINS

part of astragalus, with section of all opposing tendons, wiring of bones together, and plaster of paris splint.

*Choledochotomy*.—This patient was a lady, age 38, referred by Dr. Connely of Chilliwack. Six months previous she came with most intense cholæmia, with great prostration, presenting a distended gall bladder. She was in no condition to endure any major operation, so I merely drained the gall bladder. Convalescence was very slow, but in seven weeks she was able to return home, the fistula continued to discharge for four months; upon the closure of the fistula, severe gall colic supervened, which necessitated the re-opening of the fistula. After several severe attacks she returned to the sanitarium, a free incision by the gall bladder showed the hepatic duct greatly distended, the mass was partly broken in removal, a probe was passed through the common duct and the opening stitched with silk, a drainage tube was inserted in the

hepatic duct, convalescence uninterrupted. The stone measured 5 in. x  $6\frac{1}{2}$  ins. in circumference and weighed 900 grains.

*Conclusion.*

In the preparation of patients for operation, we supplement the usual regime by one or two electric light baths; this is by far the best method of thoroughly cleansing the skin, by profuse preparation, and without any depression, as the radiant energy acts as a tonic. We have had no post operative trouble with either lungs or kidneys. We also give ten grains of chloretone two hours before the operation, which decidedly lessens the post operative vomiting. It is our practice to remove the appendix in all cases, in which the abdomen is opened, if it can be done without needlessly adding to the risk, as it is only a matter of two or three minutes. Rubber gloves are used in all abdominal operations. As for anesthetics, we prefer chloroform, and always commence with it, unless in simple cases, in which we occasionally use narcotile. With a harmonious psychic environment, electric light baths, clean elementary canal, yet the patient not starved, chloretone before anesthetics, careful anæsthesia, thoroughly trained assistants, well ventilated and warm operating room, rubber gloves, small incision, little exposure of viscera, rapid work, careful overlapping of raw surfaces, saline solution left in abdomen, careful closure of peritoneum, figure of eight silk worm gut sutures for fascia, muscles and skin, surgery may reach an ideal development.

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HYDRO-PNEUMOTHORAX.\*

By ALEXANDER McPHERAN, M.B.; Toronto.  
Professor of Medicine, University of Toronto.

**C**ASE:—Charles A——, age 51. A fruit farmer of good personal and family history. Sought advice on account of tightness in the upper thoracic region, with some cough and loss of strength. He also had hemorrhoids that bled frequently for the last four or five years oftener of late. He had had a slight cough for two years, but his health was good until 24th December last. On the evening of that day a sudden pain occurred in the right lower thorax with tightness in the sternal region. This led to decided dyspnoea, but without distinct shock. He improved and was able to go about, although with difficulty. Some days later he noticed loud, metallic tinkling sounds in the chest on movement.

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\* Reported at the Toronto Medical Society, 14th April.

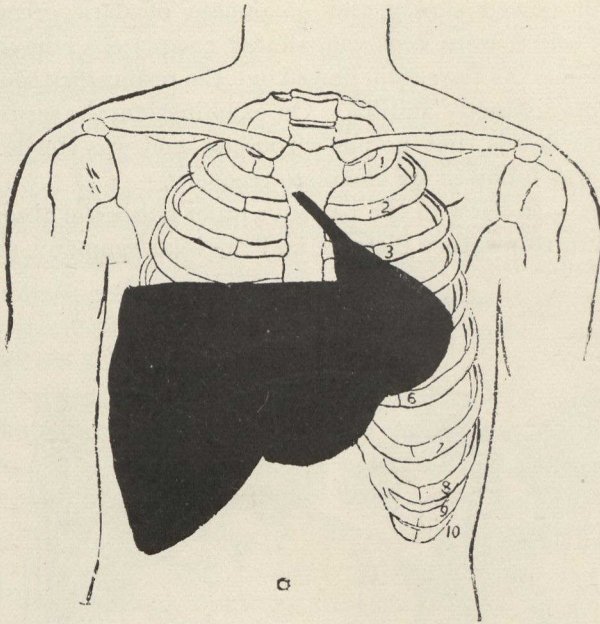


FIGURE ILLUSTRATING THE DISPLACEMENT OF THE VISCERA  
IN DR. MCPHEDRAN'S CASE

His state on examination. He was thin, somewhat pale and worn looking. Breathing was short and labored. The right side of the chest was full and did not move in respiration. The left side showed but little expansion. No cardiac impulse was visible, except a slight pulsation at the ensiform cartilage. The heart was found displaced outwards, so that the left border was in the anterior axillary line. The upper part of the right side of the chest was very tympanitic down to the third intercostal space. Below that it was flat and markedly resistant. The upper line of flatness was horizontal, and remained so in all positions of the body. Respiratory sounds were barely audible over the tympanitic area, which extended to the left border of the sternum. Over the dull area no sounds could be heard. With the patient lying on his back the line of dullness was below the anterior axillary line, the front of the chest being tympanitic; on his left side the axilla was tympanitic and the sternal portion of the chest flat, showing that the fluid shifted its position as the patient changed his position. With movement, a very loud, tinkling splash was produced, and over the tympanitic area loud bell sounds were caused by coin percussion.

The chest was aspirated carefully under very low pressure, so

that the fluid flowed slowly, and 55 ounces of dark, greenish-yellow, rather thick serum were removed, almost completely relieving the patient's symptoms. As the serum flowed out, the respiratory sounds became more and more distinctly audible. On examination, the serum contained some granular debris, but no pus corpuscles, and was sterile. Removal of the fluid was followed by complete recovery.

Remarks.—In view of the patient's quiet pulse, the absence of fever and increase in respiratory distress, and the loud tympany, showing low

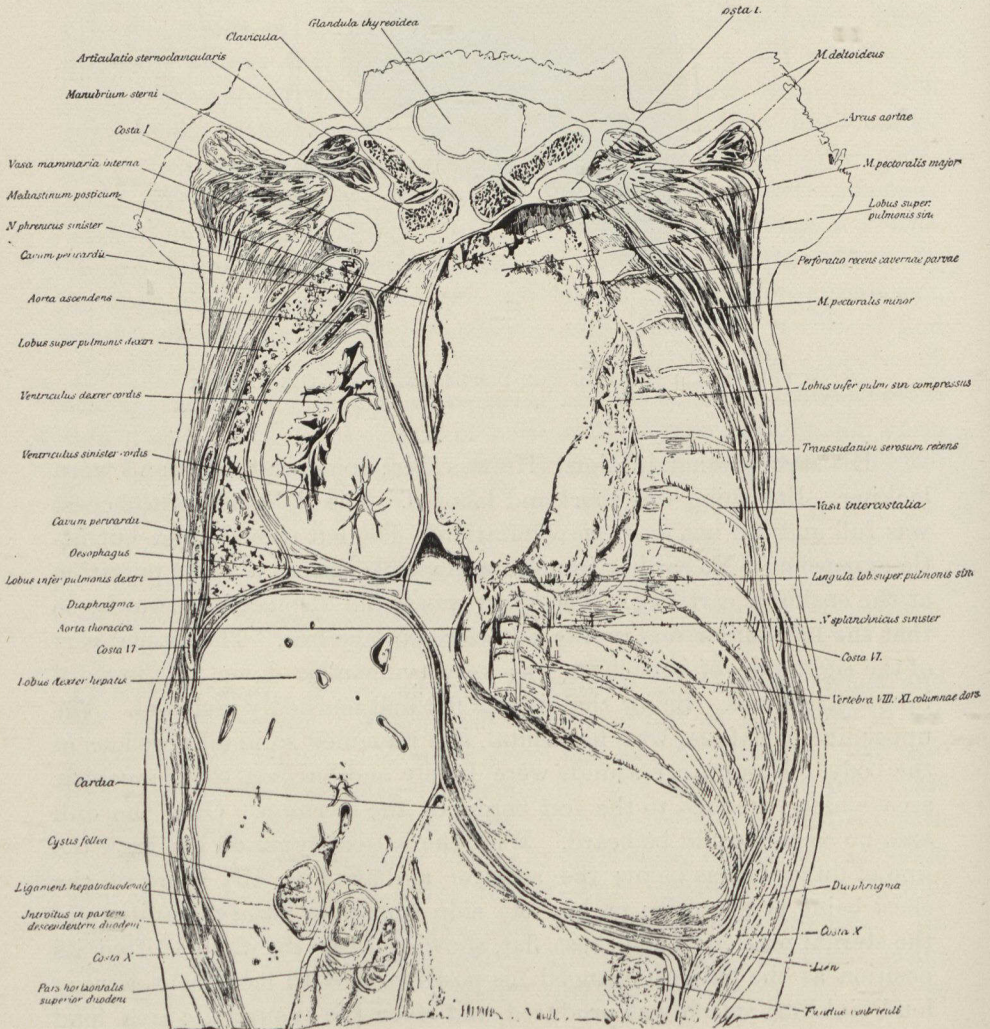


FIGURE SHOWING THE DISPLACEMENT OF THE VISCERA IN A CASE OF EFFUSION INTO THE LEFT PLEURAL CAVITY



tension of the gas in the pleura, it was considered highly probable that the perforation in the lung had closed, and therefore that aspiration could be done quite safely. It was evident that no air had at any time been forced into the pleura during cough or other expiratory efforts, as the history showed no condition of extreme dyspnoea. This was an additional reason for believing that the opening had closed. There seemed no doubt that the tension in the pleura after the first two hours was quite as high as that of the air in the lung, the serous effusion being probably secreted rapidly enough to more than replace whatever air was absorbed. In that case the perforation would not have been opened afresh after the first escape of air through it.

Properly speaking, such a case as this should be called pneumothorax, as the serous exudation was only a complication, and caused by the irritation of the pleura subsequent to the escape of the air. As to the cause of the rupture of the lung, there seems no reason to doubt that it was due to the rupture of a tuberculous focus lying beneath the pleura. The focus must have been old and sterile, otherwise the pleura would have been infected and a purulent exudate would have resulted. The man considered himself well at the time, but he gives a history of having had some cough for two years. Some writers believe that it is possible by severe strain to rupture a healthy lung, but such an opinion seems untenable. In the cases so reported there doubtless existed some quiescent tuberculous focus. It is well established that an artery never suffers aneurysmal dilatation without having first been the seat of local disease weakening its wall, and it is probably equally true that a lung will not rupture unless it also is previously weakened by disease. The late Sir William Gull is reported to have aptly said, "Call no man healthy until he is dead, and Dr.— has made the post-mortem."

As to how soon the fluid should be removed will depend somewhat on the individual case. The greater the effusion, and hence the more marked the dyspnoea, the earlier will the fluid have to be removed, but if possible sufficient time should elapse to allow of permanent sealing of the rupture, if such will take place. As soon as air ceases to pass through the opening, if repair of the ruptures occur, it should require only a few days to become firm, so that nothing will be gained in delaying removal of the fluid at most beyond 3 or 4 weeks.

By many the use of the aspirator is not approved, lest the tension in the pleural cavity be too greatly reduced, and subject the healed rupture to too great pressure by the air in the lung. The aspirator is a convenient instrument, however, and judiciously used, as it should be in all cases, is quite as far from risk as the syphon.

There is an old theory that, in tuberculous cases, pleural effusion inhibits, and may even arrest, the spread of tuberculosis in the compressed lung, and that its removal is likely to be followed by a rapid spread of the affected lung when it re-expands. But such is only an exceptional occurrence, and is probably a coincidence rather than a result of the removal of the fluid.

Absorption of air from the pleural cavity appears to be governed by similar conditions to those related to fluid. No air appears to have entered the pleural cavity after the first day or two in this case, yet little, if any, absorption of the air seems to have taken place. As soon as the aspiration had been done both it and the remaining fluid were rapidly absorbed. In some cases of persistently recurrent serous effusion filtered air was introduced into the pleural cavity in the hope that it might lessen or stop the exudate, and with some success in a few cases. As to the air, it was always absorbed within a few days.

151 Bloor St. West.

#### A CONTRIBUTION TO THE STUDY OF GENITAL AND PRO- GENITAL PAPILOMATA AND EXCRESCENCES.

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**T**HE above title which stands in lieu of the timeworn and obsolete designation "Venereal Warts," has received but little attention heretofore in medical literature. Some authors merely suggest their existence in a cursory manner, and those who consider them somewhat in detail fail to view them from a scientific standpoint, intimating solely the clinical aspect of these lesions and paying little heed to their morbid anatomy and etiology. The writer has reason to believe that they are of much interest, not alone to the genito-urinary surgeon, but also to the general practitioner. They are not infrequently the first messengers of some affection in distant organs, or tissues of the body, permitting by their presence a number of valuable inferences to be drawn, serving as important diagnostic indices for certain abnormal states of the organism and aiding greatly rational therapeutic efforts in overcoming concomitant conditions, of which they are only expressions or symptoms.

Our first attention will be directed to the study of the genital and progenital papillomata; subsequently other excrescences will be discussed in the order of their frequency. The former may be divided, for convenience of study, into the following classification: (a) papilloma simplex;

(b) papilloma acuminatum; (c) papilloma giganticum; (d) papilloma latum; (e) papilloma molle; (f) papilloma malignaforme.

Subjointly, the reader will find an elucidation of each variety separately, giving briefly its pathology, enumerating the etiological factors leading to its inception, outlining the methods of treatment now in vogue, and stating the prognosis in relation to other morbid states of the economy.

(a) *Papilloma simplex*. This is the form termed in older writings venereal wart. It is of common occurrence, especially during the periods of puberty and adolescence. Males are more frequently affected than females, particularly those of a weak and unstable nervous constitution. Its location is in the integument of the genito-urinary tract, and its adnexa, the sulcus glandis in the male and labia majora in the female being very favorite sites. It denotes an intensification of anabolism, an exaggeration of tissue construction met with during the epochs above mentioned, wherein the anabolic activity far exceeds catabolic functionation. This constitutes a most important predisposing etiologic factor. Uncleanliness of the genitalia and the contiguous parts, a tight prepuce, the presence of the smegma bacillus and the various forms of helminthes are responsible for its production. Hyperactivity of the sebaceous glands in the preputial sulcus is another potent cause. Excesses in venery, ungratified sexual desire and the irritation attendant upon masturbation are likewise apt to induce this affection. The influence which the vaso-motor nervous system exercises in the creation of these lesions must not be undervalued. In the period of extreme growth and functional activity, as during pubescence, the nervous system is likely to be burdened with the brunt of the process, which is partly characterised by an augmentation or rather perversion of function of the nerves regulating circulation and nutrition. Local vaso-motor paralysis ensues, eventuating into the dilatation of the capillaries of the layers of the corium and favoring transudation within the adjoining structures, factors instrumental in the production of the simple genital papilloma. The morbid anatomy of this form of wart is comprised in the foregoing explanation of the agency of the vaso-motor nervous apparatus in the causation of this morbidity. In short, the entire process may be regarded as a trophoneurosis. Simple papillomata manifest no subjective symptoms, being indifferent throughout. Their color varies from a dirty gray to a yellowish brown or black, with numerous intermediary shades.

The *treatment* of papilloma simplex comprises the removal of the causes productive of this lesion. Of course, we cannot curtail the

physiological period of adolescence, but we can materially aid in removing the lesions by topical applications. Cleanliness is not only curative in the majority of cases, but it is also a valuable prophylactic agent. Bathing the genitalia and adnexa with a weak solution of boric acid, as hot as it can be borne, acts very favorably upon the growths. In no instance should heroic measures be employed. Cauterization should be avoided by all means, and only resorted to when all other measures fail. After washing the papillomata with the above mentioned solution, they may be dusted with a drying powder of the following composition:—

Aristolis .....	dr. $\frac{1}{2}$ .
Bismuthi subnitratiss .....	dr. 2.
Magnesi silicatis .....	dr. 5 M, et fiat

pulvis, or this solution may be applied:—

Acidi tannici .....	dr. 1.
Adrenalin solution 1-1000 .....	dr. $\frac{1}{2}$ .
Collodii flexilis vel Tr. benzoini comp. q. s. ad	dr. 4. M.

Sig. Apply with a camel's hair brush every second day.

In case they seem rebellious to the above procedure, more potent remedies may be tried, namely:—

Ac. salicylici .....	gr. 20.
Extr. suprarenalis .....	gr. 10.
Resorcini .....	gr. 20.
Liq. Gutta Percha .....	q. s. ad dr. 2. M.

Sig. Apply with a camel's hair brush once or twice a week. After three or four applications, the warts drop off leaving a normal or slightly reddened base underneath. If pain is experienced during the exhibition of the above applications, a few grains of the hydrochlorate of cocaine may advantageously be combined with the foregoing formulæ. As already intimated, the use of escharotics or highly irritating agents must be refrained from, lest an ugly ulcer result, which may prove very obstinate and intractable, and resist treatment. Thuja occidentalis, which has been recommended by some authors, has proven ineffectual in my hands in this form of papilloma. Magnesium sulphate in ten grain doses three times a day has acted admirably in eradicating these lesions without having recourse to any other form of medication. When cleanliness is persevered in, the simple papilloma is likely to disappear without the aid of medicinal agents. Small doses of zinc phosphide tentatively administered have a very pronounced effect upon those growths, the result of perverted nerve activity, and are indicated in nervous individuals. Tr. cocci cacti in ten minim doses is warmly recommended by some authorities.

(b) *Papilloma acuminatum*. This is a variety of papilloma peculiar

to the genital region only. It is a truly genital lesion. In the male, it is found on the mucous or cutaneous surface of the prepuce and its sulcus. Occasionally entire ridges may be seen to extend in a perpendicular direction on the dorsal surface of the penis. The scrotum participates in the process, and may be studded with a number of these growths. In the female, the posterior commissure and the fourchette may be the seat of this particular form of papilloma. The labia majora may be likewise involved, less so the labia minora, which is the habitat of another variety of excrescence, namely, the papilloma molle. The individual lesions resemble ordinary warts, but are more pointed than the latter, acuminate, very slender, considerably indurated and their surfaces extremely rough and corrugated. They seldom exceed one-eighth of an inch in length, and are more or less sensitive. They are of a muddy, gray, or brownish-black coloration. Their cause is to be sought in some abnormal condition of the genital organs. Ulcerations, luetic and chancreoid, or due to pre-existing herpetic eruptions, furnish an adequate soil for the development of this variety of wart. A number of cutaneous diseases, as eczema scrotale, lichen, keratosis pilaris and syphilodermata affecting the prepuce and dorsal surface of the penis and scrotum in the male, and the posterior commissure and labia in the female, may bring about this dermatosis. Urethral inflammations, specific or otherwise, and leucorrhœal discharges, diseases of the uterine mucosa, giving rise to irritating secretions, may likewise produce it. Vesical calculi have been known to cause acuminate papillomata, reflexly. A redundant and constricted prepuce, increased secretion of smegma and the presence of round worms are apt to originate it. Adolescence and middle life are the ages mostly attacked. The morbid anatomy of this variety of papilloma is identical with that of papilloma simplex, and hence need not be repeated.

The *treatment* consists in the removal of the causative factor and the institution of scrupulous cleanliness. The local applications recommended for the former variety are equally applicable to this condition. Besides these, the cautious application of chromic acid or the use of a strong solution of silver nitrate will eventually eradicate the malady. The area adjoining the wart, however, must be well protected, lest the caustic come in contact with the healthy tissue and work havoc in it. The actual or electro-cautery may at times be necessary to destroy these growths, but they are painful methods of procedure, and should only be resorted to after all the milder remedies fail. Ablation by the knife is much better than escharotism, after which the raw surface may be touched with a mild astringent and stimulating agent, as

tr. iodine or a solution of silver nitrate, 10 grains to the ounce. The tr. of *thuja occidentalis* acts well in this particular form, and should be given in ascending doses.

(c) *Papilloma giganticum*. This variety of papilloma invades most often the ischio-rectal space, perineum, the inner aspect of the thighs and the genitalia in both sexes, and may assume enormous dimensions, reaching at times the size of a hen's egg. The anal region is a very favorite location of *papilloma giganticum*, which it may completely encircle. It gives rise to subjective disturbances, as smarting, burning and itching, and thus occasions a great deal of suffering and discomfort.

The etiology of this form of papilloma is rather obscure; venereal causes do not seem to influence it much, for very few individuals, the subjects of *papilloma giganticum*, are the subjects of venereal affections. Rectal diseases, as hæmorrhoids, fistulæ in ano, fissures and neoplasms of the rectal mucosa are credited with its causation. Many nervous disorders, as hysteria, neurasthenia, general paresis, tabes dorsalis, and disturbances of the vaso-motor nervous apparatus are known to be accompanied by papillomatous excrescences in the regions above mentioned. Vaginal affections and disorders of the uterine canal are etiologic factors, known to have inaugurated this form of wart. Its pathology may be summed up in the following short description: The papillæ of the corium are enormously enlarged and the rete mucosum is filled with large pigment granules of an abnormal type; there is also a hyperplasia of the various layers of the stratum corneum. Their color varies from yellowish gray to that of a dirty brown; some assume a greenish hue.

The *treatment* consists in the extirpation of these growths by the knife. Chemical escharotics or the electro-cautery are of no avail in this form. Concomitant affections must be remedied; pathologic conditions within the rectum removed and uterine abnormalities corrected. The higher nerve stimulants may be tried if there are co-existing nerve lesions. Arsenic in the form of Fowler's solution is indicated under these circumstances, and acts very beneficially upon the local disease as well, by virtue of its epithelial predilection.

(d and e) *Papillomata lata and mollia* may be considered collectively, as they constitute really various grades of the same affection, differing only in degree, not in kind. They are of a soft consistency, and their favorite location is the perineum, anus and the integument of the penis in the male, the labia majora and minora and the posterior commissure in the female. The gluteal fold and ischio-rectal space may likewise be the seat of this form of papilloma. They may

also be occasionally observed in remote places, as in the hypogastric region, the lower third of the inner surface of the thighs and the popliteal space. The papillomata lata are apt to assume considerable proportions. In color they suggest a pearly hue, bordering on grayish-blue. They may take upon themselves numerous shapes and configurations, viz., ovoid, oblong, circular, irregularly spherical, etc. They predominate in the female sex, although males—as remarked in a former place—are by no means exempt. Pregnancy is a predisposing factor in their development, but an exciting cause is necessary for their final appearance. This exciting cause is to be found in utero-vaginal secretions of a leucorrhœal nature, so commonly met in the early months of utero-gestation. Then again, the nervous element plays an important rôle in their causation. Condylomata lata must not be confounded with papillomata lata, the latter being non-contagious in character. Moreover, other symptoms of syphilis are likely to be present at this particular juncture. They may also be ascribed to the presence of anæmia or chlorosis. Vulvo-vaginitis and various dermatoses of the genitalia are equally responsible for the condition under consideration. They may also be attributed to friction between two adjoining surfaces, as the ischio-rectal space and the inguino-scrotal fold, and the accumulations of offensive secretions in these localities.

