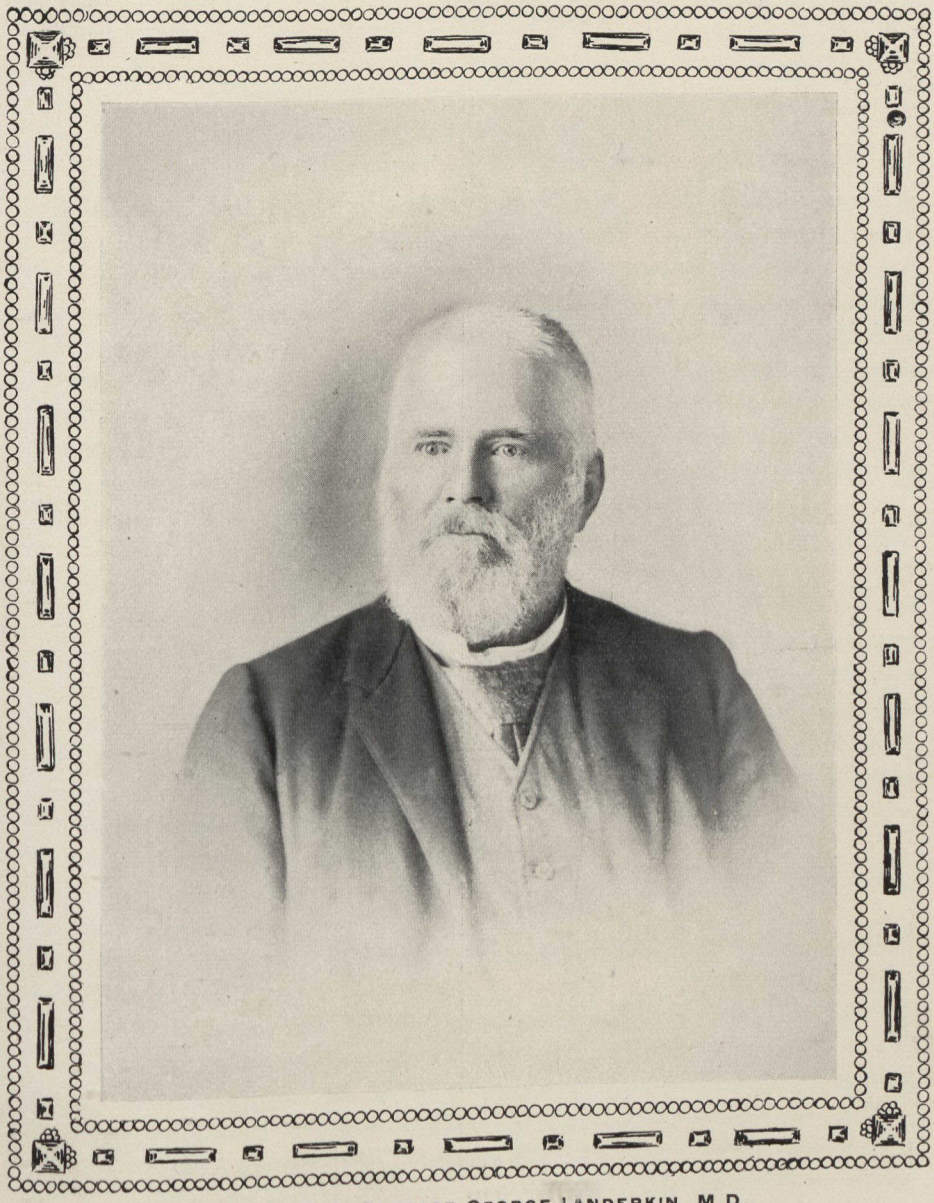

THE LATE HON. SENATOR GEORGE LANDERKIN, M.D.,
Hanover, Ontario.

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## AMYOTROPHIC LATERAL SCLEROSIS.*

By ALEXANDER McPHEDRAN, M. B.
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THIS is one of the most rare of the organic diseases of the nervous system. As it affects both the cerebral and spinal segments of the motor tract widely, it is subject to much variation in its symptoms according as it affects one or the other segment primarily and chiefly. In the majority of cases the spinal neurones are affected earliest as shewn by paralysis with atrophy, the spastic symptoms developing later. In this case the cerebral neurone appeared to have been first affected as shown by the weakness and stiffness of the lower limbs.