Their pathology may be viewed as a proliferation of the tissues of the corium, maceration and ultimate desquamation of the cuticle and a slight transudation of serum in the delicate and abraded cutis. In short, they are ordinary warts, which have been deprived of their superimposed corneous covering and possessing slight moisture. They impart to the examining finger an unctuous feel. Some authors assert that there is a contagious element about them, which, however, has not been verified in the writer's experience. Co-habitation does not seem to transmit the lesions to the unaffected person. The influence of the nervous system in this form of papilloma becomes again obvious, for there are cases on record, wherein the sudden occurrence of papilloma molle is solely traceable to emotional states and hysterical paroxysms. They are more prone to make their appearance during the heated season and entail much discomfort on part of the individual thus afflicted, giving rise to subjective manifestations, especially pruritus.

The *treatment* is both local and systemic; all dyscrasiæ must be remedied and the causes favoring their production removed. Washing the lesions with a mild solution of an alkali, both deterges and disinfects them, leaving a clean surface for the application of the remedial agents.

Astringents and protectives may be used locally, as well as mildly stimulating applications. A very efficacious prescription is the following:—

Ac. salicylici.....	gr. 10
Zinc oxidi .....	dr. 1
Amyli .....	dr. 2
Pulv. talci.....	dr. 5 m.

OR

Aristolis.....	dr. 1
Dismuthi subnitratis .....	dr. 5
Lycopodii .....	dr. 2

If they are situated in the inguino-genital fold, the adjacent surfaces must be separated by means of gauze, into the meshes of which one of the above powders is thoroughly incorporated. No ointments of whatsoever kind should be used in this variety of wart, nor any caustic agents.

(f) *Papilloma malignaforme*. As the name implies, this is either a malignant or malignancy forming growth. Its first appearance does not suggest the possibility of its being malignant, but later developments soon create a suspicion in the mind of the physician. The author has had but three cases of this singular kind of papilloma. In all of these it began in the form of an ordinary wart, situated on the glans penis or prepuce. It projected about one-eighth of an inch beyond the level of the surface it invaded. The base was markedly indurated, the surface of the growth uneven, corrugated and covered with a tenacious, ropy and mucilaginous secretion. At times, there was excruciating pain, radiating towards the groin. The inguinal glands were not enlarged nor indurated, nor was there any cachexia, the patient enjoying the best of health. Still, the local malady gave rise to much annoyance and discomfort to the patient. The author is satisfied that it is more than an ordinary papillomatous formation; its entire appearance strongly suggested the probability of its being a malignant neoplasm. The color of these lesions was a dirty yellowish-gray. One of the patients had it for about three years, with exacerbations of pain and inflammation. It was finally removed by surgical interference and thoroughly cauterized. Three or four months after, it reappeared, presenting the same symptoms as before. A second, more thorough excision was advised, which was, however, refused by the patient, who is treating it at present with one of the dusting powders mentioned on a preceding page. The age of this patient is about forty. What the final outcome of this morbid condition will be, cannot be surmised with any degree of certainty. The second patient was a Polander by nationality and about sixty years of age. A painful and indurated papilloma developed on the glans penis, surrounded



with a band or halo of inflammatory tissue. The inguinal lymphatics were not enlarged, nor was there any cachexia noticeable. Local medication and the internal administration of arsenic proved futile. Six months later, degenerative changes set in and the patient was urged to have the neoplasm removed. He drifted from observation to fall a prey to charlatans. Finally, he returned; examination at this time revealed an ulcer fully the size of a large walnut, with undermined edges and uneven floor; the base was considerably indurated and there was intense pain, robbing the patient's nightly rest. There was no enlargement of the inguinal nodes and no constitutional deterioration. Epithelioma of the penis was diagnosed and the member amputated. Complete restitutio ad integrum was apparently the result. But six months later, metastasis to the inguinal lymphatics appeared on the scene and the patient succumbed to marasmus, induced by the cancerous cachexia.\* The third patient is about 38 years of age. His family and past history are negative. The present malady commenced about three or four months ago in the form of a wart with indurated margins and an inflammatory areola. No constitutional cachexia present; all the functions, assimilation inclusive, are perfect. There is, however, severe pain of a incinerating character, which occasions much distress, annoyance and worry. An immediate and thorough extirpation of the papilloma was recommended, which the patient emphatically refused. Antiseptics, detergents and protectives are the remedies employed, as well as the internal exhibition of arsenic. Not much time has elapsed since, to allow of any definite conclusion to be arrived at. The author apprehends the possibility of its turning into epithelioma, for it tallies closely with the manifestations of the two former cases.

*Other genital and progenital excrescences.* *Cornu cutaneum*, although invading in preference the scalp and face, is also encountered on the genitalia. Dr. Felix describes the case of a boy, whose penis was the seat of a number of cutaneous horns; some of them were spiculated, while others were blunt, straight or curved. Their color is a dirty yellowish-white. The shape and size of these excrescences vary; they are either straight, or curved, or twisted in various directions. They are invariably shed after reaching a certain size, but soon redevelop after a short period of quiescence. They are caused by wounds, pressure, or injuries to the integument of the penis and its adnexa. Chancroids are known to cause them; they may also originate from pre-existing papillomata. Their morbid anatomy may be viewed as a hyperplastic

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\*This case was reported in the *Columbus Medical Journal* (1898).

growth of the rete mucosum. Enlarged papillæ and tortuous capillaries have also been observed. The epithelial cells of the epidermis are cornified and arranged in the form of longitudinal bands or pillars. The *treatment* calls for their *immediate removal*. This may be accomplished by ligating off their base or, what is still better, the entire growths are excised with a portion of the tissues they spring from. The base is then cauterized with the actual or electro-cautery, or with a strong solution of zinc chloride. The above can be done under local anæsthesia. Not infrequently these growths are the starting nidi of malignancy and their early removal is therefore imperative.

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CARCINOMA OF STOMACH, CAUSING ATROPHY OF THE ORGAN,  
WITHOUT PYLORIC OBSTRUCTION.\*

By R. J. DWYER, M.B., Toronto, M.R.C.P., Lond. Lecturer on Clinical Medicine,  
University of Toronto.

J. M., æt. 55, sailor, admitted Feb. 6, 1904, complaining of loss of appetite and pain in the stomach, made worse by taking food; also had attacks of nausea but had never vomited, nor had eructations. Was also much constipated.

Family history.—Parents died of old age. One brother is living and well; no other brothers or sisters.

Personal history.—Had diseases of childhood, but had always been healthy up till present illness, except for some catarrh of nose. Had always been moderate in the use of tobacco and stimulants, and had never had any venereal disease. His occupation as a sailor kept him employed during the summer, but during the winter he did nothing.

Present illness.—His trouble began last December with loss of appetite and burning pain in the stomach after food, especially if the latter was meat or potatoes. These symptoms he attributed to his want of exercise and indoor life. The pain, which at first only appeared shortly after food, had latterly become almost continuous. Although he had never vomited for some time past he had been subject to attacks of nausea, coming on about two hours after meals. About the time that he first began to be troubled with the stomach he also began to lose weight, and this, with the other symptoms of his illness, had persisted up till the time of death. Had never vomited any blood.

Condition on admission.—Weight, 124 lbs. At the time the illness began he weighed about 147 lbs.

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\*Read at the Toronto Medical Society 14th April.

General inspection.—He was a man of medium stature, slightly emaciated, and somewhat anæmic; skin dry and harsh; facies drawn and anxious, but showed no distinct cachexia.

Examination of abdomen.—There was slight general distension, due to numerous coils of intestine, in which active peristaltic action was visible. Some dilation of veins in the wall on either side in the lower half. There was no fulness in the epigastric region, except in the left half close to the costal cartilages, where a slight fulness, about four inches in length, was discerned. This faint prominence was parallel to the costal margin and moved slightly downwards on a full inspiration. Palpation elicited no general abdominal tenderness, but some distress in the epigastric region which he asserted firm pressure relieved. His favorite attitude was to sit at the side of the bed and bend forward over its edge, in such a manner as to press it against the epigastrium. The fulness seen on inspection was found to be an indefinite, nodular mass, running towards and ending in the middle line in a distinct, hard, round tumor, about one inch in diameter. This tumor was situated about two inches below the ensiform, and varied in its distinctness from time to time, though no gas was felt bubbling through it.

Percussion over the indefinitely large mass, at the end of full inspiration, showed it to be tympanitic, and evidently due to stomach distension. Frequently, too, at the end of a full breath, bubbling could be felt through it. According to the area of tympany denoting the stomach the latter was much contracted, not reaching beyond the middle line, nor extending lower than three finger-breadths above umbilicus.

Constipation was very obstinate, and only yielded to pulv. jalap. co., otherwise he would not have a motion in five or six days.

Examination of urine revealed no albumen; sp. g. 1029; no sugar; reaction neutral; no bile; excess of urates; and indican also found.

Examination of stomach contents.— $\zeta$ ii being taken an hour after Ewald's test breakfast; brownish fluid with particles of undigested bread; no excess of mucus; odor not sour but disagreeable; no HCl; no lactic acid; and no pepsin. The microscope showed epithelial cells, starch granules, yeast cells, numerous pus cells, a few red cells and a few long rods, resembling Oppler-Boas bacilli.

Circulatory system.—There was a moderate degree of arteriosclerosis in peripheral vessels, but no enlargement of heart or valvular murmurs.

Respiratory system.—At the right apex, vocal and tactile fremitus was increased, and the breath sounds were harsh, but no râles could be heard. The sputum was abundant and muco-purulent. Repeated

examination failed to discover tubercle bacilli, but many streptococci were present, with abundance of pus cells.

No enlargement of supra-clavicular glands.

Subsequent history.—Feb. 26, had steadily but slowly emaciated and grown weaker. Stomach contents again examined, and absence of HCl, lactic acid and pepsin noted. The urine on this occasion was found to be albuminous, containing 1.5 per cent. of albumen by bulk.

March 4th.—To-day it was found impossible to pass the stomach tube, owing to an obstruction at the cardia. The tube appeared to be gripped at the latter orifice, and prevented the passage of fluid either way, though swallowing was not interfered with to any extent. The cancerous cachexia was noted in the face. Some enlargement of the supra-clavicular glands was also observed for the first time.

He died a month later, April 4th, from facial erysipelas, which attacked him three days before death. There were no new developments, merely a progressive asthenia, emaciation and anorexia. The stomach tube could not be passed in spite of repeated attempts. The albumen, noted as being present in the urine Feb. 26, had disappeared for over a month before death. The epigastric tumor did not markedly increase in size, neither did he have any severe pain, hæmatemesis nor vomiting.

Autopsy report.—Post-mortem, 18 hours after death. Rigor mortis and post-mortem staining well marked. Body much emaciated.

Section.—On opening the abdomen, the tumor, noted during life at the edge of the left floating ribs, was found to be due to a flat, nodular growth, triangular in shape, and occupied the only visible portion of the anterior wall of the fundus of the stomach. This growth was about 2 inches in diameter, and was the most prominent and visible portion of an envelope of malignant disease which had invested the stomach on all its surfaces and borders, except a narrow strip along the greater curvature and anterior surface. Even in this situation, there were numerous adhesions and thickenings of the omentum with a number of nodules of cancer in the space between the stomach and transverse colon. To the left and just above the pylorus was a large, round growth, 2 inches in diameter, which was densely adherent to the stomach and formed the most prominent feature of a mass of new growth which thickly occupied the lesser curvature and posterior wall, and which closely bound into one mass the pancreas on the one hand and the diaphragm on the other. The latter was particularly adherent round about the œsophageal opening. The pancreas, though beset by the growth and universally adherent to it, was in itself free of change. The spleen was very adherent to the stomach. Between the stomach and

the liver were also numerous adhesions, which were very thick and obviously infiltrated with cancer tissue, especially about the hilus. In this situation the neck of the gall bladder was compressed and that viscus considerably distended, containing about  $\frac{3}{4}$  vi of bile.

The stomach, on removal, appeared to be distinctly smaller than normal and was markedly constricted by a band of adhesions about its middle. The measurements were from cardia to pylorus 3 inches on lesser curvature, and on the greater curvature about 12 inches.

On opening the organ, the walls were found to be thickened and firm. Over two-thirds of the interior was occupied by a vast, shallow ulcer, with here and there hard ridges, and a raised fungating edge. Here and there were patches of deeper ulceration, averaging  $\frac{3}{4}$  inch in diameter, and, in one spot, a large slough was loosely adherent. The growth extended to within 2 inches of the pylorus along the lesser curvature, and over the fundus and sides, except for a strip  $1\frac{1}{2}$  inches wide reaching from the cardiac opening to the pylorus. The latter opening was free and patent, but the cardiac opening was partially occluded by a number of fungus masses which projected into the œsophagus.

The stomach contained about  $\frac{3}{4}$  iv of grumous, treacly fluid in which were a few small blood clots.

The liver was pale and not enlarged, one large cancer nodule on convex surface at the junction of the two lobes. Numerous nodules, from  $\frac{1}{4}$  to 1 inch in diameter, were scattered throughout its substance.

Both kidneys were small, normal in color, the capsule in both being very adherent.

The spleen was small, but otherwise normal.

The colon was loaded with slaty-colored, putty-like fæces. The splenic flexure was involved in adhesions and somewhat constricted.

On the front and sides of the vertebræ, and extending from the cardiac axis down to the bifurcation of the aorta, was a large nodular mass of cancer, which closely invested the abdominal aorta, but did not invade the wall.

Thorax.—Left pleural cavity contained about  $\frac{3}{4}$  x of reddish, fibrinous fluid; patches of lymph were found over lower lobe at its edge and under surface. Some recent adhesions on outer surface of upper lobe. At apex, pleura was thickened and cartilaginous, and the entire pleural membrane was much reddened and injected. This injection, as also the deposit of lymph, was most marked around the œsophageal opening. The lower lobe of the lung partially consolidated and grayish on cut surface. A number of small, hard nodules, like tubercles were scattered throughout this hepatised area. Also many points exuding thick mucopus in the lower lobe, fewer in the upper lobe.

Right pleural cavity.—There were a few old adhesions over the outer surface of the lung. The pleura at apex was thick and cartilaginous. The lung, generally, pale and emphysematous. Half-a-dozen or so small hard modules were scattered throughout, from base to apex. These were caseous on section for most part, though some were calcareous.

The heart was small and pale, the muscle friable and the valves normal.

The bronchial glands were enlarged, mostly pigmented and calcareous. Several, however, were obviously cancerous. Of the latter, a number extended along the aortic arch.

In the left supra-clavicular region was a cancerous gland, 1 inch in length.

Comments.—The foregoing case presents unusual features, both in the clinical course and the post-mortem findings. About 3-5ths of all gastric tumors are found in the pyloric region, forming during life a visible or palpable mass, at or to the right of the mid line in the epigastric region.

Of twenty-four cases of tumor of the stomach collected by Prof. Osler, 14 presented a mass at the pylorus, and of these 10 had dilatation of the organ so pronounced as to form the most striking feature of the abdominal appearances, while in 3 others, dilatation was present.

In the present case, the tumor was felt during life in the left epigastric region and almost concealed by the ribs. Contraction rather than dilatation appeared to be the condition during life.

Throughout the illness, the absence of vomiting and hematemesis was noticeable.

The pylorus being free of growth would account for the absence of dilatation, but not for that of the other symptoms. The extent and severity of the lesion, as revealed after death, were also remarkable in view of the history.

The primary situation of the growth, too, was unusual. This appeared to be in the lesser curvature. Of 1,300 cases of tumor of the stomach, collected by Prof. Welsh, only 148 were found in this situation.

In view of the history of the last few days of life, the immediate cause of death, viz., the purulent pleurisy, with pneumonia of the left base, was quite unexpected. There had been no rise of temperature, and no aggravation of the general symptoms, sufficient to indicate the presence of a condition so severe.

The existence also of a latent pulmonary tuberculosis must also be regarded with interest; more particularly as the examination of the sputum did not reveal it during life, though the physical signs pointed to it as a possibility.

## AN EPILEPSY SYMPOSIUM.

By JOHN FERGUSON, M.A., M.D., Toronto. Senior Physician, Toronto Western Hospital.

**I**N *Medicine* for February, 1904, there are a number of articles on the diagnosis, pathology, etiology, and treatment of epilepsy. These articles are by Wharton Sinkler, J. Chalmers Da Costa, Wm. P. Sprattling, John B. Chapin, William N. Bullard, Henry M. Weeks, Albert C. Buckley, F. Savary Pearce, S. Napoleon Boston, and Carran Pope. These articles cover the field of what is known regarding epilepsy at the present moment.

WHARTON SINKLER, M.D., in his "Presidential address to the National Association for the study and prevention of epilepsy and the care and treatment of epileptics" covers a wide range of topics. He calls attention to the interest that is now being taken in these cases, and to the establishment of homes for epileptics. A hundred years ago the provisions for the care of the insane were no better than that for epileptics a few years since. As our knowledge of insanity increased, it was found that a much larger number of the community required care in suitable institutions than was at one time thought; and so with regard to epileptics, it is now known that there are more epileptics than was once thought to be the case. He refers, in graphic terms, to the dungeon cells in which maniacs were formerly confined.

In 1890 there was not a single hospital, colony, or institution of any kind devoted exclusively to the care of epileptics. In Europe twenty years ago, there were only a few colonies, but now there are many. There are now 21 state institutions, many of which are of very fine construction and with every facility for outdoor work and recreation. Reference is made to the new institution for epileptics at Woodstock, Ontario; and to several now in existence in Britain, namely, at Maghull, at Chalfint St. Peter, the Meath Home of Comfort, St. Luke's Home at Bournemouth, and at Ewell, Surrey. This latter institution cost \$500,000, is on a farm of 112 acres, and has accommodation for 325 patients. The Craig Colony at Sonyea, in the State of New York, has 1,900 acres of land. Every form of occupation is to be found there. From constant occupation, not only are the lives of these people made happier, but, as statistics show, their disease is ameliorated and sometimes cured, and they become useful citizens, instead of despondent, feeble-minded drones.

In reviewing the recent literature upon epilepsy, Dr. Sinkler cites Krainsky to the effect that there is a close and constant connection between the excretion of urea and epilepsy. Every attack is preceded for

24 or 48 hours by a diminution in the amount of excreted urea. So long as the epileptic excretes .6 to .8 of urea there is no danger of an attack, but if it falls to .4 or .3 an attack is imminent. He is inclined to regard epilepsy as a disease of metabolism to some extent. Dr. G. W. McCasky has drawn attention to the influence of gastro-intestinal diseases on epilepsy. Cabisto has made some investigations on the perspiration of epileptics, and found that immediately after an attack it was very toxic, whereas that collected in the intervals was not toxic when injected into a rabbit. Cabisto urges the diaphoretic treatment. Drs. Clark and Prout regard the excitant as a toxic or autotoxic agent. They contend, from a study of 21 autopsies at the Craig Colony, that the changes of the cell are quite analogous to those definitely known to be caused by toxic agents, such as alcohol, tetanus toxin, and autotoxins. Dr. Crothers is quoted to the effect that the abuse of alcohol is a potent cause of epilepsy, and that alcoholic epilepsy is rapidly increasing. In the general populace there are 2 cases per 1,000; but where drinking abounds, and in the neighborhood of distilleries, there are from 4 to 7 cases per 1,000. Drs. Fletcher Beach, of London, and G. M. Gould, of Philadelphia, are referred to as authority that cases of epilepsy have been cured by correcting errors of refraction. Heredity does not appear to be of great importance. Gowers, Tissot, Leuret, Delasiauve, Berger, Turner, and others give the influence of heredity as varying from 9 to 35 per cent. of the cases. In the Infirmary for Nervous Diseases, Philadelphia, 9 per cent. showed an epileptic heredity.

With regard to treatment, Dr. Sinkler remarks that it is well to be guarded in claiming too much, as epileptics usually improve for a time under any method of treatment. Lion and Poehl have reported good results from the administration of cerebrin, either in tablet form or subcutaneously. In a number of cases distinct improvement followed this treatment. An epileptic was treated in the Pasteur Institute for rabies, and his epilepsy did not return. It has been suggested that the anti-rabic treatment may prove useful. In a case treated at the Post-Graduate Hospital, N.Y., benefit is claimed from the use of the x-rays, after other methods of treatment had failed. Urbane Alessi claims that epilepsy is due to well-marked changes in metabolism and gives a combination of sodium arsenate, zinc phosphide, calcium phosphate, sodium benzoate, and pancreatin. Bechterew recommends potassium bromide, codeine and adonis vernalis, given twice a day. Janot strongly urges the treatment by the bromides. He gives potassium bromide in quantities varying from 60 to 150 grains per day. Many years ago, Hughlings Jackson recommended the withdrawal of salt from the food. Recently



a number of writers pressed this forward for favorable consideration. Some observers, including Hammond and Weeks, have found good results from the administration of chloretone. Others, however, have met with instances of stupor from its employment. Dr. Sinkler ends his review of the various methods of treatment with the statement that our mainstay at the present time is the bromides.

He concludes his article by contending that the requirements of epileptics are best met in industrial colonies or farms. The most favorable results are obtained by giving them ample opportunities for work under good hygienic conditions, where this treatment can be carried out by regular methods. These conditions can only be fulfilled in the country. The cottage plan of treatment is by far the best. In connection with this cottage system there should be a well-equipped hospital. Every facility must be furnished for indoor amusements for bad weather, and the more delicate patients. There should be a separate building for children. The inmates of these colonies are put at various forms of employment, and, in this way, earn much of the cost of maintaining them. He refers in his address to the excellent work done along these lines at the Bethel Colony, Bielefeld, Germany, and the Craig Colony, New York.

DR. CHALMERS DA COSTA, Professor of Surgery, Jefferson Medical College, in his article discusses "The Surgical Treatment of Epilepsy." He starts out with the statement that the aim of a surgical operation is to cure, or materially benefit the patient, and quotes the saying of Rabelais that "science without conscience is naught but ruin of the soul." He condemns operations that have no clearly defined object in view. The statement is made that in brain surgery the sphere of the surgeon is limited, and particularly so in epilepsy. As there is one epileptic in every five hundred persons, the surgeon is sometimes consulted with regard to the possibility of an operation.

Among the causes of the disease may be mentioned hereditary influence, emotional shock, autointoxication, syphilis, alcoholism, chronic poisoning with lead or mercury, inflammations or growths of the brain or of its membranes, traumatism of the head, and reflex excitement. From this it is clear that there are many different forms of the disease, or that epilepsy is a symptom-group resulting from various conditions acting on an already predisposed brain. It is this fact that makes the surgeon chary of predicting a cure by an operation. Our conception of the pathology of epilepsy is not an established certainty. It has been, and is still, changing; and scarcely two authorities are agreed upon the subject. The majority of observers believe there is some essential trouble

in the cells of the cortex. In some instances there are depressions of bone, tumors, or adhesions between the cortex and its membranes, or some other obvious lesion.

Among the surgical methods of treating epilepsy may be mentioned ovariectomy, clitorrectomy, circumcision, nerve-stretching and nerve-section, orchidectomy, the removal of irritating scars and of painful cicatrices, blistering, cauterization, the use of the seton, operations on the ocular muscles to correct defects, the ligation of the vertebral arteries, the excision of the cervical sympathetic ganglia, and trephining of the skull. Many of these procedures are dead; but the practice of trephining the skull, which was introduced for the cure of epilepsy in the sixteenth century, is still employed in some cases. During the seventeenth century, trephining was practised to an extraordinary extent. The operation fell into disuse under the attacks of such men as Desault and Abernethy. In 1867, LeFort states that the operation had only been performed four times in France in ten years, and Mr. Callender, in the St. Bartholomew's Hospital Report for 1867, says that there had not been a case of trephining in the hospital for six years.

There are some cases where the removal of a painful cicatrix or the performance of circumcision has been of distinct benefit; but the number of cures by such means are really very few. A few years ago it was claimed that surgery could cure from 60 to 70 per cent. of cases. These claims are no longer put forth. The author thinks that less than 5 per cent. of cases can be cured by operation. Any operation, or the administration of an anæsthetic, may temporarily benefit an epileptic and, in the past, this was often regarded as either curing, or improving, the patient; the effect only lasted a short time. Cases should not be reported as cured till after a lapse of at least three years.

Before operating in any case the utmost care must be taken with regard to the diagnosis. The greatest care should be taken to arrive at correct views on the matter of injury to the head at some time in the past. For the purpose of making a diagnosis, the author classifies attacks of epilepsy as follows:—1. Reflex epilepsy; 2. The common nontraumatic, idiopathic epilepsy, in which the attacks are general and without a local onset; 3. Idiopathic epilepsy with a local onset of attacks (focal and Jacksonian epilepsy); 4. Traumatic epilepsy, of which there are two forms: (a) attacks without a local onset, and attacks with a local onset (focal or Jacksonian); 5. Jacksonian epilepsy due to gross brain disease, a tumor, aneurism, etc.; 6. Epilepsy following infantile cerebral palsy; and 7. Post hemiplegic epilepsy of adults.

With regard to idiopathic epilepsy, uncomplicated cases should not

be operated upon. Operation cannot effect a cure. In the status epilepticus trephining may relieve the pressure and be of distinct benefit. Kocher claims that in essential epilepsy there is increased cerebral pressure, and that trephining, opening the dura and cutting away the edges of the flaps, and draining the lateral ventricles through a silver canula always do good. Jaboulay claimed good results from the excision of the cervical ganglia of the sympathetic. This operation was founded on the belief that in epilepsy there is cerebral anæmia; but this is no longer held.

In cases of idiopathic epilepsy with focal symptoms, it is thought by some that the cause is infantile cerebral hemorrhage. In these cases the fits are usually limited to one side. Operations in children are more hopeful than in adults; when the condition has existed for a period of two years, operation holds out little hope of a cure. In some old cases, where the fits are frequent, an operation may lessen their frequency and severity. In some of these cases a portion of the motor cortex is removed. This operation benefits many for a time, but the scar that heals the brain wound becomes again the source of irritation. In performing these operations plenty room should be secured.

Traumatism may cause epilepsy, but usually some months or a year or more may elapse before the fits come on. The scalp should be examined with great care for painful scars, as these may cause epileptic attacks by reflex influence. They should be removed. In all cases where there is any indication of skull injury, or depression, an operation should be performed. The dura must always be opened, and if there is any dural scar, it must be removed. The brain should be carefully examined for tumor or scar tissue. If no tumor or scar can be found, it is justifiable to remove the motor centre from which the convulsions arise. When the injury was in the motor region the chances are much better than when it occurred to a sensory centre. When the injury was in the frontal region the chances of cure are remote. In some cases of generalized epilepsy a button of bone may be removed and left out, with the view of modifying the cerebral pressure.

The author's conclusions are: operations for epilepsy are distinctly disappointing, and are indicated in only a few cases; they frequently produce temporary improvement; they may save life, but they are not free from danger, and sometimes leave the patient worse than before; and the number of cures is probably under 5 per cent.

WM. P. SPRATTLING, M.D., treats of "The Psychological Aspects of Epilepsy." Dr. Sprattling, as the medical superintendent of the Craig

Colony, has enjoyed exceptional opportunities for the study of this subject. Every true epileptic attack impairs the mind to some extent, and this cannot be determined by the degree of motor disturbance. There are cases where consciousness is completely lost, and yet there is no muscular commotion in the body. This is specially true of psychical epilepsy, which is a very perplexing problem for the psychologist. There is a form of post-epileptic automatism that is very like psychical epilepsy. In this state actions are performed as if the person were conscious, and yet he is acting like an unconscious machine. The effects of epilepsy on the mind may be classified as temporary, prolonged or permanent. The temporary effects are those that occur at the time of the convulsion; the prolonged effects are those that last for a considerable time, and may precede or follow an attack; and the permanent effects are those that cause mental unsoundness of varying degrees.

The paroxysmal mental states due to epilepsy are psychical epilepsy, a morbid state entirely complete in itself; epileptic automatism, a condition of mental vacuity and bodily activity; pre- and post-paroxysmal disturbance, usually in the form of mania; and paroxysmal or epileptic mania, occurring during the attack. When this condition takes the place of the fit it is psychical epilepsy.

The following are the mental states due to epilepsy, occurring in the intervals of attacks, namely, transitory ill humor and loss of memory for recent events; slight clouding or dulling of the intellect; feeble-mindedness; imbecility; idiocy; epileptic dementia; and acute confusional insanity, characterized by delusions, hallucinations and illusions. If the stamina of the person is good, the attacks may last for many years before the intellect is much impaired, but in other cases this is early manifested. When epilepsy comes on in adult life, and has been preceded by vicious habits and alcoholic excesses, the mind is almost at once marred.

Some of the nocturnal attacks may be mistaken for somnambulism, the patient moving about in a most deliberate fashion, and avoiding danger. In some instances a conversation may be conducted with such patients and no recollection of such retained when consciousness returns. No instance has been observed in which the acts and sayings of this state were remembered. This automatic state is usually one of motor tranquillity, but it may be the reverse. Psychic epileptics commit all manner of crimes, such as rape, homicide, arson, theft, etc., and in this state often go away to distant places, being unable to give any account of how they came to be in their strange places.

Mania may occur in connection with fits, either before or after them. It is more frequent before attacks than after them. It may begin some days before the paroxysm, and show itself as irritability, the person being unusually talkative or fault finding, magnifying trifles into matters of great importance. Finally, there is a falsification of the special senses which constitute the aura of an attack. Delusions of persecution may be present. There is sometimes confused ideation, rapidly changing, and the speech may be a mere jargon. These disordered mental states that precede the convulsions subside with the coma that follows the fit. Some patients know nothing that occurred during this confused state prior to the attack. In some grandmal attacks there is very great physical disturbance, and the patients act in a most violent manner. This epileptic furor is perhaps the wildest frenzy known in any condition. They seem to develop superhuman strength, five or six strong attendants being required to restrain a patient. This may be followed by extreme prostration.

In some instances the patient is irritable, fault-finding, fussy, querulous, things that ordinarily would not annoy cause much displeasure. These conditions may last for some time, even days, before the convulsions, but almost always disappear after it, the convulsions clearing up the atmosphere again. It is well within the mark to state that about 80 per cent. of epileptics show these temperamental obliquities.

The memory is, of all the faculties, the one that suffers most. In cases of a mainly motor type, the memory may escape for a long time, but if the epilepsy is of the psychological type, it soon suffers, and severely. A single attack may destroy the memory for a thing that the person was charged to look after, the person completely forgetting what he was going to do. Every attack tends to destroy the memory of recent events, and this renders the education of the epileptic a very difficult task. As the memory fails feeble-mindedness sets in. This is the case in about 50 per cent. Later on, a considerable number of these become imbecile. Consciousness is generally little impaired. Trifles may be remembered and essential things forgotten. As the mind weakens the ego is magnified. Epileptic idiocy is the lowest mental state to which these patients can sink, save that of complete dementia.

The condition of epileptic idiocy may be congenital or acquired. There are found chronic encephalitis, diffuse syphilitic disease of the vessels, arrest of cortex development, inequality of the hemispheres, defect of the island of Reil, thickening of the meninges, cephalhæmatomata, embolisms, thromboses, atrophy of cortical cells, microcephalus, and

macrocephalus. The epileptic idiot is usually small and undeveloped, and there are many stigmata of a low grade physical organism. These features are present in 80 per cent. of idiots. The idiotic type is usually met with in the young, under 10 or 12 years, and rarely arises after 18 or 20 years. Motor types of epilepsy rarely cause dementia, whereas those cases where the convulsions originate in the frontal lobes are prone to become demented. At the time of a paroxysm these dementia cases may become excited, violent and dangerous, being roused from their apathy for the time. The frenzy appears like a flash and spends itself in a moment. Dementia usually occurs between 20 and 40 years of age.

Epileptic mania, melancholia and circular insanity form a group of psychoses. The symptoms may be very complex. In mania there is great psycho-motor excitement, purposeless activity, excessive emotional attitude, unsystematized delusions, sometimes hallucinations, and the perceptive faculties may be overly acute. The depressive forms are characterized by mental and motor symptoms, the opposite of the above. There are a lack of activity, paucity of ideas, emotions of dejection, delusions of a persecutory nature, and some obscuration of consciousness. These states may alternate, or become mixed. Thus we meet with the maniac, depressive and mixed forms. The epileptic is subject to sudden impulse. In two cases of self destruction, there was no indication of premeditation. These were the only two in an experience with 1,600 cases, 200 of whom had been committed as insane.

JOHN B. CHAPIN, M.D., of the Pennsylvania Hospital for the Insane, takes up "The Consideration of the Epileptic by the Courts." In the first place the writer states that the epileptic is an object of sympathy wherever he may be found. The interest in him begins with his disease and does not end till his death, as very few recover. He is found in the hospitals, the asylums, and sometimes friendless and shunned, a wanderer in the community. Although he may not be in the public gaze, he is usually heard from, as he is not regarded as properly placed in any location, wherever he may happen to live.

The epileptic sometimes receives the consideration of the courts. By reason of his disease he may become irritable, feeble-minded and suspicious, having hallucinations, delusions and illusions. By the time the physical storms have ceased, the unfortunate person reaches the terminal stage of dementia. There is a loss of self-control; and passionate outbreaks may precede or follow the seizures, during which criminal acts may be committed. The epileptic must be regarded as insane dur-

ing convulsive seizure, and usually for some period either before or after it. In the intervals between the seizures, the epileptic may appear normal; and this is often the source of much medico-legal difficulty in dealing with the acts done in these intervals.

Epilepsy has been assumed as the cause of criminal acts, and this defence has been set up, on the assumption that it was the only way in which to account for these acts. In some instances this has been accepted by the courts, and the person charged has been committed to an asylum or prison. After years of observation, no seizures were detected, and these persons have been discharged. It is reasonable that the responsibility of the person should be determined by some other test than the nature of the act alone. *Mania transitoria*, instead of always being a manifestation of epilepsy, may only mean that the person made no attempt to control the impulse, and that he is, therefore, responsible for his acts. It must also be remembered that epilepsy has been successfully feigned. This is notoriously so in the case of James Clegg. If the defence of epilepsy is set up, it may be laid down as a safe rule that in all forms of this disease some of the recognized marks of its actual existence will sooner or later be observed.

But suppose no convulsion has ever been observed and there is nothing but the criminal act, or that at long intervals there have occurred convulsions, but no mental failure can be detected or incapacity to appreciate the nature of his act or the proceedings of the court, it is not likely the court would accept the view that there had been a nocturnal or unobserved attack. Courts have held that the epileptic is responsible, no matter how many convulsions he may have had, unless it can be shown that the criminal act was committed during or preceding the seizure, and was done in a state of unconsciousness. The studies of J. Russell Reynolds show that 66 per cent. of epileptics present varying degrees of mental impairment. If it be contended that every epileptic, whether the attacks are frequent or rare, be mentally impaired, the statements made by Reynolds that 33 per cent. of epileptics show no impairment must be considered. In cases where an epileptic is tried for an act of his, he has often been held responsible, unless the act was committed during, or just preceding or following the attack, particularly if it is shown that in the intervals he possessed the usual elements that constitute a state of responsibility. It is not likely that a court would accept the plea of irresponsibility on the assumption of nocturnal or unobserved day seizures. The author reaches the following conclusions:—

1. That it is the result of observation that epileptics do show some mental failure, as loss of memory, a tendency to become suspicious, revengeful, emotional, passionate, etc.

2. That these changes become more marked as the attacks become more frequent and the disease advances.

3. In every medio-legal trial it is necessary to establish the existence of paroxysms, beyond a reasonable doubt by actual observation.

4. That in criminal cases where epilepsy has been shown to exist and there is mental and moral degeneration, the accused should be acquitted, and committed as insane.

5. If a person had been epileptic when a child, or in the past at some time, but the act was not committed near an attack and no mental failure is shown, he is entitled at most to recommendation to mercy.

6. That the convulsion is only an evidence of the disease in the nervous system due to vicious habits, traumatism, or the result of degeneration, usually following an unfortunate inheritance. It is the rule of experience that sooner or later, whether the convulsions are at long intervals or not, there will be mental and moral failure, and he is entitled to merciful consideration.

DR. WILLIAM N. BULLARD deals with "The Care of Epileptics in Private Practice." A certain number of these cases must be treated at home because their attacks are not frequent enough to unfit them for their usual mode of life, because they have means to provide for their own care, because they will not go to an institution, or because there may be no such place within their reach.

In the first place it may be laid down that the bromide salts take first rank in the drug treatment of the disease. But drug treatment forms only a part in its proper management.

In cases where the attacks are not very frequent and there is no apparent mental deterioration, the patients may be allowed to continue their occupation. Care should be taken, however, to avoid mental strain by doing too much in a day, or subjecting the system to too much excitement, fatigue, or worry. It is not a good practice with the adult cases to make too radical changes in their method of life.

In the young who have not formed definite plans of life, it is well to advise an occupation that does not involve much mental effort, and secures a good deal of physical exercise in the open air. Farming in



some form is the most useful, as it furnishes the chief requisites, absence of mental strain, sufficient exercise, and an out-door life.

Great care should be given to the digestive organs. Constipation must not be allowed to occur. The author regards a mixed, plain diet as the best, though he mentions that many withhold meats almost entirely. Much stress is laid upon the fact that epileptics must not be allowed to eat too much. There should never be a sense of fulness, or oppression in the digestive organs. The teeth must be looked after, and only such food given as can be properly masticated. It may be necessary to limit, and, in severe cases, to withdraw table salt altogether. Alcohol should be avoided, and tea and coffee limited, while tobacco may be allowed in moderation.

Epileptics should have sufficient sleep. This should be secured, as far as possible, during the night in regular hours. Naps during the time are bad for these patients, as they tend to disturb the proper sleep at night. An epileptic should not be awakened from the sleep that follows an attack.

Exercise should be moderate, regular, and in the open air. It should not be too exacting, nor producing mental strain. The best way to secure this is by some suitable occupation in the air. Excitement, worry and mental shock must be guarded against.

The bromide of sodium is recommended most highly. When the bromides fail the author has not found much value in other drugs. He sometimes uses the triple bromide mixture, but thinks the bromide of sodium sufficient for nearly all cases. It is best given before meals, and, if necessary, at bedtime. It should be administered with plenty of water. From 30 to 40 grains a day are usually sufficient. The acne can be avoided by means of liquor arsenicalis. Bromism can also be prevented by watchfulness. The treatment may be omitted for a week at intervals. When the bromides and other drugs have failed, the patient should have a course of iodide of potash. If table salt be omitted from the food, less of the bromide salts may be required.

HENRY M. WEEKS, M.D., superintendent, has a very interesting paper on "The Progress of the New Jersey State Village for Epileptics." In the article an account is given of the houses and occupation. These are such as to carry out the most modern methods of treatment.

ALBERT C. BUCKLEY, A.M., M.D., Assistant of the Neurological Department of the Medico-Chirurgical Hospital, Philadelphia, takes for

his topic "The Diagnosis of Atypical Forms of Epilepsy." The writer lays down the rule that the performance of a nervous function becomes easier as it is repeated. This is true in pathology, and the more frequent the attacks are the more readily they are to recur.

From the classic type there are many departures. In some instances the seizures are of such momentary duration that they escape detection for months or years; while in other cases they occur during sleep, the patient only experiencing a muscular soreness in the morning. Minor attacks are usually only of momentary duration, with loss of consciousness, but without spasm. These minor attacks are frequently spoken of by the patient as "faints."

A type of great importance is that in which the patient does some automatic act, during the seizure or just after it. These acts often have the appearance of willed acts. They are, however, quite unconsciously performed. From a medico-legal point of view these automatic acts are of much importance.

In the minor attacks the only events that may occur are that the patient may drop something from his hand, or look for a moment with staring countenance. In the nocturnal attacks all that there may be to guide physicians are the muscular pains, the bitten tongue, some blood on the pillow, or the involuntary evacuation of the bowels.

F. SAVARY PEARCE, M.D., professor of nervous and mental diseases, Medico-Chirurgical College, Philadelphia, and L. Napoleon Boston, M.D., Bacteriologist to the Philadelphia Hospital, have an interesting study of "The Blood in Epilepsy." They conclude that there is an anæmia and a distinct leucocytosis. They mention two instances in which difibrinated blood from epileptics was injected into the veins of other persons, and in both cases epileptic fits followed in the persons injected. The injections were made for pernicious anæmia. They argue that the blood in idiopathic epilepsy must contain some toxine possessing convulsant powers.

CURRAN POPE, M.D., Consulting Neurologist to the Louisville City Hospital, closes the series of articles by an account of two cases of spasms nutans. The first case was that of a child. The nodding of the head began when it was six months old. Careful feeding and good hygienic conditions, with bromide of soda for a year, effected a cure. The second case was seven months old. The treatment consisted in proper feeding, tonics and bromides. The spasms of the head were very pronounced.

## CURRENT MEDICAL LITERATURE

### MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.D., Toronto.

#### URINARY CASTS.

**I**N the *Southern Practitioner*, March, there is an interesting article on "Casts and their Significance." The importance of the existence of hyaline casts has been the subject of much difference of opinion, but the weight of authority now inclines to the theory that occurring in the absence of other evidence, they mean a condition indicating a weakness of the structure rather than a diseased condition; and the application of some unaccustomed strain, e.g., cold, exertion, or irritating drugs causes their appearance. The origin of the casts is also of importance. If they come from the spiral and proximal convoluted tubule, as indicated by small and contorted forms, and are accompanied by larger forms which must come from other parts, then the prognosis is more grave.

#### TREATMENT OF WHOOPING-COUGH.

In *Colorado Medicine*, February, Melvin discusses his experience in an epidemic of whooping-cough. His own cases being 158, with 8 deaths. The deaths, in nearly all cases, seemed to be due to strangling with mucus or spasm of the glottis, and were all in infants, who numbered 36 of the total cases.

A large variety of drugs was tried, but best results were obtained from antipyrine, internally or as a spray, and inhalations of crude carbolic or formalin, by vaporization in the room where the patients were. Relief from spasm, reduction in length and frequency of the attacks of coughing and shortening of the duration of the attack were the advantages which appeared to follow this treatment.

#### AN UNAPPRECIATED SOURCE OF TYPHOID INFECTION.

In the *Virginia Medical Semi-Monthly*, February 12th, there is a paper by Barringer, in which he discusses the importance of the present closet systems in our passenger coaches in its relation to the dissemination of typhoid fever.

Some of the facts that give weight to the writer's suggestions are

(1) Typhoid is most common at the age when the tendency to railway travel is greatest ; (2) Patients suffering from typhoid in the incipient stages are often sent to their homes, involving frequently railway journeys of some distance ; (3) Railway employees, especially track-men, are very subject to typhoid ; (4) In all cars at present used on American railways for passenger travel, the dejecta from the closets are strewn along the track-bed ; (5) In this way it readily becomes a highly infected strip across the country, poisoning by the dust raised by passing trains and by the washing by rain into streams and springs.

This matter becomes of great importance, especially in thickly populated districts, where the railway passenger traffic is heavy.

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#### HOUR-GLASS STOMACH.

In the *British Medical Journal*, Feb. 20th, Moynihan writes on "Hour-glass Contraction of the Stomach." As to etiology, congenital conditions, imperfect development, atavism, abnormal development of muscle strands, etc., are the causes in a large proportion of cases. Acquired causes include perigastric adhesion, chronic ulcer and malignant disease. Perigastric adhesion is generally due to either ulcer of the stomach, or gall-stone disease. Chronic ulceration affects the result partly by contraction of cicatrization, partly anchoring the stomach to the abdominal wall and permitting a sacculation, and partly by spasmodic contraction of the circular fibres due to irritation.