George Rosenberg, aged 47, worked in cement works for the last few years and was therefore much exposed to wet and cold.

There is nothing of moment in his family history. His habits were good, and he had always been well.

His present illness began in September, 1901, with twitching and weakness in the thighs, and shortly afterward in the hands, forearms and arms; he was soon unable to work. The left leg became affected first, and later the right one. They both became stiff and heavy, and he found it difficult to get about. He has not walked since late in August, 1902. The hands and arms became weak without stiffness, and wasting in them became evident a few months after the symptoms began, and has increased rapidly, especially during the last few months.

Speech became affected early in the summer of 1902, and swallowing about the same time.

The following entry was made on admission to Toronto General Hospital:—

He is a large man. His expression is anxious and quite staring, owing to the wide palpebral fissures, but he has full power to close his eyes. The lower part of the face has little expression, and the movements are not free. He can close the lips but not purse them to whistle, nor hold them together while puffing out the cheeks. The movements of the tongue are awkward and it is protruded with difficulty. The

* Presented at the Canadian Medical Association, London, Ont., Aug., 1903.

soft palate is not affected. Phonation is good, but speech is barely intelligible. Swallowing is difficult, so that food can be taken only in the erect position; solids and semi-solids are taken more easily than liquids. Jaw-jerk is easily elicited, and is very marked.

The arms are almost powerless The shoulder-girdle muscles are quite paralyzed and atrophied. He can flex the elbow with difficulty so as to bring the hand up on the chest and extend it again, and he can barely flex the wrist and fingers through the action of the long flexors. Power of rotation of the hand is lost. There is much atrophy of the forearms. The muscles of the hands are almost completely atrophied and the hands present the typical claw-like appearnce.

Elbow-jerk is marked, but there is no wrist-jerk, the forearm muscle atrophy having advanced too far.

The trunk presents no change from the normal, except lessened expansion of the chest in respiration.

The lower extremities appear well-nourished, and are very firm. Slight fibrillary twitching is present in many parts, chiefly in the inner sides of the thighs, less so in the legs.

The knees are flexed with much difficulty, resistance being continuous during flexion. Knee-jerk is extremely exaggerated. Ankle-clonus is difficult to obtain, owing to the extreme spasticity of the calf muscles, but sufficient relaxation was obtained on one or two occasions to give marked clonus. Tendo-Achilles jerk is marked. There is typical dorsi-flexion of the great toe of the right foot, ankylosis of the left metatarso-phalangeal joint prevents extension of the great toe beyond the straight line. There is no cremastic reflex, but the abdominal is easily obtained.

There are no sensory disturbances, but he gave a history of some girdle pain in the abdomen for a few months, it disappeared a month before admission.

The bladder and bowel functions are normal.

His mental condition is clear, but his emotions are easily disturbed, so that he laughs immoderately and is as easily made to weep.

He went home into the country in June. The bulbar symptoms continued to grow worse so that swallowing became extremely difficult. He died early in September, 1903. An autopsy could not be obtained.

*Remarks.*—The duration of this case was unusually long—two years after the onset of the first symptoms, and fifteen months after the bulbar symptoms first showed themselves. Most cases terminate in about one year.

Fig 1. Shows loss of power in the face and upper extremities; the feet are held in normal position, showing that the muscles of the legs have not lost their tone. Atrophy of the deltoid is well shown; also some of the face.

Fig. 2. Showing atrophy of the themar and interosseous muscles; also the ape—or claw-hand.

The symptoms were quite characteristic: the paralysis with atrophy in the upper extremities and face showing degeneration of the motor neurones in the cervical and bulbar portions of the spinal cord; and the spastic paralysis of the lower limbs with the marked irritability of the wasted muscles of the arms and face indicating equally clearly degeneration of the cerebral neurone processes in the crossed pyramidal tracts. The extremely marked jaw-jerk showed that the pyramidal tract degeneration had extended up at least through the medulla, beyond the motor nucleus of the fifth nerve. Judging from the long duration and marked character of the spastic symptoms, it is reasonable to suppose that the sclerosis extended up to the internal capsule, and that there may have been degenerative changes even in the motor cortex itself.