The symptoms and signs are as follows:—

(1) In washing out the stomach part of the fluid is lost and cannot be recovered.

(2) If the stomach is washed clean a sudden re-appearance of stomach contents may take place.

(3) "Paradoxical dilatation" when the stomach has apparently been emptied, a splashing sound may be elicited by palpation of the pyloric segment.

(4) After distending the stomach, a change in the position of the distension tumor may be seen in some cases.

(5) Gushing, bubbling or sizzling sound heard on dilatation with  $\text{CO}_2$  at a point distinct from the pylorus.

(6) By giving a seidlitz powder in successive divisions, the upper part of the stomach will be found distended while the lower is dull to percussion till at least a few minutes later.

(7) In some cases, when both parts are dilated, two tumors with a notch or sulcus between are apparent to sight or touch.

(8) When the stomach is filled with water and examined by gastro-diaphany, the upper segment alone is illuminated, the lower remaining dark.

(9) The deglutable India-rubber bag of Turck and Hemmeter is passed and distended—the bulging crest to the left of the middle line.

The treatment is surgical, and varies with the condition found in the individual case.

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#### TREATMENT OF PULMONARY TUBERCULOSIS.

In *Le Bulletin Général de Therapeutique*, 30th January, there is a discussion of the method followed by Marechal, at Nice, for the treatment of pulmonary tuberculosis. An injection is made in the back muscles on three successive days of phosphate of creosote in increasing dose, to be followed on the fourth by a sub-cutaneous injection of  $\frac{1}{4}$  c. c. of a diluted tuberculin. When symptoms of reaction have disappeared, the cycle is repeated. The treatment, which has been in use since May, 1903, has had satisfactory results in 33 cases.

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#### SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.  
Chief Surgeon Canadian Pacific Railway, Ontario Division, Surgeon Toronto Western Hospital.

#### SURGICAL TREATMENT OF RECENT FRACTURE OF THE PATELLA.

Edward Martin and T. T. Thomas contribute a paper on this subject in the *Therapeutic Gazette* of February.

Most fractures of the patella are due to a violent contraction of the quadriceps extensor, while the knee is flexed and the patella is resting on the convex femoral condyle. The lower end of the patella is fixed by the ligamentum patellæ, while the quadriceps is pulling at right angles to the anterior surface of the bone.

The ultimate functional results, after fracture of the patella, are fairly satisfactory under any method of treatment which fixes the leg in extension for one or more weeks.

When the joint is normal, the worst that can be expected from purely conservative treatment is a weakness and incompleteness of extension, incident to prolongation of the tendinous expansion of the quadriceps and separation of the patellar fragments, manifested by difficulty in ascending stairs or rising from a sitting posture, and a tendency to fall forward when the toe is caught even by a slight obstruction.

The usual result of conservative treatment is a separation of fragments so moderate as to cause no serious inconvenience.

As most fractures of the patella are caused by muscular action, the fracture is usually single and simple, and the amount of separation of the fragments will depend on the extent of tearing to which the ligamentous structures lying to either side of the bone have been subjected. When these structures are untorn, the separation of the fragments, when the leg is flexed at right angles to the thigh, will not be greater than half an inch, usually not more than a quarter of an inch.

Fragment separation of more than half an inch necessarily implies that the tendinous expansions at the sides of the patella have been torn. The amount of separation when the knee is flexed is roughly indicative of the extent of the tear.

Blow fractures are usually comminuted, are often compound, and the tendinous structures to either side of the patella are usually uninvolved; hence the fragments, though often displaced, are not widely separated from each other even when there is a large effusion into the joint.

The treatment of tear fractures has for its object a union of the patella, either by bone or by a ligament not over half an inch in length.

The treatment of blow fractures has for its aim the bringing into good apposition often many small fragments of bone.

The treatment of fractured patella may be non-operative or operative.

In the non-operative or conservative treatment of fractured patella, one of two methods is usually adopted.

In the first, and most favored method in hospital and private practice, the leg is fixed in extension, and the fragments brought into as close apposition as possible by means of strips of adhesive plaster. This fixation is continued for from four to six weeks, and then the patient is subjected to massage and passive movement. In a patient previously healthy and with a normal joint, as much function as he can expect should be acquired in from six to twelve months.

The second conservative method consists in fixing the leg in extension for from six to ten days and applying about the swollen joint pressure by means of elastic bandages. At the end of ten days vigorous massage is practised, together with gentle passive movements. The claim for this method is a greatly shortened period of convalescence, incident to the rapid absorption of the inflammatory exudate, and an approximation of fragments sufficiently close to insure good function.

Fibrous union results from both these methods, and after both the fragments are likely to become more widely separated with use, though this usually occurs only in such cases as exhibit, at the time of the accident, the symptoms of a wide tear of the tendinous expansions of the quadriceps.

In the operative treatment of fractured patella the following operations are practised :

1. Subcutaneous antero-posterior encircling of the two fragments by means of silver wire—the so-called Barker method. It opens the joint, but provides an inadequate exit for the blood clots which it may contain. It introduces a foreign body into the joint and allows it to remain there. It provides no sufficient means for the removal of the shreds of periosteum which nearly always cover and adhere tightly to the broken bone surfaces. It does not unite the torn tendinous expansions of the quadriceps. The operation has been thoroughly successful in hundreds of cases, and there have been very few instances of infection. Moreover, the operation is simple, and can be completed in five minutes. It requires but few instruments, no technical training, and, if practised under antiseptic irrigation, assures against joint infection, providing the long, curved, blunt-ended needle and the silver wire are sterile.

If indicated at all, it would be for those cases in which the conservative or non-operative treatment is most successfully employed—*i.e.*, simple, single blow, or tear fractures without wide separation.

2. Subcutaneous, peripheral circumferentiation of the patella by a purse-string wire suture. This has its main application in blow fractures which are simple, are extensively comminuted, and are unattended by rapid and great joint distention. Such fractures are rare. This method brings into apposition the broken fragments without endangering their vitality.

3. Free incision and direct bony suture of the patellar fragments, and suture of the torn ligaments on either side. It should be practised as soon as possible after the injury. It enables the surgeon to clean the joint cavity thoroughly, to suture the torn tendons, and to bring the patellar fragments into exact apposition, thus assuring bony union. The patella should be so drilled that the wire does not pass through the cartilage, but gets a fairly good grip on the bone. The whole operation can be completed in less than fifteen minutes. The wound is closed without drainage, and the joint is kept quiet for ten days, after which massage and gentle passive motion are begun, and the patient is allowed

to walk with a back splint. In six weeks the splint can be entirely removed.

The author summarizes the choice of treatment as follows:—

1. The conservative treatment of fracture of the patella is applicable to blow or tear fractures in which the separation of the fragments is not greater than one-half inch, when the knee is flexed to a right angle, and in which there is no great joint tension.

2. All fractures of the patella, independent of the amount of fragment separation, attended by marked and immediate joint tension, should be treated by the open method.

3. All fractures of the patella in which the fragments are separated more than one-half inch, when the knee is bent to a right angle, should be treated by the open method; the torn tendinous expansions of the quadriceps being closed by mattress suture, and the patellar fragments being united by silver wire.

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## GYNÆCOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynæcologist Toronto Western Hospital;  
Consulting Surgeon Toronto Orthopedic Hospital.

### CARCINOMA UTERI.

Dr. Jno. C. Murphy, of St. Louis, in writing on the above subject in the January 30th number of the *St. Louis Medical Review*, says:—

Carcinoma of the uterus is not necessarily a disease of middle life. This fact should be borne in mind constantly, as it is well known that a prompt recognition of the early stage of cancer is necessary to the saving of life. The younger the patient, the more rapid the destruction.

The pathologist, with his microscope, is our main reliance for an early diagnosis.

Kelley reports a case at the early age of 31 years, but says the greatest number occurs between 40 and 45 years of age. In cancer of the body of the uterus, Kelley reports a case at 30 years of age, while here the greatest number occurs between the ages of 50 and 55 years. Dr. Murphy reports one case of cancer of the cervix in a patient only 25 years old. In fifty cases of epithelioma of the cervix, in every instance the patient was married, and forty-nine of them had borne children. Kelley has only seen three cases of cancer of the cervix in his entire experience in nulliparous women, and in one of the cases the cervix had been forcibly dilated.

Statistics teach us valuable lessons in prophylaxis. It will be seen



that cancer of the cervix is essentially a disease of married women. Pregnancy and the trauma of labor play an important part in the after production of cancer.

He is fully convinced that if the obstetricians would take more care in the after treatment of their cases, and have all injuries to the pelvic floor and cervix properly and promptly repaired, carcinoma of the cervix would be much less frequent than it is to-day.

The reviewer makes it a rule to ask all his obstetric patients to come to his office in 6 or 8 weeks after delivery that he may determine the exact position and condition of the uterus.

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#### HOW TO SELECT, FIT, AND INSERT A PESSARY.

In the October number of the *Medical Critic*, Dr. A. Ernest Gallant writes on the above subject as follows:—

Of pelvic ills from which womankind suffer, uterine displacements outnumber all others, not only in frequency and as a source of misery, but also as the most obstinate and difficult to cure. We may relieve them, but a positive cure, anatomic and symptomatic, can but rarely honestly be promised, either by mechanical or operative means.

It is a mechanical impossibility for a normally anteverted uterus, as it bridges over the vaginal outlet, to prolapse. But when the uterus becomes retroverted, it resembles a wedge, the apex pointing downward, then the intra-abdominal pressure applied to its base (the fundus) gradually drives it downward toward the vulva.

The diagnosis of displacement of the uterus can be most easily determined by digital examination.

Next ascertain the degree of uterine mobility. In most acute cases a displaced uterus can be easily replaced, held in position by tampons, later by pessary, and after a few months will remain *in situ* without support. In cases of old standing displacement, even though the organ is readily replaced and retained by support, it will shortly resume its abnormal position after the support is removed.

When carefully conducted efforts toward releasing an adherent uterus fail to secure the desired results, or when pus tubes, ovarian or broad-ligament cysts or other neoplasm are present in the pelvis, lifting efforts are positively contra-indicated, and the use of pessaries must not be attempted, but persistent use of ichthyol-glycerine tampons will give comfort and defer operation.

Having intelligently selected the case, and by preliminary local treatment eliminated all tenderness, the successful use of a pessary will

depend upon the good judgment displayed in selecting one of appropriate style and size.

In nulliparous married women, the Hodge or Albert Smith pessary answers all purposes, also for virgins. Women who have borne children, who have a relaxed pelvic floor, a lacerated perineum with more or less rectocele and vesicocele, require a pessary which has been widened and shortened, and possesses a less acute angle. Some with extreme relaxation of vulva must be supplied with a round, solid rubber ring, or a hollow, hard or soft rubber pessary.

To determine the size and shape of a pessary, introduce two fingers within the vagina (the patient being on her back), and note the width of the posterior portion of the pubic arch. Separating the fingers, ascertain the width of the mid-vaginal canal, also the length of the vaginal canal from the pubic arch to the apex of the posterior fornix, when the cervix is pushed backward and the fundus lies forward, and decide upon the proper curve while the uterus is held in the desired position.

Solid hard rubber pessaries may be moulded into almost any shape if placed in boiling water for one or two minutes, and then pressed into the shape desired, and at once plunged into cold water.

To insert a pessary: (1) introduce the index finger of the left hand within the hymen and draw the perineum well backward; (2) hold the pessary by its broader end between the thumb, index and middle fingers of the right hand, introduce the pessary sideways two-thirds of its length through the vulvar slit, relax the hold on the lower end, and, with the right index finger against the upper bar, carry the pessary along the right vaginal wall and rotate it posteriorly, so that the cervix slips within the upper end.

When the pessary is in position, the vaginal wall should never be tense, the lower bar must lie just behind the symphysis, invisible at the vulva, it should be somewhat movable up and down, and free from discomfort during coition, and the wearer must not feel conscious of its presence. It should be removed frequently and the vagina examined for pressure points, also for the purpose of cleansing the instrument.

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#### A NEW METHOD OF CLOSING THE ABDOMEN.

Higgins, in the *Boston Medical and Surgical Journal*, describes his particular method of closing the abdominal wound, and also gives his objections to both the layer suture and mass suture methods in vogue. He first introduces mass sutures of silkworm gut which remain untied. Then the peritoneum is closed by a running suture of fine unchromicized

catgut, the fascia by twenty-day chromicized gut, and the skin with a subcuticular suture of fine silkworm gut or horsehair. The mass sutures are then tied over a metal guard, which is separated from the abdominal wound by gauze. This guard, the author's special feature, is a plain piece of thin metal, the object of which is to prevent the mass sutures from cutting through the skin.

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## X-RAY THERAPY AND SKIAGRAPHY.

Under the charge of JOHN McMASTER, B.A., M.D., C.M., Toronto.

### X-RAYS AND RADIUM RAYS COMPARED.

In the *Boston Medical and Surgical Journal* of February, Dr. Francis H. Williams makes a comparison between the uses of x-rays and the rays from the salts of radium in both medical and surgical cases. The diagnostic uses of the x-rays are enumerated. They aid the surgeon in determining the location and nature of fractures, diseases of bone, the location of foreign bodies, the presence or absence of most varieties of calculi in the bladder, ureters and kidneys, and the presence of calcareous deposits in glands. In medical diagnosis they are of even greater value. Aneurisms of the aorta in the early stage can be detected more certainly than by any other means. Growths in the mediastina, the size and position of the heart, central pneumonias, fluid in the chest, and the extent of the movements of the diaphragm are clearly shown by the fluoroscope. The presence of foci of tubercular deposits in incipient phthisis can be recognised by the skiagraph before there are any definite physical signs. He emphasizes the value of this. It enables the physician to place his patient early in the most favorable position for recovery, thus often greatly shortening this period in successful treatment.

The therapeutic uses of the x-rays are referred to as being manifold. It will relieve the pain of intercostal and other neuralgias, as well as that due to cancer. Chronic skin diseases of almost all varieties are cured by their use. Superficial growths and skin cancers, especially face cancers, are removed with but little scarring. Lupus in all its forms, whether of recent occurrence or after many years of ravaging, can be exterminated rapidly.

The rays of the radium salts are of three varieties, classified by Rutherford as alpha, beta, and gamma. The alpha rays are very readily absorbed, and cannot be used for skiagraphing. The beta and gamma rays, when used jointly, produce radiographs which are wanting in detail; they show no differentiation between the tissues. The gamma rays alone are possessed of much penetrating power. They show some indication

of the bones, but the results are far below those obtained by the x-rays. The time required is also many thousand times that needed for taking a skiagraph by the x-rays. In fluoroscopic examinations the gamma rays will show the presence of pneumonia or pleuritic effusions. The beta rays ought to be cut off by an aluminum screen, otherwise there is great danger of burning the patient, the beta rays being transformed in the surface tissues. It is, therefore, only in the field of therapeutics that we look for radium salts to be of value. The radio-activity of the radium salts is estimated by comparing it with that of uranium as a unit. The weaker specimens of radium salts, which are easily obtained, range in radio-activity from 1,000 to 8,000 or much higher, but the pure radium salts, which can be had with difficulty, have a radio-activity of 1,500,000.

The use of the weaker salts has been abandoned as inefficient. He used the pure radium bromide in 50 cases, in amounts varying from 10 to 100 mgm. They were mostly all skin diseases. One of acne was cured by radium. Two cases of psoriasis were treated in certain areas by radium, and in others by x-rays for purposes of comparison. Healing took place much more quickly in the parts exposed to the radium. Five cases of lupus vulgaris were treated, two being cured and the others are doing well. In one of these cases a comparison was made, as above, and again in favor of the radium rays. The same was true of one case of keloid. In two cases of eczema, the radium rays failed and the x-rays were applied. Four out of five cases of rodent ulcer have healed. In the fifth case, which was very extensive, the x-rays were effective in curing a recurrence, after an operation, but later an extensive recurrence developed which the x-rays did not, and which the radium rays may not, heal. But the radium has checked the growth of the rodent ulcer, and arrested the rapid loss of strength of the patient. Here the radium appears to be the more efficient. Half of the twenty-eight skin carcinomas have healed, and thirteen are still under treatment. Out of four breast cases, three were recurrences after operation. The radium diminished the indurations in the scar or neighborhood, and appeared to be more effective than the x-rays.

In some cases the radium rays acted as an analgesic.

It is evidently the beta rays which play the greater part in the healing process, rather than the gamma, although the latter may contribute. The gamma rays, even on long exposures, produce no irritation, whereas the beta rays may do so after one minute's exposure. Burns result from radium rays as from x-rays, and they are said to be very difficult to heal. Patients vary in susceptibility to the effects of radium salts, and the dose must be gauged to suit the individual.

## OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. Sterling Ryerson, M.D., C.M., Professor of Ophthalmology and Otology, Medical Faculty, University of Toronto.

## THE MODERN MASTOID OPERATION.

Macleod Yearsley, F.R.C.S., has an interesting article in the *London Medical Times*, on "The History and Development of the Mastoid Operation." The operation, he says, is quite a modern procedure in surgery. It is one of those great advances in surgery which we owe to the last quarter of the 19th century; for, although the simple opening of the mastoid antrum may be assigned to a much earlier date, the complete operation is a development of the last ten or fifteen years. Historically, the first operation was performed by Riolanus, in 1649, who suggested it for the relief of obstruction of the Eustachian tubes, but the earliest mention for evacuating pus was in 1750, by Petit. Until 1791, opening of the mastoid was in vogue for the relief of deafness; but bad results caused it to fall into disrepute. In 1792, Arneman, of Göttingen, laid down the following rules for the opening of the mastoid.

1. In cases of absolute deafness which is progressive and otherwise incurable.
2. In caries and collection of pus in the mastoid.
3. If the normal mucous secretion has become hardened or collected in excessive quantity.
4. In persistent pain and noise.
5. In Eustachian obstruction, not remedied by injections.

It was not, however, until 1860, nearly seventy years later, that Toynbee wrote that, although he had never performed the operation, he would not scruple to do so where life was concerned. About the same time Forget and Von Tröltsch spoke in its favor, and between that date and 1870, successful cases were published by Hinton and others. Schwartze, of Halle, was really the first to elaborate the technique and indications for the operation. Since Schwartze's first communication of fifty-nine cases progress has been rapid, but it was not until 1897 that Stäcke published the monograph which detailed his method. Hence has arisen the "Schwartze-Stäcke" complete post aural operation. Latterly, it has been further improved by skin grafting the cavity, by Ballance.

The operations in vogue among modern otologists are two, viz: (1) Simple opening of the antrum; and (2) The complete post aural operation, which consists in throwing the meatus, tympanum, attic and antrum, into one large cavity, lined with epithelium obtained by means of flaps cut from the cartilaginous meatus, supplemented with skin grafts. Yearsley describes the indications for opening the mastoid as follows:—

A.—Acute cases. (1) Acute middle ear suppuration, with mastoid involvement. (2) Influenzal mastoiditis. (3) Acute middle ear tuberculosis.

B.—Chronic cases. (1) Caries of the tympanic walls. (2) Recurrent attacks of acute or subacute mastoiditis. (3) Mastoid fistula, leading to carious bone. (4) Cholesteatoma. (5) Meatal hyperostosis. (6) Obstinate mastoid neuralgia. (7) Chronic middle ear tuberculosis. (8) Protracted suppuration resisting other forms of treatment. (9) Vertigo occurring in course of middle ear suppuration. (10) Facial paralysis, occurring in course of middle ear suppuration. (11) Necrosis. (12) Bezold's mastoiditis. (13) As a preliminary step in operations for intracranial complications. In acute cases, the simple or Schwartz's operation is performed.

In ordinary cases of suppuration in antrum, the simple opening is sufficient to give relief to the symptoms. In the influenzal mastoiditis, the process may be so rapid and severe as to destroy the whole mastoid and middle ear. Unfortunately, partly from non-recognition of the destructive nature of the disease, and partly from the patient's repugnance to an operation, many cases are allowed to proceed until a complete post aural operation becomes necessary.

In chronic cases a simple opening is not sufficient; the most thorough eradication of the disease is necessary by the Schwartz-Stäcke method. The grafting requires, in most cases, a second operation, to which patients decidedly object. It is, therefore, necessary in many cases to graft at the time of the first operation, even though the results are said not to be so good. In the case of young subjects and large cavities, Yearsley prefers to graft.

#### ENUCLEATION AND ITS SUBSTITUTES.

This question is discussed by Harold B. Grimsdale, F.R.C.S., in *The Medical Times* of December 19th, 1903.

Grimsdale states that it is called for not only on account of disease, which might by extension endanger the patient's life, but much more commonly to prevent the possibility of the loss of the uninjured eye by sympathetic inflammation.

The fear of sympathetic ophthalmia has, no doubt, often caused surgeons to excise eyes which might have recovered some degree of vision; but it cannot be doubted that it is better to sacrifice a badly damaged eye than run any risk of total blindness. The treatment of sympathetic ophthalmia is so uncertain, and the prognosis is so bad that it cannot be wondered at that patients are often pressed to submit to immediate removal.

But if we are to avert the loss of both eyes, we must endeavor to minimize the resulting deformity; hence, enucleation as a simple operation is gradually losing ground, while some other substitute is taking its place.

The disadvantages of enucleation are entirely connected with the after results. It is easy of performance, is almost free from risk and requires little time for recovery. The deformity which follows arises from the shrinking of the parts, while the upper lid falls back into the orbit and movement of the artificial eye is restricted. The vacant, staring look is very noticeable, the secretions roughen this artificial eye, which gives rise to chronic conjunctivitis. Lastly, this perpetual irritation gives rise to chronic inflammatory changes in the subconjunctival tissues and capsule of Tenon. When a simple enucleation has been performed the surgeon may be asked to remedy the resulting difficulty. Three methods are open to him: 1. He may attempt to improve the existing stump by dissecting up a pocket of tissue and inserting a glass sphere. This may improve appearances but not movement. 2. An almost similar effect may be obtained by using Snellen's "reformed" eye. 3. By wearing a convex glass before the eye, the eye may be made to appear more prominent. None of these devices are entirely satisfactory.

Evisceration was first employed by Frohlich in 1881. The cornea is excised and the interior of eye scraped out. The tissue shrinks to a button.

Mule, in 1884, proposed to place a glass sphere in empty sclerotic and thus make a prominent stump of empty sclerotic. In some 30 per cent. of the cases the sclerotic eventually gives way and the glass ball works out. Fox, of Philadelphia, advised cutting cornea across instead of excising it. The results have been much better under this method. The length of convalescence is a serious drawback, but the movements of the eye are very good.

The other method was suggested by Frost, in 1885, and is now much used—and is called implantation. The eye is excised in the ordinary way; immediately afterwards a glass sphere (may be of gold or silver) is placed in the hollow of the capsule of Tenon and is stitched in. The results are fairly good. Reaction less than Mule's operation and convalescence shorter.

Lately it has been proposed to inject parafin into the capsule of Tenon. This has been done with fair success.

Some continental surgeons have tried the transplantation of the rabbit's eye but without success.

Such are the substitutes for enucleation.

## LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY E. GOLDSMITH, M.D., Belleville. Fellow of the British Laryngological, Rhinological and Otological Society.

### POST-MORTEM OBSERVATIONS ON TUBERCULOUS DISEASE OF THE LARYNX.

Dr. Jobson Horn makes the following statements with reference to tuberculous disease of the larynx:—

1. When the larynx is infected with tubercle, the disease is already established in the lungs.
2. That by the time the disease in the larynx has advanced to ulceration, the disease in the lung has advanced to cavitation.
3. When the disease in the lung is confined to the pure miliary form, the larynx is never infected.
4. The infection of the larynx is from the sputum.

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### A CASE OF MUCOCELE OF THE FRONTAL SINUS.

Morani, in the *Journal of Eye, Ear and Throat Diseases*, gives symptoms referable to the eye as ptosis and displacement of the ball downwards and outwards. The eye was not impeded in its movements except above D.V. = 20/200. The disk showed a beginning neuritis. Palpation disclosed a tumor at the roof of the orbit. The swelling was non-movable, appeared adherent to the periosteum, and was hard. Retrobulbar neoplasm was diagnosed. Incision was followed by the escape of a coffee-colored muco-colloid substance. The tumor was directly connected with the frontal sinus through its inferior orbital wall. After treatment of the sinus all the eye symptoms subsided.

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### THE TREATMENT OF ADENOID VEGETATIONS.

Dr. John Winslow, in the January number of the *Journal of Eye, Ear, and Throat Diseases*, has a very practical paper on this subject. The question as to the advisability of removing adenoids whenever present, is discussed at length. He does not favor removal if the mass is small and producing no symptoms. If on the contrary the growths are found to interfere with any of the physiological functions of the parts concerned, our duty is to remove them, else irreparable damage ensues. A statement of far-reaching importance is made. In cases of adenoids, associated with even slight retraction of the membrani tympani, with or without noticeable dullness of hearing in early life, there will certainly be some impairment of this function in middle life. A large proportion of cases of dullness of hearing occurring in middle life is due to post-nasal catarrh from neglected adenoids in youth, of which the



remains may still be present in the naso-pharynx. The author draws attention to a frequent mistake—diagnosing and even operating on a subacute congestion of the lymphoid tissue of the naso-pharynx of catarrhal origin. This subsides under astringent treatment alone as a rule, while true hypertrophy always requires operation.

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#### THE RELATIONSHIP OF DISEASES OF THE BRONCHI AND LUNGS TO THOSE OF THE NOSE AND THROAT.

Thomas, *Southern Californian Practitioner*, points out that catarrhal affections, for instance of the upper air passages, are not limited to a circumscribed area; they display on the contrary a peculiar descending character, beginning in the nose as an acute rhinitis and invading at certain definite intervals the pharynx, larynx and bronchial tubes. The importance and desirability of proper nasal breathing is fully explained, and the evil effects of mouth breathing shown. Diseases of the lungs may own their origin to direct extension of disease of the upper air passages, as for instance, chronic bronchitis may result from chronic atrophic catarrh or from suppurative processes in the nose, its accessory cavities, or the post-nasal space. Under such circumstances the bronchitis may prove very obstinate, especially if pus trickles down from the naso-pharynx into the deeper air passages and sets up a chronic irritation which may extend to the trachea, bronchi, lungs, or pleura. On the other hand purulent disease of the lower air passages may set up a chronic laryngeal or pharyngeal catarrh, the intensity of which is in direct proportion to the amount and consistency of the expectorated material, and to the amount of effort required to expel it. Mention is also made of the paralysis of the recurrent laryngeal nerve due to enlarged glands from lung disease.

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#### THE IMPORTANCE OF EPISTAXIS IN THE DIAGNOSIS OF NASAL DIPHThERIA.

Jas. H. McKee, *The Therapeutic Gazette*, in a paper on this point insists that tinging of the nasal discharge with blood is not exceptional in nasal diphtheria, but is the *rule*. Nasal diphtheria may or may not cause severe systemic disturbance, though when confined to the posterior nares, it usually severely prostrates the patient. The author cites several cases in which there were supposed to be foreign bodies in the children's nostrils, since there was unilateral discharge with obstruction, which on examination proved to be cases of nasal diphtheria. McKee asks the acceptance of the following views:—

1. The slight staining of the nasal discharge with blood, either in subacute or severe nasal diphtheria, would seem to be due to the *severity*

of the local process. The nasal mucous membrane, highly vascular as it is, bleeds upon very slight provocation.

2. The slight or moderate hemorrhages which may occur in more acute cases are probably dependent upon the toxemia.

3. The alarming and even fatal hemorrhages observed in severe diphtheria are always dependent upon the profound toxemia.

4. Nose-bleed is a symptom of much diagnostic value, for it may suggest the possibility of nasal diphtheria.

#### THE CONNECTION BETWEEN TUBERCULOUS GLANDS AND THE TONSILS.

Dr. Havilland Hall, in a discussion on the upper respiratory tract as a source of systemic infection, has the following to say on this question: "Until recent years it was generally believed that the tonsils were but rarely affected with tuberculosis, and then usually only superficially as the result of extension from pharyngeal tuberculosis, but Dr. Hugh Walsham has shown that out of 39 consecutive post-mortem cases the tonsils were found to be more or less tuberculous in 20. The examination of enlarged tonsils and adenoids removed during life has not had equally marked results. The discovery of the liability of the tonsils to tuberculous infection has thrown quite a new light on the subject of tubercular disease of the cervical glands, and emphasizes the importance of removing enlarged and honeycombed tonsils, by means of which all kinds of noxious germs may enter the system. The tonsils probably become infected by tubercle bacilli in children who crawl about and get their hands covered with dust and dirt, and then infect themselves by sucking their fingers. Sucking dirty toys is another source of infection. Some bacilli may gain access to the tonsils in swallowing tuberculised milk, or, in respiration, the air containing the bacilli may deposit them on the surface of the tonsil. The potentiality of the tonsils as a source of tubercular infection is great. Not only are the faucial tonsils the seat of primary infection by the tubercle bacillus, but also the pharyngeal tonsil may be the part first affected.

It has been shown that pulmonary tuberculosis is essentially a "filth" disease, that is, that it depends on impure air. The aerial dangers are three in number: first the presence of tubercle bacilli, without which, of course, tuberculosis could not arise; second, dust in the air; and thirdly, gaseous impurities. Dust in the air, especially minute fragments of mineral matter, by damaging the epithelium of the air passages, allows a point of entrance to the bacilli, and gaseous impurities, especially carbonic dioxide, by diminishing the protective power of the lymph glands, favor the growth of the bacilli.

## PROVINCE OF QUEBEC NEWS

Conducted by MALCOLM MACKAY, B.A., M.D., Montreal

Dr. R. Tait Mackenzie read a paper and gave a demonstration at the Montreal Medico-Chirurgical Society, upon the relation of the thoracic type to the lung capacity. He stated that there were two well-marked types of chest: first, the broad and flat thorax, typical of the vaulter, jumper and hurdler; second, the round barrel-shaped thorax found in the wrestler, swimmer and boxer. A large number of people occupied an intermediate position, as the two types gradually merged, but nevertheless the majority could be classed according to the relation between the breadth and depth diagrammatically represented by a rectangle. A fair representation of the classes would be given by rectangles 12.3 ins. by 6.2 ins. and 9.7 ins. by 8.5 ins., the capacities being 260 and 265 cub. ins. respectively.

Before proceeding to give the results obtained by measurement, Dr. Mackenzie illustrated the mechanism of respiration by using as model a student who had the splendid expansion of eight inches. In this way he was able to demonstrate very clearly the elevation and outward rotation of the upper ribs, as well as the raising of the upper end of the sternum, and the rotation of the ribs on their long axes.

The lecturer then went into the question of lung capacity in relation to the type of chest, basing his statements upon observations of 500 students, candidates for athletics at McGill University, the observations having extended over a period of six years and not taken with any definite object in view. The following seven measurements were taken in each case:—

1st. The depth of the thorax quiescent, at nipple line, measured by calipers.

2nd. The breadth of the thorax quiescent muscles relaxed at same level, measured from behind with sliding calipers. The relation of these two measurements gave the thoracic index, the average being 68 per cent.

3rd. The girth of the chest in forced expiration above the nipple line.

4th. The girth of chest in forced inspiration above the nipple line.

5th. Girth of thorax in expiration below the pectoral line.

6th. Girth of thorax in forced inspiration at same level.

7th. The capacity of the lungs by the wet spirometer in cubic inches.

A table was made containing all those whose thoracic index was above 68 per cent. Out of the 500, 94 such men were found with an

average of of 259.3, or 7.7 cubic ins. above the average capacity of the whole 500. A second table, containing those whose index was below 68, had 58 names, and the capacity was found to be but 243.7, or 7.9 cubic ins. below the average of the 500.

The men were selected as types of their classes, and their weight differed only by a pound, and their height (sitting) by a fraction of an inch.

Looking at the question from an æsthetic point of view the lecturer found that the measurement of a number of the finest Grecian statues, representative of the highest ideals of manly beauty, were very distinctly of the deep thoracic type, as for example the Hermes of Praxiteles, which had an index of 79.

Drs. Birkett and Nicholls reported the very rare condition of otomycosis, due to *aspergillus glaucus*. The patient, æt. 40, had complained of deafness for three months. Thinking it due to wax, he had been using injections by a syringe, but as the itching and tinnitus became intolerable he consulted Dr. Birkett. Examination showed that the man was practically deaf in one ear—namely, hearing of “watch on contact.” Inspection showed a dark mass of dirty epithelium in the auditory meatus, covered with a layer of dark greenish substance which looked like mould. Removal and microscopic examination showed it to be an *aspergillus* of some nature, and it was handed over to Dr. Nicholls for further investigation. The ear was treated with alcohol and boric acid with rapid relief from all the symptoms, and now some three months later there has been no recurrence.

Dr. Nicholls reported that the mould submitted for examination was placed on various media of which potato was the best. At first the growth presented a whitish appearance, but later became green. The mycelium and sporangium were also found to be typical of the *aspergillus glaucus*, a very fine specimen being placed under the microscope for demonstration. A specimen of *aspergillus nigricans* was also shown for the sake of comparison with the *glaucus*. On testing the pathogenicity of the mould, Dr. Nicholls was surprised to find that contrary to the accepted view a rabbit was killed within 48 hours of an injection with an emulsion of the *aspergillus*.

The mycelium was found in the liver and other organs in distinct patches, and the mould was recovered and cultivated from these metastatic growths. As far as the literature could be examined no other case had been reported in America, and but one, rather indefinitely, in Europe, although the *nigricans* had been frèquently noted.

Drs. Buller and Beyers exhibited a number of specimens of pathological conditions of the eye preserved according to the Greff method.

Dr. Beyers emphasized the simplicity of making the preparations and their permanent character.

Dr. Elder reported a case of acute intestinal obstruction following syphilitic ulceration of the ileum. The patient was a laborer, æt. 23, admitted to the Montreal General Hospital, August 20th, 1903, for ulceration of the left eyelid. A few hours after his admission he developed acute abdominal symptoms with sharp pain at the umbilicus shortly after going to stool, and accompanied by rectal tenesmus and nausea. The abdomen was distended and rigid on examination, although tenderness was not marked. There was no vomiting, but the patient was becoming rapidly worse. Operation with a median incision was at once carried out. Some fluid was found in the abdomen and the colon was collapsed. The appendix was normal, as well as the Peyers patches, and no glands were enlarged. Two and a half feet from the ileo-cæcal valve the omentum was adherent to the bowel, and above this point the gut was distended and apparently full of blood.

A firm nodular mass could be felt in the bowel, and a resection was done with end to end anastomosis. The abdomen was closed with drainage. On examination of the resected part an old ulcer was found at the mesenteric attachment with an eroded area; a hemorrhage had occurred beneath the mucosa, and this together with the old scar tissue had been sufficient to produce sudden obstruction. The ulcer of the eyelid cleared up under potassium iodide and mercury, and some time later when the patient again came complaining of abdominal symptoms they at once ceased under specific treatment, which had in the meantime been neglected by the patient. These points, with a definite history of syphilis and characteristic appearance of the ulcer, were considered to be sufficient grounds for the diagnosis.

Dr. Alex. Hutchison read a long and very complete paper upon fracture of the patella with a report of seven cases. Five of these men were exhibited to the members of the society, and complete restoration of function was seen in all but one. This one had been treated by the non-operative method, and was unable to walk down stairs without holding on to the banister. The others had been operated upon by the open method with particularly pleasing results. X-ray photographs, before and after operation, were shown in each of the seven cases. Dr. Hutchison thought that his series was not large enough to draw any definite conclusions, but combining it with lists prepared by other men he thought that in the case of a man whose daily bread depended upon a sound limb the open method was best to follow, when all precautions could be taken for strict asepsis.

## MEDICAL SOCIETIES AND GATHERINGS

### TORONTO MEDICAL SOCIETY.

A regular meeting was held March 10th, 1904. Dr. Silverthorn, the President, was in the chair. Drs. Stuart and McKichan were proposed for membership. Dr. J. T. Duncan read a paper "Notes on Gould's Biographic Clinics," and Dr. Clarkson read a paper, "A Case of Puerperal Sepsis treated with Antistreptococcic Serum."

Regular meeting, March 24th, 1904. The President occupied the chair.

This meeting was held at the Toronto Western General Hospital. Drs. Stuart and McKichan were elected to membership.

Dr. Price Brown showed: (a) The case of laryngeal tuberculosis shown here a year ago. At that time he was cured and was working four hours a day, but now he was at work the full eight hours. The patient is still wearing the tracheotomy tube; (b) The case of nasal sarcoma seen here also a year ago. He is not entirely cured, as where the snare was used there has been some return, but none where the cautery was used; (c) A case of nasal synechia and the splint used. This was a piece of plain rubber, solid and smooth, such as is used for erasure purposes; (d) A case of antral disease and the rubber drain, which was made of soft tubing with ends rolled back to prevent its slipping in or out.

In the discussion, Dr. Todd asked if in case (a) there had been any other treatment than fresh air. Dr. Ryerson asked the present condition of the larynx. In reply it was stated that tonics and menthol spray had been used; the epiglottis was only half there, and that was bound down by adhesions.

Dr. B. E. McKenzie showed: (a) A case of Dr. Hooper's, age 70, fell down stairs into the cellar, sustaining a transverse fracture of the tibiae. These were put up in plaster splints and the patient allowed up and about; (b) A boy, 11, while tobogganing, struck a tree and had a fracture at the junction of the upper and middle thirds. Under anaesthesia it was found impossible to make it as long as the sound side. This was also put up in plaster.

Dr. Oldright remarked that the best dressing yet made to the shoulder and humerus was the Aikens splint. In the thigh he would hesitate before he would give up the weight and pulley where there was

never more than half an inch shortening; there was enough give in the cotton under the plaster to allow of shortening. Dr. Hay said that he had two cases to report with no shortening, and the plaster was much more comfortable. Dr. Carveth said that sometimes the plaster would not set. He asked why this should be. The President asked if any precautions were taken in putting on the plaster.

Dr. McKenzie said the Aikens splint was good. What was known as book muslin was the best for the bandage, and the plaster should be thoroughly dry.

Dr. T. S. Webster showed a woman from whom he had removed the ovaries, and showed them as specimens. They were cystic, and the operation had been by the vagina. The patient was sitting up on the second day.

Dr. Ashton Fletcher showed a woman, aged 67, who had lost the great toe of the left foot by gangrene, due to embolus. There was a condition of general arterio-sclerosis, and there had been two slight hemorrhages in the brain with partial paralysis, which had been absorbed to the extent that there was now no inconvenience. The separation had been secured, in the foot, without smell, by keeping the foot under a dressing of soap jelly, made from the soap known as the H. and H., which is alkaline.

Refreshments were served by the Lady Superintendent and a number of the nurses.

Regular meeting, April 13th, 1904. Dr. Bryans occupied the chair.

Dr. McPhedran reported a case of sero-pneumothorax.

Dr. Dwyer said that he had seen a case of pyo-pneumothorax, extending over a period of 10 years, with one side of the chest full of pus during that time; he had come into the hospital with a third attack of hemiplegia. Dr. Carveth asked what effect the condition would have in considering the question of an anæsthetic for surgical work. Dr. F. N. G. Starr asked the effect of an artificial pneumothorax for the cure of recurrent effusion. He reported three cases of benefit from this procedure. Dr. Rudolf said that cases of pyo-pneumothorax should be left alone until the pus gave rise to disturbance, as the tubercular processes were much more rapid.

Dr. McPhedran said that he would be very reluctant to give an anæsthetic. In regard to what Dr. Starr had said he related a case which had done well at first, but the trouble returned for three months and then gradually got well. Dr. Bower, of Liverpool, was injecting adrenaline successfully.

Dr. Dwyer reported a case of carcinoma of stomach with specimen.

## CANADIAN MEDICAL ASSOCIATION.

As previously announced through these columns the thirty-seventh annual meeting of the Canadian Medical Association will be held in Vancouver, B.C., from the 23rd to the 26th of August. Definite rates have been arranged for as regards points east of Port Arthur, and the General Secretary is in communication with the C.P.R. officials in Winnipeg regarding the latter, which when arranged will be announced in due time. Although the official circular from the railway companies has not yet been received it is expected that the date of sale of tickets will open on the 15th of August, and following days; the time limit will be two months, and will not be extended beyond that. Tickets will be sold only to delegates and immediate members of their families, on presentation of certificate from General Secretary of the Canadian Medical Association, and those who have not already done so should file their names with that official at an early date. Under the arrangements made tickets will be good going via Canadian Pacific direct, via Port Arthur or via Sault St. Marie, St. Paul, thence Soo-Pacific Route, Great Northern and Northern Pacific, returning same route or any other of the above routes. Returning, diversion can be made via St. Paul to St. Louis at an additional cost of \$10.00 and from St. Louis to Detroit, where travellers will rejoin either C.P.R. or G.T.R. to their homes according as tickets read. Should any wish on return journey to visit the Yellowstone Park they can do so on payment of the extra charge made for the trip through the Park from the junction with the Northern Pacific Railway. Later information will be forthcoming re this. No other arrangements have been made so far, but the General Secretary is in communication with the Union Pacific to provide for return via California, Salt Lake City, Colorado, etc. If these arrangements can be made they will be announced in due time. If any arrangements are made for special train these will be announced in due and proper time. The following gives an approximation of the rates from all points east of Port Arthur: Toronto, Brantford, Hamilton, Windsor, Chatham, London, Stratford, Guelph, Orillia, \$62.40; Montreal, Ottawa, Brockville, \$68.00; St. John, N.B., \$76.50; Halifax, via I.C.R., \$81.00; Sydney, \$83.70. Winnipeg and points in Manitoba, \$45.00, but full arrangements for this have not as yet been fixed. One certificate only will be required to be presented by delegate for his own use and the immediate members of his family, and those only who file their names with the General Secretary can be sent these certificates. The berth rate to Vancouver in each direction from Toronto and Montreal is \$17.00 and \$18.00 respectively. Mr. Mayo Robson is to be a guest of the Associa-



tion as well as Dr. J. W. Mayo, Rochester, Minn., and probably Professor Marmorek, who is to be the guest of Dr. A. J. Richer, Montreal, during the coming summer. In addition to this already a fine list of papers has been promised, titles and names of which will appear in future issues of this journal. Those contemplating attending should send in their names without further delay to the General Secretary, Dr. George Elliott, 129 John Street, Toronto.

#### ONTARIO MEDICAL ASSOCIATION.

The 24th annual meeting of the Ontario Medical Association will be held in Toronto, in the new Medical Buildings, Queen's Park, June 14th, 15th and 16th, 1904.

If you desire to read a paper, kindly forward the title to the Secretary by May 15th.

Papers must be in the hands of the Committee by May 31st.

Fifteen minutes are allowed for the reading of a paper. If too long to be read in this time an abstract may be presented.

An outline of the provisional programme includes the following list of papers:—Prophylaxis of Diabetic Coma, Dr. John Caven, Toronto; Uncertainties of Diagnosis and the Necessity of Early and Vigorous Treatment of Diphtheria, Dr. McMahon, Toronto; Anæmias more than Ordinarily Severe, Dr. Frank Trebilcock, Enniskillen; Modified Small-pox, Dr. Chas. Hodgetts, Toronto; Electro-Therapeutics, Dr. Lipsey, St. Thomas; Functional Heart Murmurs, Dr. Rudolf, Toronto; A Case of Landry's Paralysis, Dr. Hugh McColl, Milton; Inflammations of the Laryngeal Apparatus, Dr. G. H. Burnham, Toronto; A Discussion of the Subject of Life Insurance from the Standpoint of the Expectancy of Life in Conditions of the Various Systems, to be participated in by Dr. E. Ryan, Kingston; Dr. R. J. Dwyer, Toronto; Dr. H. R. Frank, Brantford; Dr. B. L. Riordan, Toronto; and, it is hoped, two physicians associated with large Insurance Companies in Canada; A Restatement of the Attitude of the Profession Toward Placenta Prævia, Dr. McIlwraith, Toronto; Myxomatous Degeneration of the Chorionic Villi, Dr. C. J. Hastings, Toronto; Occipito-Posterior Positions in Obstetric Practice, Dr. A. A. Macdonald, Toronto; Anomalies in Fœtal Development, with exhibition of specimens and descriptions of cases, Dr. J. Peters, Hamilton, and Dr. F. J. R. Forster, Caistorville; Clinic upon Diseases of the Skin, Drs. McPhedran and H. B. Anderson, Toronto; An Exhibition of the Methods of Intestinal Anastomosis, dealing especially with the Elastic Ligature, Dr. N. A. Powell, Toronto; Tumors of the Prostate Gland, Etiology, Symptoms and Pathology of, Dr. F. W. Marlow, Toronto, and Surgical Relief of, Dr. G. A. Bingham, Toronto; Lithot-

omy versus Lithotrity, Dr. Chas. B. Shuttleworth, Toronto; Thiersch's Method of Skin Grafting, Dr. Primrose, Toronto; Report of a Case of Congenital Dislocation of both Hips Treated by Lorenz Method and Exhibitions of Photos, Skiagraphs, and of Patient, Dr. H. P. H. Gallo-way, Toronto; Some Cases Illustrating Difficulties of Differential Diagnosis and Treatment of Tumors, Dr. Wm. Oldwright, Toronto.

Of the distinguished visitors who are to be present, Sir Frederick Borden will discuss "The Evolution of the Medical Department of the Militia of Canada and the Possibilities of its Future Development," and Sir Wm. Hingston will give a paper dealing with the subject of "Cancer." Papers are promised by the following gentlemen, but the titles have not yet been received: Dr. H. A. Bruce, Toronto; Dr. Hodge, London; Dr. Perry Goldsmith, Belleville; Dr. Elliott, Gravenhurst.

The Committee hopes to announce presently as guests of the Association the names of two of the foremost men in the United States.

A very pleasant feature of the meeting will be the tenth class reunion of 1894, Toronto University, under the presidency of Dr. W. J. McCallum. Between thirty and forty men already have signified their intention of coming to the city that they may conjointly meet as a class and attend the sessions. The yearly meeting of the Association ought to serve as a nucleus for many such reunions.

The Committee on Arrangements, notwithstanding the success attending the meeting of last year, promises a programme of entertainment that will be in keeping with the larger interest exhibited in the forthcoming meeting of this year. It is hoped every medical man in the Province who can get away from duty will be present.

The fusion of collegiate interests into one grand college, one of the largest on the continent, offers a special setting for the meeting of this year. Additional interest is due to the fact that the meetings will be held in the new Medical Buildings, where an opportunity will be available of seeing what has been accomplished in the advancement of medical education in the Province.

Communications should be addressed to Dr. C. P. Lusk, 99 Bloor St. W., Toronto.

#### TORONTO HEALTH MATTERS.

It was made clear at a recent meeting of the Toronto Board of Health that more rigid regulations respecting the inspection of rags was highly necessary. Dr. Sheard, Medical Health Officer, was instructed to confer with the Provincial Board of Health with a view to obtaining an enactment from the Government, providing for the disinfection of every bale of rags coming into the country. Dr. Sheard stated he was con-

ducting an inspection of the premises of all the rag pickers in the city.

The last two cases of smallpox which developed in Toronto were traced to rags which had been shipped to Toronto from New York, and it is the intention of the Health Department to take steps to guard against this danger in the future.

The contest for the chairmanship of the board, made vacant by the resignation of Wm. Bell, was between Ald. Dr. Harrison and Ald. Dr. Noble, the former being elected to the position. Dr. Harrison made a short speech, in which he paid a high tribute to the able services rendered the city by Dr. Sheard. The Medical Health Officer had done good work in giving the medical students clinics in smallpox. From this source fees amounting to \$125 has been collected.

Dr. Sheard stated that the new wing of the Isolation Hospital would be ready at the end of May. He purposed inviting the board and the members of the Provincial Board of Health to be present at the formal opening, at which luncheon would be served.

Dr. Sheard called attention to the woful lack of public lavatories, the only one maintained by the city being opposite the Post Office, on Adelaide street. He declared that the lavatories of the Toronto Railway Company were a standing disgrace. He was not sure that the department had jurisdiction over them, but some action should be taken in the matter.

Mayor Urquhart stated that the Board of Control had under consideration the advisability of making a recommendation to the Council in respect to placing public lavatories at different points in the city.

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#### ONTARIO HOSPITAL ASSOCIATION.

The annual meeting of the above Association was held in Toronto on 6th April. There was a large attendance, and many subjects of interest to the hospitals of the Province were discussed. It was agreed to ask the Government to pay the grant on patients from whom the hospitals receive \$3.50 per week or less; and also to recommend that hospitals advance the charge on private ward patients. The following officers were elected:—

President—Edward Gurney, Esq., Toronto.

Vice-Presidents—C. O'Reilly, Esq., M.D., Toronto; George Orme, Esq., Ottawa; B. W. Robertson, Esq., Kingston; Adam Beck, Esq., M.P.P., London; George Roach, Esq., Hamilton; H. Malcolmson, Esq., Chatham.

Secretary-Treasurer—J. Ferguson, Esq., M.A., M.D., Toronto.

Committee—M. O'Connor, Esq., Toronto; Robert McLaren, Esq., St. Catharines; J. H. Stratford, Esq., Brantford; A. Robillard, Esq., M.D., Ottawa; James McLauchlin, Esq., Owen Sound; T. L. Kenny, Esq., Sarnia; Robert Melvin, Esq., Guelph; T. Cochrane, Esq., Sudbury.

## UNIVERSITIES AND COLLEGES

### QUEEN'S UNIVERSITY MEDICAL GRADUATES.

Thirty-seven students have been granted their M.D. degrees by Queen's Medical College. Among the graduates are two negroes from Jamaica, who went there to complete their course and get a Canadian degree. Following is the list: Degree of M.D. and C.M., R. N. Bailey, Kingston, Jamaica; M. E. Branscombe, B.A., Picton; M. C. Brown, Bellview; J. S. Carruthers, New Glasgow, N.S.; J. C. Caskey, Tweed; A. K. Connolly, Kingston; T. J. Costello, Calgary; A. W. Delong, Gananoque; A. C. Driscoll, Trenton; A. D. Falkner, Williamstown; E. A. Ferguson, Kingston; A. A. Ferguson, Glen Water; J. V. Gallivan, Kingston; W. Gibson, Emerald; J. J. Gillespie, Morrisburg; J. R. Goodfellow, Kingston; J. A. Graham, Montreal; L. J. Gray, Kingston; L. W. Hopkins, Kingston; E. C. Kinkead, Kingston, Jamaica; A. J. Lalonde, Barrie; G. C. Leach, B.A., Fenelon; R. A. Lee, Port Hope; A. T. Munroe, Moose Creek; F. C. McCullough, Gananoque; H. A. McDonald, Sudbury; M. McGonigle, Newboro'; N. I. Pennock, Brockville; Miss Victoria Reid, B.A., Kingston; E. J. Robinson, North Williamsburg; S. H. Rutledge, Thomasburg; A. H. Singleton, B.A., Newboro'; N. Smith, Kingston; H. Tandy, B.A., Kingston; E. J. F. Williams, B.A., Brockville; C. S. Van Ness, Wolfe Island; J. M. Young, B.A., Bristol's Corners.

Medals and Prizes: In medicine—H. Tandy, B.A., Kingston. In surgery—William Gibson, Emerald. House surgeons—Wm. Gibson, H. Tandy, B.A., A. H. Singleton, B.A. Dr. Charles Clarke's prize in mental diseases—J. M. Young, B.A. Dean Fowler's scholarship, third year—A. C. Spooner, B.A., Latimer. McCabe prize in pathology—H. J. Williamson, B.A. Faculty prize, second year—E. Bolton, Phillippsville. Hayunga prize in Materia Medica—P. A. McIntosh, B.A., Dundela.

Queen's Convocation Hall was thronged at the medical convocation 8th April, at which Sir Sanford Fleming, C.M.G., the veteran chancellor, presided. After prayer by the chaplain, Rev. Eber Crummey, medals and prizes were presented. Dean Connell gave an address reviewing the session's work, and telling of future plans. This session the medical registration was 216, as compared with 201 a year ago. Of this number 37, or one-sixth, were art graduates. A valedictory address was given by Dr. M. E. Branscombe, B.A., captain of last year's senior rugby team. After the laureation ceremony, Prof. Cappon addressed the graduates. Principal Gordon also made a few brief remarks.

A feature of the proceedings was the presentation of a prize to E. W. Delong, Gananoque, by Dean Connell, who decided to follow out a scheme inaugurated three years ago by the late Principal Grant. The

prize is for the student whose moral standing is the highest. Graduates were asked to cast ballots for the purpose of choosing one among their number who they conscientiously thought would do the right thing at all times.

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#### UNIVERSITY OF TORONTO CONVOCATION HALL.

The proposed Convocation Hall for the University of Toronto will be the result of the active devotion of the Alumni Association. The sum of \$100,000 has already been subscribed, and it is understood that further private assistance has been promised which will enable the university to construct the building of stone instead of brick, as the plans contemplate. The alumni have attempted to combine utility and beauty. The sketch of the exterior speaks for itself. A few words about the interior are necessary. The hall is arranged in the form of an amphitheatre, in such a way that no seat is more than 60 feet from the centre of the stage, and every occupant can see perfectly the whole of the stage. The total seating capacity is 1,857. The ground floor, or inner circle, will seat 468. Rising from this all round is the outer circle, to seat 440. The first gallery will accommodate 364, and the second gallery 455. The platform will seat 120, and the special boxes ten more. On each side of the platform will be retiring rooms 34 feet by 23 feet, with all conveniences. On the ground floor there is a spacious foyer running from one end of the stage to the other at the rear of the outer circle, affording many entrances to that and to the inner circle, and off it will be a number of cloak rooms. The first gallery is really a continuation of the outer circle, and will give that impression from the stage. Around both galleries will be wide corridors, so that entrance and exit will at all times be easy. In the rear of the theatre proper will be a large hall, 118 feet by 50 feet, capable of seating 500 persons. It can be used for banqueting purposes or for meetings which are not large enough to require the theatre. There will be ample provisions for lavatories, cloak rooms, etc., and the whole building is designed on the best application of the most modern ideas.

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#### LONDON MEDICAL COLLEGE EXAMINATION RESULTS.

The results of the London Medical College examinations were announced a few days ago. Of the one hundred and odd pupils, Edward Spence, of Mossley, Township of North Dorchester, distinguished himself by capturing the gold medal in the final year. The medal is awarded to the student making the highest number of marks in the second, third, and fourth years, and the race was between Spence and Adrian J. Manard of Belle River. On the work of the second and third years, there

was a difference of only one point, but on the final year Spence did better. Manard takes the silver medal. It was the keenest contest in the history of the school. There are eighteen in the graduating class—a record number for the school—eight of the successful ones being Londoners. In the work in the first, second and third year London students did well, capturing three scholarships. The trio are:—Messrs. Rowntree, Hamilton and Danks. The graduates have yet to pass the Ontario Medical Council at Toronto. They are as follows: J. Agnew, Wingham; W. G. Anderson, Thorndale; G. M. Campbell, Belmont; J. G. Gunn, Ailsa Craig; W. H. Keen, St. Mary's; J. T. Lefever, Dunnville; A. J. Manard, Belle River; C. F. McGuffin, London; A. McMillan, London; D. McMillan, London; F. B. Patterson, Yarmouth Centre; J. H. Ross, London; A. W. Seighon, London; C. O. E. Smith, London; E. Spence, Mossley; H. G. Taylor, London; A. Turner, Southwold; J. A. Wright, London.

Gold medalist—Edward Spence, Mossley.

Silver medalist—A. J. Manard, Belle River.

Third-year scholarship—L. H. Rowntree, London.

Second-year scholarship—W. J. Hamilton, London.

First-year scholarship—A. J. Danks, London.

Honors—Fourth year, Spence, Manard, A. McMillan, Anderson, Turner, Wright; third year, Rowntree, Beer, Watson, Ewin, Glenn, Thomson; second year, Hamilton, Beal, Trottier, Grover, McQuaid, Holmes, Reid; first year, Danks, Milne, Holmes, Young, McKay, McVicar, Gray, MeBroom, Russell, Broome, Brown, Newell.

#### QUEEN'S MEDICAL APPOINTMENTS.

The following appointments have been made by Queen's trustees to the medical college: Professor of pædiatrics and associate professor of obstetrics and gynæcology, Dr. Wood; assistant professor of anatomy, Dr. Mylkes; professor of medical jurisprudence and toxicology, Dr. Williamson; senior demonstrator of anatomy, Dr. Etherington.

#### UNIVERSITY OF TORONTO MEDICAL EXAMINATION FEES.

There has been much dissatisfaction among the students over the recent advance in the examinations. The students have protested against the increase and sought redress, but without success. They claim that the fees have been increased without notice, and that the Trinity medical students are called upon only for \$5, whereas the University students have to pay \$14. In answer, it is said that due notice was given, and that the Trinity students are entitled to the lower fee according to the terms of federation.

# THE CANADA LANCET

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## EDITORIAL

### SOME POINTS IN APPOLINARIS WATER.

Some time ago the *Lancet* (London) published a lengthy article on mineral waters, and particularly on Appolinaris water. The *Lancet* remarks that the natural mineral waters possess greater therapeutic qualities than those that are artificially prepared. This may be due to radio-activity, as has been shown to be the case in some instances. These natural waters contain traces of salts that are not present at all in artificially prepared waters. There is also the formation of double salts under high pressure, a condition not realized in the artificial preparation.

Some of the mineral water dealers entered action against the Appolinaris company for selling a manufactured article and that the spring was a mythical entity. The action was dismissed; and, after the evidence was heard, the Lord Chief Justice said in confirming the decision of the magistrate, "I understand that the water and the combination of it with carbonic acid gas is the same when supplied to the public, as it is when it is drawn up from the spring."

The *Lancet* sent a special commissioner to examine the spring and the method of bottling, and to have analyses made of the water as it comes from the spring, and of that sold in the open market. The spring is near the river Ahr, a small tributary of the Rhine, midway between Bonn and Coblenz; notwithstanding that 30 million bottles are put up annually there is no diminution in the flow from the spring.

A full account is given of the methods of collecting the water, its physical qualities as it flows from the spring, and the bottling of the water. The water in the market is the same as that of the spring in all respects as to its composition and the gas, with two exceptions. In the first place, before bottling, iron is deposited; and in the second place, salt is added. It has been fully determined that if there is one gramme of salt per litre, the sulphates are not changed to sulphides. It is with this end in view that the quantity of salt is increased from  $3\frac{1}{2}$  to  $12\frac{1}{2}$  grains per pint.

All the samples taken from the open market yielded a constant composition on analysis, and only differ from the water of the spring in the two points mentioned; the loss of a trifling quantity of iron and the addition of 0.1 per cent. of salt.

The *Lancet* article concludes that it would be difficult to conceive in what way the bottling of the water could be improved upon. The taste of the water on the market is the same as that at the spring. Appolinaris water is a natural mineral water of great purity and distinct medicinal value. The *Lancet* Analyses are in substantial agreement with those of Virchow, Bischoff, Liebreich, Mohr, Hofmann, Odling and Frankland.

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#### THE INHALATION OF FORMIC ALDEHYDE IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

In the *Philadelphia Medical Journal* for 13th December, 1902, there appeared an article from W. G. Smallcross, Ph. G., M.D., of Elwyn, Penn, on "the treatment of pulmonary tuberculosis with formic aldehyde and a description of an inhaler for its practical administration."

The writer first directs attention to the defective nature of the methods of inhalation, and describes an inhaler which he had devised. The author cites the results of Vincenzo Cervello, who obtained much benefit in nineteen out of twenty-six cases by the inhalation of a medicated vapor containing formalin; of Huggard, who read a paper at the London Congress on Tuberculosis, in which he stated that the best agent in our possession was the vapor of formaldehyde; of Muthu, who uses formic aldehyde, either by vaporizing tabloids over a spirit lamp or by means of steam. He gives Green's formula: Formaldehyde, 1 fl. dram; glycerine, 4 fl. drams; water, 5 fl. ounces. This should be inhaled for ten or fifteen minutes, four times a day. He refers to Maguire's attempts to render the lungs aseptic by injecting intravenously a solution of formalin 1 : 2,000. As much as 50 c. c. of this solution may be injected in a day. Tomaselli and Hahn have each employed formalin with gratifying results.

The author employs the following formula: Forty per cent. commercial formaldehyde, and ninety-five per cent. alcohol, equal parts. Chloroform, creosote, oil of gaultheria, guaicol, etc., may be added to this when desired.

The following advantages are claimed for formic aldehyde: It is a gaseous agent, it is a powerful disinfectant, it is stimulant and non-toxic, it lessens the absorption of toxins, it reduces fever, and relieves nervous symptoms and night sweats.



Some years ago, Dr. Murrell, of London, spoke highly of the inhalation of formalin in some form. He recommended the plan of putting some of the solution on a bib under the chin.

Recently there has been perfected an inhaler known as the Max Duplex Inhaler. By means of this inhaler any formula containing formaldehyde can be administered in a very satisfactory manner. It produces a cloud of extremely fine vapor that can be inhaled to the remote capillary bronchial tubes and air cells. There is reason to hope for good results from the inhalation treatment of pulmonary tuberculosis, now that suitable appliances are at hand for the production of a sufficiently fine vapor in sufficient volume.

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#### THE SOLUBLE FERMENTS OF COWS' MILK.

Dr. Joseph Lesperance, of Montreal, has an article in the *Medical Record* for March 19th on the above subject. Dr. Lesperance is an authority on this subject, as he is one of the two who discovered the process of manufacturing Lacto-Globulin.

Milk is a complete food, as it contains the albuminoids, the fats and the sugars. It has been shown that an artificial composition of these constituents in the same proportion as is found in milk will not sustain life beyond a limited period. The constituent that is lacking in the artificial milk is an enzyme or unorganized soluble ferment. The absence of this explains why sterilized milk and sterilized foods have not fulfilled the general expectations of the scientific world. This fact induced many to return to good, natural milk. It was noticed that sterilized milk produced soft muscles in children.

The constituents which are destroyed when milk is raised to a temperature of 176° F. are the enzymes, those mysterious ferments which govern the equilibrium of the protoplasm. Every vital phenomenon seems to be dependent on these ferments, both in the animal and vegetable kingdoms. Animals kept in an aseptic atmosphere and fed on sterilized foods cannot live. The quantity and proportion of albumen, of carbohydrates, and of fats may be perfect, but that particular force which separates and disintegrates them into their ultimate terms of absorption no longer exists, and these food substances become inert.

Science has shown that though there are germs whose secretions are injurious to animal life, there are many others whose secretions are a direct benefit. Among these may be mentioned those that produce fine wines, good ciders, fragrant vinegars and savory beers.

The ferments that are found in milk originate in both the organic

cell and the bacterial cell. The former come from the gland cells that give rise to the milk, and the latter from the bacteria that get into the milk before it leaves the galactiferous ducts, or after it has been exposed to the air. The first set of enzymes is by far the more important. It became apparent to investigators that all the changes that take place were not due to bacteria. When chloroform or ether is added to milk the growth of bacteria is arrested, and yet in two or three days the milk will coagulate without an increase in its acidity. There must be enzymes not formed by bacteria.

Various carefully conducted experiments have proven that there are ferments in milk that are not accidental, but inherent in the milk itself. It has been determined by the writer of this article that cows' milk contains trypsin, pepsin, lipasic and oxidizing ferments, and a glycolytic ferment. The scientific value of these discoveries is very great, as they throw light upon the proper principles upon which artificial foods must be prepared in order that the milk may retain its nutritive properties.

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#### A TORONTO SANITARIUM FOR CONSUMPTIVES.

For some months there has been a good deal said in the public press upon the subject of a civic sanitarium for consumptives in Toronto. There is evidently some confusion upon the subject, judging by the tenor of these comments. The Anti-Consumption League is entitled to the credit for several things. In the first place it has done much to educate public opinion on the subject of consumption. In the second place, it organized the Canadian Association for the Prevention of Tuberculosis, with the Governor-General at its head. In the third place, it was instrumental in securing legislation that renders it possible for municipalities to establish sanitariums for consumptives. In the fourth place, it was due to the efforts of the League that the Toronto Council submitted a vote to the people asking if the ratepayers were in favor of giving \$50,000 to aid a sanitarium for the city. Fifthly, it was due to the League that the vote was in the affirmative. Finally, it was due to the League that the following conditions were proposed by the League, concurred in by the Medical Health Officer and City Solicitor, and agreed to by the Council in 1902:—

“The city shall be at no expense in connection with the sanitarium beyond the \$50,000 to be granted by the city, and the payment of \$2.80 per week for each patient sent thereto at the city's expense.

“The sanitarium shall be exclusively for residents of Toronto; it shall be within twelve miles of the city, with 50 to 100 acres of suitable

land; shall consist of an administration building, cottages and tents, to accommodate patients who have been bona fide residents of the city continuously for at least two years immediately prior to their admission, and shall have a wide-open door to consumptives in all conditions of life and in all stages of the disease.

"It shall not be a free sanitarium, as such would encourage pauperism, but those able to pay shall pay, and the poor shall be treated free of charge.

"The board of trustees shall consist of the medical health officer and eight other persons appointed by the council, four of whom shall be nominated by the voluntary contributors.

"The money to be derived from the city to remain in the hands of the City Treasurer, and if the sanitarium is proceeded with, one-half or more, as may be authorized by the City Council, shall be paid over to the trustees when a like amount has been paid to the trustees from voluntary contributions, donations, bequests, legacies, etc., and the balance of the \$50,000 is to be paid over in the sums of \$2,000, when a like amount is paid in from the sources above indicated."

From the above conditions, under which the vote was taken, it is perfectly clear that the money cannot be diverted to a dispensary. There must be a site of at least 50 acres. This clearly settles it outside of the city. There must be an administration building, cottages and tents, and these settle forever the idea of the money being used merely for a dispensary and clinic for tuberculosis in the negative. The money must be applied for the purposes for which it was voted, and no portion can be used until at least \$25,000 has been first raised by voluntary contributions.

This latter condition is very clear and important. When those interested in the work have secured \$25,000, the city must then advance \$25,000 of the \$50,000. The remaining \$25,000 is to be advanced in sums of \$2,000 as required for furnishing, etc., when similar sums are raised by contributions. The city thereafter only gives \$2.80 a week on its poor consumptives. The sanitarium must therefore be maintained, apart from the above, by the fees from paying patients and donations.

This does not add one penny to the expenses of the city, as \$2.80 would be paid to any institution taking care of a poor consumptive. The only outlay the city is at is the sum of \$50,000, and this is not paid over until as much is obtained by donations, bequests, etc. The city of Toronto never voted \$50,000 for a better purpose, nor under safer conditions.

Until the conditions, under which the vote was taken, have been en-

tirely changed, the idea of applying the \$50,000 for the establishment of a municipal dispensary and clinic for tuberculosis must be entirely set aside. It would be a complete disregard of the will of the people, and of the agreements entered into by all the parties concerned.

The vote was taken on a municipal sanitarium for consumptives, and that it be managed for the city by trustees appointed in a manner clearly defined when the vote was submitted. The money, nor any portion of it, cannot be given to any corporation or association unless all the above conditions are fully complied with. The \$50,000 can only be expended on a sanitarium, which must be outside of the city and governed by trustees appointed by the City Council.

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#### THE ONTARIO HOSPITALS, REFUGES AND ORPHANAGES.

The 34th Annual Report of the Hospitals, Refuges, Orphans' Homes, etc., for the year ending 30th September, 1903, has just been issued.

There are now fifty-nine hospitals, thirty-five refuges, thirty-one orphanages, three homes for incurables, two convalescent homes, and two magdalen asylums in the Province.

Many improvements in the hospitals are noted, in the form of additional buildings, bathrooms, better ventilation, etc. Attention is drawn to the fact that in some hospitals the public ward patients seem to be somewhat overlooked in the interest of the paying patients, and the tendency to elaborate private wards and expend too much money on them are pointed out. The Inspector is of the opinion that this in some instances might be avoided. In some hospitals there appears to be an actual or seeming neglect of which the charity patients have complained.

There are only two hospitals entirely under municipal management, namely, the Hamilton City Hospital and the General Hospital in London. Dr. Chamberlain does not approve of this method of government of a hospital and thinks that hospitals had better be under the control of a board of trustees. For one thing they are more likely to receive donations. He points out that though these two hospitals receive Government aid, they are not really entitled to aid, as they are wholly under municipal control.

The number of patients in the hospitals on the 1st October, 1902, was 2,410; number admitted during the year ending 30th September, 1903, 32,368; and the total number under treatment during the year, 35,912. These figures do not include those who received medicine and treatment as outdoor patients. The number of deaths during the year was 1,997, and the total number of days' stay of patients in the

hospitals was 882,200. The provincial grant to hospitals is \$110,000; total amount received from all other sources, subscriptions, donations, etc., \$152,597.83; average cost of each patient per day, 89 cents; percentage of provincial grant to total expenditure, 14 per cent.

There are some one hundred old people's homes, orphanages, magdalen asylums, convalescent homes and homes for incurables in the province, having a total population of over 9,000, and an annual expenditure of \$358,559. The provincial grant for the year amounts to \$75,577.59.

The number of days' stay in hospitals for which Government aid was allowed, was 640,184. The grant of \$110,000 distributed over this yields  $17\frac{1}{2}$  cents per day, for each patient from the hospital receives less than \$3 per week. It will be noticed that the grant remains stationary, while the number of hospitals and patients entitled to Government aid are steadily increasing.

THE CANADA LANCET has repeatedly directed attention to this state of affairs. The hospitals of the province are doing, as a whole, a truly provincial work, and should receive a large share of the provincial funds. It is not fair for the Government and the various municipalities to send charity cases into the hospitals and not send with them the means for their support. Dr. Chamberlain's report shows that 89 cents per day is the average cost of daily maintenance. The Government grant of  $17\frac{1}{2}$  cents, and municipal grants of never more than 40 cents a day, leave a heavy deficit on account of charity patients to be met from the other incomes of the hospitals. This deficit of about 30 cents a day on these patients seriously hampers the work of the hospitals in all their departments.

The Government at the recent session amended the law so as to permit hospitals to receive the Government grant on patients from whom the hospitals receive \$3.50 per week or less. This will improve the income of the hospitals very materially.

#### THE ONTARIO HOSPITAL ASSOCIATION.

The second meeting of this influential organization was held at the King Edward Hotel, 6th April, 1904. The organization meeting was held in Toronto in February, 1902. The larger hospitals are now members of the Association.

The objects of the Association are to regulate charges on patients so as to get the hospitals on a better business basis, and to use efforts to secure from the Government and municipalities a more liberal treatment of the charity patients in the hospitals.

It was pointed out that the per diem allowance from the Government is steadily decreasing. Last year it was  $17\frac{1}{2}$  cents per day, whereas this year it will not exceed 16 cents. When the Association interviewed the Premier, it was argued that the Government should fix the rate at not less than 20 cents per day for those entitled to Government aid.

It was also urged that the Government restriction of less than \$3.00 per week should be removed and made \$3.50 and less. This would enable the hospitals to collect from the various municipalities 50 cents a day as against the 40 cents now received. In this way the income on charity cases would be raised to 70 cents a day. This would better the situation materially, but would still leave these patients below the paying level, as Dr. Chamberlain's report points out the fact that it costs 89 cents per day to care for patients in hospitals. On another page will be found a full report of the meeting. The privilege to charge \$3.50 per week on charity cases has since been granted.

We commend the objects of the Association to the attention of the Government, the municipalities that are interested in hospitals, and the hospitals themselves. There is not a hospital in the Province that can afford to remain aloof from the Association.

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#### THE MUSKOKA COTTAGE SANATORIUM IN WINTER.

The attendance at the Sanatorium has largely increased, reaching now the greatest in the history of the institution, over 70 of the 75 beds being constantly occupied.

Muskoka has long been known as an ideal summer resort, but not till the opening of the Sanatorium and the publication of its splendid result has it been properly recognized as an excellent winter resort. There is every reason to think that during the next few years a great many people who now come to Muskoka for the summer, will change their visit to the winter season; or, dropping the summer vacation entirely, will take their holidays in the winter, when their business will allow them to do so.

The stimulating air of the north, with its bracing out-of-door sports, will surely soon be more attractive to the health-seekers than the more enervating climates of the south.

The present winter was in Muskoka, as elsewhere, unusually severe, and the snowfalls very excessive. This latter has meant rather a lessened amount of sunshine; but February had an excess of sunshine, and made a most enjoyable season in spite of the mercury ranging from  $10^{\circ}$  to  $30^{\circ}$

below each night, and often for many nights in succession keeping below zero.

Life in the Sanatorium was particularly pleasant last winter, most of the patients enjoying the out-of-door life and happy in the knowledge of returning health. A great deal of sympathy for the patients in their "comparative exile," as it has been termed by those unacquainted with our pleasures, has been misplaced by friends at home, who cannot fully realize what a good time most of those under treatment are enabled to have, without in any way interfering with their progress to health; indeed the winter sports are very important factors in the fight to improve the languishing powers of the body, and, by building up the system, insure a perfect cure. Those who through weakness are unable to take part in the various pastimes, never fail to secure a good deal of pleasure from watching what is going on about them, while snugly wrapped up in furs and rugs upon their steamer chairs on the wide verandahs looking out upon the winter woods and the stretches of snow.

In the early part of the winter there was good skating until abruptly terminated by heavy falls of snow. Then snowshoeing began, and for three months this has afforded a most beneficial form of exercise; while driving and sleighing parties proved a most agreeable form of diversion for all.

The toboggan slide, which is immediately in front of the Administration building, was a great source of enjoyment, both for those using it and for those sitting out on the verandahs, all of which affords an excellent view of the slide—the regulation run being occasionally varied by a race between the toboggan and the terrier "Tim," whose antics are at times, to say the least, highly amusing.

In the way of indoor entertainment there has been this year some exceptionally good talent among the patients, both musical and dramatic. The orchestra comprised three violins, 'cello, flute, cornet and piano. The billiard-room, with its open windows, were seldom without a game in progress, while the Projection Lantern, presented by Dr. and Mrs. Powell, using the slides kindly loaned and presented by the Toronto Camera Club, helped to fill in a number of stormy evenings very pleasantly. There has been presented a gift of a large-sized Columbus Phonograph from Dr. George Elliott, of Toronto, and this will afford still another means of adding pleasure to the patients. The library is gradually growing, now numbering nearly 700 volumes, and this, no doubt, will be constantly added to by friends.

Photography is becoming steadily more popular; and in searching

for the most beautiful of the many beautiful spots which nature has provided the patients gather health and strength.

Spring is coming, and instead of a glistening surface of white, there will be the verdure of nature's spring, heralded by the wild flowers which carpet the woods and many hillsides.

#### THE COST OF CONSUMPTION TO CANADA.

It is only when some questions are put into figures that their real importance becomes clear to the mind. It is safe to assume that 2,000 persons die of consumption per million of the population. Taking the population of the Dominion as 6,000,000, the death loss from this disease would be about 12,000 per year. About four times as many are ill as die. This would show that there are nearly 50,000 people in Canada ill with consumption.

The duration of the disease is practically four years on an average. The average age of those who die of the disease has been determined to be about 35. This leaves an expectancy of say 32 years which is lost to these persons and the nation.

If due account be taken of all those who die of consumption at the average age of 35, it will not be far wrong to state that their earnings will average \$300 per year. This average would cover the earnings from the domestic girl to the highly paid manager of a company.

As the average duration of ill health in consumption is approximately four years, it will at once appear that there will be a heavy loss in the depreciation of their working capacity each of these years. It would be fair to say that at least one-half of their working value is lost. This would reduce the value of each life from \$300 to \$150, or a loss of \$150 each year. This loss on 50,000 persons represents a total loss each year, on account of sickness, of \$7,500,000.

But when we turn to the loss to the country by the death of 12,000 persons at the average age of 35, and with the average earning capacity of \$300, we begin to see the vastness of the loss. The value of one dollar a year on each life at the average age of 35 is, according to the rate of interest selected in making the calculations, from \$15 to \$20. Assume the lower sum. It will be seen that with the annuity value of \$15, and each life worth \$300 a year, on an expectancy of over 30 years, the loss for each life is \$4,500.

With \$4,500 for each life and a death loss of 12,000 persons, the monetary loss to the country each year on these 12,000 deaths is \$54,000,000. Add to this the loss of \$7,500,000 on account of lost time through sickness, and the grand annual loss is \$61,500,000.



And all this due to a disease that is almost wholly preventable. Just look around and see the families that have been cut down, one after another, until three, four, five, six or more have died, because preventive measures were not taken to guard against infecting the well by the sick. Experience has already shown what prevention can do. In countries where sanatoria abound and care is taken the annual death loss has been decreased some 30 to 40 per cent. In Great Britain it has been lessened by at least 30,000 a year, on this disease alone.

The above, however, does not represent the full cost of this disease.

Observations have been made to determine what proportion of consumptives are married. Though this has not been definitely established, it is safe to assume that 40 per cent. are. This would give about 2,000 married men and a similar number of married women as dying each year of consumption. It will at once appear what a heavy burden this will place upon friends, churches, benevolent societies and municipalities to assist the widows and children. The amount of money spent in the support of these is large, though no idea exists as to what that sum is.

Add to all this the distress caused by the sickness and death of so many wage earners, and the cost of nursing and medical attendance.

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## PERSONAL AND NEWS ITEMS

Dr. Richardson, of Toronto, is recovering from his severe illness.

Dr. Fissette, of Brantford, was confined to the house through sickness.

Dr. and Mrs. Tyler, of Halifax, are enjoying the climate of Southern Italy.

Dr. Harry Thornton, of Petrolea, was recently married to Mrs. Campbell.

Dr. Jeffs will move into the residence of the late Dr. Jackes about the middle of April.

Dr. Tatham, of Cargill, Bruce, underwent an operation for appendicitis a short time ago.

Dr. J. J. Mason has been appointed pathologist to the General Hospital, London, Ont.

Dr. J. H. Ayers, of Charlottetown, was confined to his house by illness for a short time.

Dr. J. Leslie Foley, 1076 Sherbrooke street, Montreal, has recovered from an attack of grippe.

Dr. William McDonald, Antigonish, N.S., has gone for a trip to Bermuda on the SS. Octmo.

Dr. Edmund B. Norwood and Miss Stella Keens were married at Hubbard's Cove, on 6th April.

Dr. Seymour, of Indian Head, N.W.T., has left for Chicago. On his return he will remove to Regina.

Dr. and Mrs. Bell, and Master Bell, of Montreal, sailed by steamship Cedric for England Wednesday.

Dr. A. E. Ranney, formerly of Georgetown, has been appointed Medical Health Officer at North Bay.

Dr. and Mrs. F. W. Smith, of Aylmer, are contemplating taking a trip to British Columbia this summer.

Dr. Maloney will remain in St. Andrew's for a few days longer, after which he will proceed to Winnipeg.

Dr. Ernest T. Curran, who has been at Blind River for the past six months, returned to his home at Ingersoll.

Dr. Phileas Hector Bedard, of St. John Street, Quebec, is the new deputy-coroner for the city and District of Quebec.

Dr. Thompson, an assistant of Dr. Harvie's a year ago, leaves Whitby next week for a post-graduate course at Edinburgh.

Dr. John W. Manchester, who has been studying in Germany for the past year, has left Sussex for Winnipeg to locate.

Dr. Chas. W. Saunders, son of John Saunders, of Merrickville, returned two weeks ago after an extended trip abroad.

Dr. J. V. Connell has opened an office in Winnipeg. He is a post-graduate of New York, Edinburgh and London Hospitals.

Dr. G. W. Smith has resigned his position as assistant physician on the N.O. & T. railway and has opened an office at North Bay.

Dr. Frank Buchanan, of Galt, has broken the sod for a new residence on Brant avenue, which he intends erecting for himself.

The engagement is announced of Miss Ella Seeton and Dr. Leonard Murray, both well known and great favorites in Halifax, N.S.

Dr. Johns, of Brockville, was in Kingston with his father. As soon as he has sufficiently recovered they will both leave for Bermuda.

Dr. Bryson, of Ottawa, has been appointed Chief Medical Officer of the Immigration Department, and is expected to visit Halifax shortly.

Dr. Cook, Manitou, has returned from Winnipeg, and though far from well, we are pleased to state he is looking much better than formerly.

Dr. J. J. Brown, of Owen Sound, was suffering from an attack of pneumonia during latter part of March at the General and Marine Hospital.

Dr. W. H. Secord, of Brantford, left last week for Montreal to enter upon his responsible duties as one of the house surgeons of the Royal Victoria in that city.

Dr. J. S. Reid, of Walkerton, has taken charge of Dr. Price's practice and will look after the many patrons of Dr. Price until he has fully recovered his health.

The announcement has been made in Montreal of the engagement of Miss Phemie Dunlop, youngest daughter of Mr. John Dunlop, to Dr. W. Gordon Cummings.

Dr. Fred Etherington, Portsmouth, a brilliant young graduate of Queen's, left a few days ago for Portland, Me., whence he will sail shortly for Edinburgh, Scotland.

The announcement is made in Brockville of the engagement of Miss Lillian May Fitzsimmons, daughter of the late Mr. Robert Fitzsimmons, to Dr. S. Gowan.

Dr. Clemes, of Collingwood, who was in the G. and M. Hospital for a week, suffering with appendicitis, we are pleased to say is out again and attending to his duties.

Dr. L. De L. Harwood has been appointed professor of gynaecology in Laval University, and also chief of the gynaecological department of Notre Dame Hospital at Montreal.

Dr. A. H. Peck, an old resident of this county, who has practised his profession for several years at Hopewell Cape, N.B., is dangerously ill. No hope is entertained for his recovery.

Dr. Prowse, of Winnipeg, has returned from the east, where he has been making a combined pleasure and professional visit, and will receive patients as usual in his rooms at the Baker block.

Among the physicians attending special courses at Johns Hopkins University, Baltimore, is D. George and J. Campbell, M.D., C.M., Dalhousie University, 1902, in pathology and surgery.

The marriage of Miss Robina Bryson, daughter of Hon. Geo. and Mrs. Bryson, of Fort Coulonge, to Dr. William Alexander Cameron, of Arnprior, took place on Wednesday the 30th March.

A very pleasant event took place at the residence of Dr. Beeman, Napanee, on Wednesday, 6th April, when his eldest daughter, Edith, was united in marriage to Dr. H. E. Paul of Fort William, Ont.

On 5th April Dr. A. J. Sinclair received a telegram from the Hon. William Paterson, Minister of Customs, stating that he had been appointed acting collector of customs for the Town of Paris.

Dr. C. A. Hodgetts, Secretary to the Provincial Board of Health for Ontario, has been made a vice-president of the American Congress of Tuberculosis to be held at St. Louis, in October of this year.

Dr. Willmott of Strathroy, while driving in the dark, a couple of weeks ago, missed the road and his horse and rig went over an embankment. He received some severe cuts and bruises about the face.

Dr. Hamilton, M.R.C.S., L.R.C.P., of London, England, is visiting his brother, R. S. Hamilton, Queen street, Galt. Dr. Hamilton will leave shortly for the Northwest, where he intends to practise his profession.

Dr. McPherson, late of the Royal Alexandria Hospital, Fergus, left at the end of March for Montreal. The doctor intends going to London, Eng., in the near future, where he will take another course in medicine.

Dr. and Mrs. Charles E. Kennedy, of Charlottetown, left a few weeks ago for Boston en route to Winnipeg, where they will make their future home. Their departure is a source of keen regret to their many friends.

Dr. Stenning, of Coaticook, who has been under the weather for some time, although he has managed to attend to his practice, sailed a short time ago for the Old Country to get the benefit of the ocean voyage.

Dr. W. G. Jolicoeur, who was recently appointed Coroner of Quebec and district, was entertained on 4th April, at a dinner, by a number of his friends, at Lefrancois, Chateau Richer, when a most pleasant time was spent.

Dr. Mitchell, of the Toronto Asylum staff, who has been appointed to take charge of the new asylum for epileptics at Woodstock, has gone to England to look over the institutions there preparatory to assuming his new duties.

We are pleased to be able to state that Dr. J. E. King, of Weston, has recovered from his recent severe attack of pneumonia, and that he is able to resume his professional duties once more, after an illness of five weeks. We are sure his many friends will be glad to hear of his recovery.

The Provincial Secretary has given notice of motion to place the General Hospital of Walkerton, the John McKellar Memorial Hospital, Fort William, and the St. Joseph Hospital, Rat Portage, on the list of those receiving Provincial aid.

Dr. Fotheringham is convalescing nicely after his recent illness, and wishes to thank the many friends who were so kind in their enquiries and attentions. He expects to resume practice early in July, after his return from a trip to the Continent and Britain.

Dr. D. A. Sinclair, who received his primary education at the Glencoe high school, has recently returned from England, where he was taking a post-graduate course at St. Thomas' Hospital, London. The doctor has decided to locate in Melbourne, his birthplace.

Many will learn with great regret of the accident to Dr. Conroy, of Charlottetown, P.E.I. The doctor was driving near Royalty Junction, where he had a professional call, when the sleigh upset, throwing him out with considerable force, and breaking his femur.

The Board of Health, Ottawa, has appointed Dr. Sheriff to the vacant position of resident physician at the Isolation Hospital in succession to Dr. Campbell, who is leaving to study abroad. Dr. Sheriff is at present one of the house surgeons at the Protestant Hospital.

A very pretty wedding occurred recently at the residence of Mr. and Mrs. John Dixon, "Maple Bank," Rebecca, Ontario, when their youngest daughter, Margaretta Florence, was united in the bonds of matrimony to Dr. William H. Clarke, of Oakville, Manitoba.

Dr. James McKenty, of Winnipeg, met with a rather serious accident ten days ago, while driving on Main Street, opposite the McIntyre block; a street car ran down his buggy, badly damaging it, and throwing the doctor on the street. He was picked up in a dazed condition.

Dr. McGillivray, of Hamilton, who has practised medicine on the corner of King and Bay streets for many years, has decided to move to a more central location, and has leased that splendid suite of office rooms over the C. P. R. office, on the corner of King and James streets.

Dr. Ami, Ottawa, has returned from a trip to the south. Mrs. Ami and little Miss Marguerite Ami are still in Thomasville, Georgia, where they expect to remain for a fortnight longer. Before returning to Ottawa in May, Mrs. Ami will visit Washington and other points.

The Central Ontario Medical Association met at Peterboro' and elected officers as follows:—President, Dr. Halliday; 1st vice-president, Dr. McNulty; 2nd vice-president, Dr. Carmichael; secretary, Dr. Morgan; treasurer, Dr. Caldwell; auditors, Drs. Scott and Amys.

The Toronto Western Hospital, which has occupied its present site for five years, has now purchased it. The block of land contains four acres, in one of the most convenient locations in the city. The location of the hospital is only a short distance west of the centre of the city.

Dr. and Mrs. Wickham, Tignish, left in the latter part of March via Georgetown, en route for the Southern States, whither the doctor has gone for the benefit of his health. His friends earnestly hope for his speedy recovery and look forward to his returning home again in good health.

J. A. Carveth & Co. respectfully call attention to the fact that they have at last become located in their new premises at 434 Yonge Street, where they will continue in the Medical Book business with the hope of materially increasing their connection with the Medical Profession and Students.

The Ontario Government were waited upon three weeks ago by a deputation with the request that the Municipal Act be amended so as to enable the town of East Toronto to submit a by-law to the people to provide for \$2,500, which they desire to contribute to the proposed new Y.M.C.A. to render it suitable for hospital purposes.

The Executive Committee of the Toronto Anti-Consumption League have decided to make a public appeal to raise \$25,000, which, they claim, is a necessary condition either to a grant by the city of \$50,000 for a municipal sanatorium, or to securing the benefits for Toronto of the Provincial act respecting municipal sanatoria for consumptives.

Dr. Henry E. Young, M.P.P. for Atlin, and Miss Rosalind Watson, M.A., late of Victoria High School teaching staff, were united in wedlock 15th March. The ceremony was performed by Rev. W. Leslie Clay, B.A., at the residence of the Premier, Hon. Richard McBride, Park Road, in the presence of the immediate friends of the contracting parties.

During the month of March this year there were registered in Toronto sixty more births than in March of last year, whilst the marriages were six less, and the deaths twelve less. The cases of diphtheria show a considerable decrease on March of 1903, as also do typhoid and scarlet fever, the latter disease being evidently about stamped out.

Dr. R. B. Anderson, of Winnipeg, has returned to that city from Edinburgh, Scotland, where he has been taking a post-graduate course in medicine and the degree of L.R.C.P. and S. On his way home he visited the hospitals at London, Belfast, Dublin, Paris, New York, Philadelphia, Baltimore, Washington and Chicago. The doctor will locate in Winnipeg.

Ludwig Knacke, a patient who died in the Manhattan State Hospital, March 28th, came to his death as a result of injuries inflicted in that institution, according to the finding of a Coroner's jury, which completed an investigation of the case. Coroner Brown, upon this finding, held three male nurses employed in the hospital for the action of the Grand Jury.

Dr. Frank R. Paterson, of St. Martins, who has for some time been a practising physician in British Columbia, has removed from Ladysmith to the Kootenay District. A few evenings ago, previous to his departure, Dr. Paterson was made the recipient of a gold watch suitably engraved, and an address from a number of his friends in Ladysmith. Dr. Paterson at one time practised in Westfield.

Dr. Hodgetts, secretary of the Provincial Board of Health, intends to make efforts to have the law obeyed. Statistics indicate that all cases of infectious or contagious diseases are not reported. The returns of physicians for 1902 showed but 1,540 cases of typhoid fever, but hospital statistics gave 2,067. In 1903 returns from 700 divisions gave 1,012 cases, as against 1,918 by the hospitals' statistics.

Miss Louisa Lorne Park, of Whitewood, N.W.T., second daughter of Mr. & Mrs. R. S. Park, and H. Softley, M.D., of Claude, Ont., were married in the Presbyterian Church, Whitewood, at 7 p.m., on Monday, April 18th. The ceremony was witnessed by sixty guests, who then repaired to the bride's home where supper was served. The couple then left by evening train for a short trip to Hawkesbury before returning home.

News was received by cable from London a few days ago that Dr. Brefney Rolph O'Reilly, son of Dr. Chas. O'Reilly, of the Toronto General Hospital, has successfully passed the examinations in medicine and surgery, entitling him to the honorable degrees of L. R. C. P., Lond. (Licentiate Royal College Physicians, London), and M. R. C. S., Eng. (Member Royal College Surgeons, England). Dr. O'Reilly was born in Toronto, educated at Upper Canada College, and took his degree of M.D.C.M. in Trinity University, when he won the gold medal. He is probably one of the youngest holders of his various degrees.

Dr. J. E. Campbell, who several months ago assumed the duties of resident physician at the Ottawa Isolation Hospital, is retiring, as he intends to go abroad for a course of study, and the city medical officer is looking for a man to fill the place. Though the house surgeon's appointment is recognized as not being permanent, but rather for the purpose of giving young medical men experience in the treatment of contagious diseases, the Board of Health much regrets to lose the services of

Dr. Campbell, who is the best man they ever had in the hospital. The name of Dr. Hill is mentioned in connection with the vacancy.

Dr. J. A. Hutchison, chief medical officer of the G.T.R., in company with Dr. Armstrong, of Montreal; Dr. Murray McLaren, of St. John, N.B., and Dr. W. G. Anglin, of Kingston, Ont., have gone on a trip through the different hospital centres of the Old Country. They took ship from Boston for Naples on April 9, and it is their intention to work their way slowly through Italy, stopping at all the principal hospitals, and finally making their way to Vienna. As Dr. Lorenz, the world-famous surgeon, lives in the capital of Austria, the four doctors intend paying him a personal visit and also inspecting his hospital in that place. It is expected the trip will last two months.

A large gathering of nurses from all over Ontario was held in St. George's Hall, Toronto, a short time ago, when the Ontario Graduate Nurses' Association was formed. The object of the association is to secure legal recognition for the profession, and to require a standard and legal registration for those holding themselves out as trained nurses. Dr. Helen McMurchy referred to the benefits which the legal and medical professions had derived from legal registration. Miss Damer, of Buffalo, said that the New York State Nurses' Association had done a great deal towards raising the educational standard. The election of officers resulted as follows:—President, Miss E. C. Gordon, Emergency Hospital; Vice-Presidents, Miss Wartman, Kingston; Miss Rice, Ottawa; Secretary, Miss Julia Stewart, Toronto General Hospital.

Application has recently been made to the Toronto Council by the Victorian Order of Nurses, through the Secretary, Mrs. A. R. Capr  ol, for a grant to go towards the deficit. When it is understood that the work of this order is done by women who are graduates of well-known hospitals, that much of it is done without any return, and that for the remainder only a nominal fee is charged, it will be readily understood how a deficit is inevitable. Private subscription goes some distance to the lessening of this, and would doubtless go further if the work were better known. As the lady superintendent of the Toronto branch has said: "Our field is a large one, in general; all the people in this big city who cannot afford a trained nurse; in particular, that large body of our people who cannot afford a small fee."

Pelee Island, weird and wild in winter, and bleak and barren in the summer, the home of 700 souls, has never had a resident physician. To get one—and have him handy all the year around—the residents have



been compelled to get a bill put through the Ontario Legislature. In support of this bill, which grants Dr. Owen B. Van Epp, an Ohio practitioner, the right to practise in Pelee Island without passing the Provincial examinations. A year ago Dr. Van Epp, of Ohio, took residence upon the Island temporarily. He was impressed with the necessities of the situation and was persuaded to remain. He could not legally practise, however, until he had secured the permission of the Legislature. Accordingly a petition signed by 200 adults, practically the entire adult population of the Island, was presented by Mr. Auld to the committee, and upon this the Act was reported to the Legislature by the Private Bills Committee. There was no opposition.

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## OBITUARY.

### WILLIAM B. BURLAND, M.D.

The news of the death of Dr. William B. Burland, at his late residence, 288 Prince Arthur street, Montreal, on Saturday, 19th March, was learned with much regret by his many friends and acquaintances.

The late Dr. Burland was ill for a short time only. He had been confined to the house for about a week prior to his death, but it was on Wednesday that he was obliged to remain in bed, and on Saturday died from pneumonia. Dr. Burland was a remarkably strong, robust man, for many years much interested in sports, and was well known in athletic circles. He was born at St. John's on March 5, 1844, his father having been Collector of Customs at that place for many years. Dr. Burland entered McGill, where he took his degree, and has for a long time been a general practitioner in the city.

In military matters Dr. Burland was also prominent, and was for many years connected with the militia, having served as a captain in the Prince of Wales Rifles (Fenian Raid medal), and later as surgeon of the Royal Scots in Lieut.-Colonel Crawford's time.

The late Dr. Burland is survived by his widow, who was a Miss Watt, and by two sons and one daughter.

The funeral took place from the house to Mount Royal Cemetery.

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### LEON VERMETTE, M.D.

Dr. Leon Vermette, of the town of St. Louis, died 15th April, at the age of 65 years. Deceased was well and favorably known in the County of Terrebonne, having practised his profession for a period of nearly forty years in the parish of St. Janvier.

## WILLIAM P. BUCKLY, M.D.

Coroner Buckley, of Prescott, died in Ogdensburg City Hospital on Saturday evening, 2nd April, as the result of an operation. William P. Buckley, M.D., was the youngest son of the late Timothy Buckley, and was born in Prescott. After matriculating from McGill, he practised in his native town. He was a prominent physician in the locality. In 1881 he married Miss Sweeney, who survives him

## H. C. FEATHERSTON, M.D.

Dr. Herbert C. Featherston, son of Mr. A. M. Featherston, died at his father's residence, 112 Bedford Road, Toronto, on 7th April, after an illness of about five weeks. The deceased, who was only twenty-five years old, was a graduate of McGill University, of the class of 1902. After graduation he went to Edinburgh University for a post graduate course, where he took a triple qualification at the Royal College. Returning to Toronto in 1903, he started to practise. He was not very well when he returned on account of hard study. He took bronchitis which developed into pleuro-pneumonia.

## JOHN ADAMS CARROLL, M.D.

At St. Catharines, on the 25th March, 1904, John Adams Carroll, M.D., only son of the late Rev. John Carroll, D.D., died, aged 56 years. The class of 1880, in the old Toronto School of Medicine, will recall their class-mate Carroll, and hear with regret the news of his death. He was a favorite.

## SIR HENRY THOMPSON, BART., F.R.S., F.R.C.S.

Sir Henry Thompson, Bart., the distinguished surgeon, died 18th April. He was born at Fralingham, Suffolk, in 1820, was distinguished as a practising surgeon, an author of standard works on surgery, the writer of several clever novels, a painter on fifteen or more canvases so excellent as to win places in the Royal Academy, the Salon, Paris, and other art temples, and was also a noted astronomer. In addition, he wrote and edited a number of essays on various topics of public interest.

## GEORGE D. SPARHAM, M.D.

Dr. George D. Sparham, of Kemptville, one of the oldest medical practitioners of Leeds and Grenville, died 20th April, at Athens. The deceased had lived to be 95 years of age and for many years past had retired from active practice of his profession. He was a graduate of McGill College, of Montreal.

## BOOK REVIEWS.

## PEARCE ON DISEASES OF THE NERVOUS SYSTEM.

A Practical Treatise on Nervous Diseases for the Medical Student and General Practitioner by F. Savary Pearce, M.D., Professor of Nervous and Mental Diseases in the Medico-Chirurgical College of Philadelphia; Fellow of the College of Physicians and Surgeons of Philadelphia; Neurologist to the Howard and Philadelphia Hospitals; Member of the American Medico-Psychological Association, and of the American Climatological Association; Chairman of the Section on Nervous and Mental Diseases of the American Medical Association. Colored frontispiece. Ninety-two illustrations in the text, many in colors. New York and London: D. Appleton and Company, 1904; Toronto: Messrs. Morang & Co. Price, \$3.00.

This book opens with a brief, but excellent account of the anatomy, physiology, and pathology of the nervous system. Then follow chapters on general symptomatology and therapeutics. The special diseases are treated of in a concise, but clear manner. The illustrations are selected with much care and aid the text in making clear the meaning of the author. The author has wisely avoided all unnecessary detail and lengthy discussions on doubtful points. In this way, he has been able to give the leading points in neurology in a book of 400 pages. For the student and general practitioner the book contains all that will be required for the final examination, and in the everyday calls of the busy doctor. At the end of the book is to be found a number of very useful formulæ. We can very cordially recommend the book, and feel sure it will well repay careful study.

## DR. MUNDELL'S ANATOMY.

Anatomy Applied to Medicine and Surgery by D. E. Mundell, B.A., M.D., Professor of Applied Anatomy, Faculty of Medicine, Queen's University; Ex-Examiner Practitioner of Medicine, Ontario Medical Council; Surgeon to Kingston General Hospital, Kingston: British Whig Office. 1904.

This book of 500 pages is just fresh from the press. It has been known for some time that Dr. Mundell was engaged on a work on anatomy, but what its scope would be was only made public when the book appeared. Those who know Dr. Mundell and his careful methods of teaching expected a good work. An examination of the book fully bears out this expectation. Most of us are familiar with such works as Bellamy's Surgical Anatomy, Ranny's Medical Anatomy, Holden's Landmarks, Treves' Applied Anatomy, etc. The present work takes the place of all these. It combines the good features of all and eliminates some of their defects. It is an excellent book of reference for all points where anatomy touches medicine and surgery. We heartily commend this Canadian work.

## COMMONER DISEASES OF THE EYE.

In our review of this book in our April issue, the name of the publishers were omitted. The work is published by Messrs. G. P. Engelhard & Co., Chicago.

### FUNCTIONAL DIAGNOSIS OF KIDNEY DISEASES.

With Special Reference to Renal Surgery. Clinical Experimental Investigations by Dr. Leopold Casper, Privatdocent an der Universität in Berlin; and Dr. Paul Friedreich Richter, Assistant der III Med. Klinik, Berlin. Translated by permission, by Dr. Robert C. Bryan, of Washington D.C., and Dr. Henry L. Sanford, Surgical Resident, Lakeside Hospital, Cleveland, O 12mo. Cloth, \$1.50 net. Philadelphia; P. Blakiston's Son & Co.; Toronto: Messrs. Chandler & Massey.

It has been of more than ordinary pleasure to review this book. Drs. Casper and Richter have given the profession a really excellent book on the Functional Diagnosis of Kidney Diseases, while Drs. Bryan and Sandford have turned the original into good English. It is a first-class work for reference, and will prove of the utmost value to every clinical teacher and practitioner.

### KNIGHT'S DISEASES OF NOSE AND THROAT.

Diseases of the Nose and Throat by Charles H. Knight, A.M., M.D., Professor of Laryngology Cornell University Medical College; Surgeon Manhattan Eye and Ear Hospital, Throat Department, etc., with 147 illustrations. P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia, Publishers. Price \$3.00.

In a book of 423 pages the author gives full notes of what has formed the basis of a course of lectures at Cornell Medical College. The arrangement therefore has been such as has been found best suited for students. The author has wisely omitted going into too much detail with anatomy and physiology. The diseases of the various areas are very clearly discussed and treatment is usually very complete. The book is valuable to all, but more especially does it appeal to students and general practitioners.

### VON BERGMANN'S SURGERY.

In our review of the first volume of Von Bergmann's Surgery in the April issue of the CANADA LANCET, we omitted to mention the name of the publishers, Messrs. Lea Brothers & Co., of Philadelphia.

### GOULD'S MEDICAL DICTIONARIES.

Messrs. Blakiston's Son & Co. are authority for the statement, that last year they sold 15,487 copies of Gould's Medical Dictionaries, making the total sales to date 166,083.

### DEAVER'S SURGICAL ANATOMY.

Messrs. P. Blakiston's Son & Co., of Philadelphia, announce that in printing all the copies of Deaver's Surgical Anatomy so far demanded by its most successful sale there will have been used 2,340 pounds of ink, 188,002 pounds or 84 tons of paper, and the printing press will have made 3,455,000 impressions. On and after July 1st, 1904, the price of this work will be advanced to \$30 in half Morocco, and \$33 in half Russia binding.

## MISCELLANEOUS

## THE THERAPEUTICS OF THE GLYCEROPHOSPHATES.

By a series of experiments, Dr. Albert Robin, of Paris, was led to attribute to the glycerophosphates the following physiological actions:—

1. Metabolism, both of organic and inorganic matter, is accelerated.
2. Nitrogenous exchanges are hastened, both as to assimilation and disassimilation.
3. Uric acid is relatively diminished.
4. Sulphur compounds are acted upon similarly to nitrogenous ones, and since the ratio of sulphur to nitrogen increases in almost every case, it is to be concluded that organs rich in sulphur, like the liver, are the special seat of more vigorous nutrition.
5. Intestinal fermentations are but little affected.
6. The increase in chloride of sodium excreted is a proof of increased appetite—a fact confirmed by clinical experience.
7. There is relative diminution in the disassimilation of phosphorus, and an absolute one in that of magnesium, both substances belonging pre-eminently to the nervous system.

From the physiological conclusions above, Dr. Robin is led to think that the glycerophosphates are not to be employed against this or that particular disease, but against varied morbid conditions which indicate the use of the preparation. Thus, in a patient suffering from neurasthenia, with phenomena of excitement and exaggeration of nitrogenous metabolism, glycerophosphatic medication is contraindicated. The same treatment would be useful in such a patient with an elimination of phosphates greater than that of urea.

Dr. Robin divides the therapeutic indications of glycerophosphates into four groups:—

1. Lowering of nitrogenous exchanges, both in assimilation and disassimilation, as in their oxidation, comprising: (*a*) one form of chlorosis, with diminution of oxidations; (*b*) chronic gout, in cachectic conditions (acute gout is a contraindication); (*c*) diabetes with cachexia (the same contraindication as above in florid diabetes); (*d*) obesity with diminished oxidation; (*e*) chronic tuberculosis, with the double object of stimulating the organism and of diminishing the demineralization of the cell, a process which Dr. Robin looks upon as one of the adjuvant causes of the disease; (*f*) chronic Bright's disease, with albuminuria and little urea; (*g*) phosphaturic albuminuria; (*h*) dyspepsia with diminished

acidity and gastric insufficiency, after appropriate gastric treatment (i) in senility attended with general debility.

2. Cases in which the action of the liver is torpid, carefully excluding all cases with exaggeration of hepatic processes.

3. The most important group comprises any depraved state of the nervous system, such as: (a) convalescence from acute affections, influenza; (b) various forms of phosphaturia with the exception of phosphaturia secondary to hypersthenic dyspepsia with hyperacidity; (c) many forms of neurasthenia, where depression or asthenia is the leading symptom—but phenomena due to excitement are aggravated; (d) muscular atrophies of various origins; (e) paralyzes due to various causes—in this class the medicament has but little influence; (f) the pains of tabes dorsalis, tic douloureux, sciatica, lumbago—which are particularly benefited by this treatment, the pains of tabes in seven out of ten patients being either much modified or altogether abolished; (g) Addison's disease. In mental diseases or progressive general paralysis no good effect has been observed—in fact, the results have been harmful in agitated patients; but some good effect has been noted in depressed patients suffering from melancholia.

4. Whenever it is desirable to modify the metabolism of the calcium salts, as in many affections of the bones, such as rickets, osteomalacia, fractures, etc.

Dr. Robin was led to study the therapeutic value of the glycerophosphates (with which he had been experimenting since 1888) by the fact that in the course of his researches on neurasthenia he found that certain patients excreted in their urine quite considerable quantities of incompletely oxidized phosphorus. And since the other nutritive conditions remained normal, he considered that this phosphorus must originate from a retrograde metamorphosis of the neurolecithin. For, as is well known, most of the imperfectly oxidized phosphorus appears as phosphoric acid; and phosphoric acid is an essential component of lecithin, which plays so important a part in the structure of the nervous system.

The excretion of the ordinary medicinal phosphates is, however, a matter of difficulty, and he therefore thought he would attain better results by administering the phosphorus in an organic combination more suitable for the nervous system.

Elixir Glycerophosphates Calcium and Sodium (Parke, Davis, etc.) rapidly builds up the impaired nervous system which is found during convalescence from all serious acute diseases, especially after gripe.

## IN SPITE OF TEACHERS AND TEXT-BOOKS.

The days of the cotton jacket and the linseed poultice seem to be past. Perhaps the applications valued most highly by medical teachers at this time are the cold ones, either in the form of ice-bags or cold compresses frequently changed. These, when placed over the seat of disease, seem to give decided relief, to modify the temperature, and to hasten early resolution. But in spite of their advocacy in the text-books, the rank and file of the profession do not take to them kindly.

Antiphlogistine now enjoys perhaps greater popularity in the treatment of pneumonia and other acute respiratory diseases than any other local application. This popularity seems to be well deserved. It may not modify the course of the disease to any great extent, but it certainly proves of the greatest comfort to the patient, and helps to ameliorate some of the troublesome symptoms which are characteristic of the disease. Antiphlogistine must therefore be considered a distinct addition to our therapeutic armamentarium.—*The Medical Standard*, March, 1904.

## THE TREATMENT OF SYMPTOMS.

In a highly interesting article on this subject, Walter M. Fleming, A.M., M.D., of New York City, uses the following language:—

“Long experience in the treatment of diseases in their incipiency, evidences beyond all debate, that almost invariably the attack in a large proportion of cases is inaugurated by febrile symptoms of greater or lesser severity. Also, it may be noticed, that constipation or torpid inactivity of the bowels prevails. Therefore, the first indication in the incubation or incipiency of the attack, of almost any form or nature, is primarily to allay the fever, pain-nervousness and solicitude of the patient, and secondarily to empty the alimentary canal. These two ends being accomplished, a long advance towards a possible abortive issue of the attack has been made, or in any event, the first indication and requirements are fulfilled, in proper progress toward a cure.

Thus in the primary treatment of the numerous ills, which are characterized by the above quoted symptoms, the physician will find Laxative Antikamnia and Quinine Tablets at once handy, convenient and reliable, safe and sure, and to which the turbulent symptoms of fever, constipation, pain-sleeplessness, nausea and generally wretched depression yield so promptly and gracefully, that it is certainly refreshing to the physician himself to note the change in his patient from suffering and solicitude to comfort and quiet. I certainly know of no other remedy which will so readily and decisively allay and control the symptoms above enumerated.”

## WHEN YOUR CASE IS WEAK ABUSE THE OTHER SIDE.

This maxim has been a favorite standby with the legal profession from time immemorial and unfortunately certain pharmaceutical manufacturers have recently seen fit to make use of that maxim. This is particularly true of the manufacturers of a certain iron preparation.

The impudence and effrontery with which these people try to hoodwink the medical profession is rather remarkable.

No other preparation ever came before the medical practitioner with so little detail as to methods of preparation, composition, therapeutic effect, etc., etc., and nevertheless the profession is asked to accept the wildest and most extravagant statements as to its wonder-working capabilities. This is not all. The makers of this preparation, in seeking the support of the profession, covertly attack and sling mud at all other iron preparations that have been before the profession for years. They single out Pepto-Mangan, a combination which has stood the tests of the leaders in the scientific medical world both here and abroad, an organic iron combination in which, in its results, the general practitioner and the hospital clinician have learned from experience to place implicit confidence.

This unbusinesslike method of attempting to cast discredit upon other reliable and thoroughly tested combinations we cannot term otherwise than despicable, and furthermore we know our readers cannot be influenced by unsupported statements of financially interested parties, but will always bear in mind that Gude's Pepto-Mangan was submitted to the profession as an organic iron product, and the results obtained by its use, as also the scrutiny of analysis by chemists of repute, substantiate all that has ever been claimed for it.

Attempting to foist upon the attention of the physician a product simply by insinuation that known articles are inferior, is a manner of doing business which should receive the stamp of disapproval by every one of our profession.—*The Toledo Medical and Surgical Reporter*, April, 1904.

## BATTLE &amp; CO.'S PREPARATIONS.

Battle & Co.'s preparations are now manufactured in Canada, thus saving cost of customs to the consumer. Messrs. Lyman Bros. & Co., of Toronto, are the agents. Any physician wishing to test Ecthol can get full-size (12 oz.) bottle free by sending 25 cents, to pay express charges, to Messrs. Lyman Bros. & Co., Toronto. Battle & Co., Chemists Corporation, St. Louis, Mo., U.S.A.