In amyotrophic lateral eclerosis, the onset is usually with weakness and early atrophy of the muscles of the upper extremity, as the spinal neurones of the cervical cord are, as a rule, first affected. In this case, weakness with spasm of the legs occurred first and without demonstrable atrophy, indicating that the peripheral parts of the cerebral neurones in the lumbar part of the spinal cord were the first to degenerate; the absence of atrophy shows that the spinal neurones in the lumbar cord remained practically healthy.

That his emotions were easily disturbed was, doubtless due to his difficulty in making himself understood. There were no other signs of mental weakness.

The full-length illustration (Fig. 1) shows very well the loss of tone and atrophy of the lower part of the face, of the arm (especially the deltoid muscele), and of the hands. The legs and feet are well nourished, and the position of the feet shows that the muscles have not lost their tone.

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## ANTISEPTIC SURGERY IN THE EIGHTEENTH CENTURY.

Dr. Angas Johnson, of Adelaide, sends us the following note which occurs in Percival Pott's chirurgical works, vol. i., p. 351, published in 1808:—"The Baron Van Swieten, writing as many others have done, that is, theoretically, on surgery, advises us in the case of very bad compound fractures, which may most probably require amputation, to defer operation until we have tried the force of *antiseptic fomentation*, and appliances of like kind, for two or three days; and this opinion and advice he builds, in some measure, on a remarkable case of La Motte, in a seemingly desperate case of a man's leg smashed by the wheel of a heavy carriage. That La Motte's patient escaped I have no doubt, because he has said so; but the surgeon showed much more rashness in attempting to save such a limb than he would have done in the amputation of it; the operation would have been the more justifiable practice."—*Australian Med. Gazette.*

# MEDICAL COLLEGES AND THEIR CLINICS.

JOHN HUNTER M.B., Toronto.

THE puissant ex-dean of Trinity and his cohorts seem to have gone into winter quarters and from their safe retreat, to watch doubtless with many misgivings, the heavily ladened bark of the "Fusionists" as she "weighs anchor" and "puts out" to sea. The old tars must admit that the new "liner" is one of the largest of its kind and that it has double the officers usually allotted to such craft. Some of the old voyageurs even hint that it is — at least numerically — top-heavy. In answer to this it may be said that the crew was made up under very unusual circumstances, and in any event some must resign, and time, the impartial arbiter of all things mundane will deal effectively with all the rest. These observant censors must have also noticed that it had on board a very full complement of new recruits for our profession.

Now that the smoke of battle has cleared away, and whilst the boat is still within range of being supplied with current medical literature, it seems an opportune time for the friends of medical progress, to take a calm survey of the whole situation; so as to form some estimate of what has been accomplished and to discuss some of the problems pressing for solution.

Progress in our science and art, as in industrial pursuits can be fairly accurately estimated in two ways, either by comparing one period with another, or by comparing the results obtained from different methods and in regard to the latter, as most physcians claim to be too busy to travel, even to the meetings of their medical associations much less to go abroad; it may be of some interest to these industrious mortals to hear about what is being done eleswhere.

## *Didactics.*

The writer in order to take some notes on the science and art of medical teaching, as exemplified in the various colleges of New York—one of the world's great medical centres—attended a number of lectures given to the students in their different years. It was easy to distinguish two types of lecturers, or professors. These were in direct antithesis. The ranks between these extremes, are filled up with intelligent, practical, resourceful men. These are in the prime of life, strong, self-reliant, and, on the whole discuss their subjects intelligently, and meet fairly well the needs of the students. They are profusely supplied with pictorial plates, and all other kinds of ingenious devices for purposes of illustration. Returning to our distinctive types, one from each is selected and by the aid of the latin maxim "*Ex uno disce omnes*" all in these

classes in every college may be judged. The two men selected have very much in common. Both have passed the three score mile stone on life's high-way. Each occupies a very high niche in the temple of medical fame, and has taught many generations of students. Prof. A. had a rather dry subject, but it was so systematically arranged, the students had no trouble in taking very full notes: his language was concise and delivered in tone and gesture of fervid eloquence. The students had a profitable and enjoyable hour, and when the bell rang, lustily cheered the speaker, and went out without feeling any se' e of physical or mental fatigue. Prof B's subject was a very interesting one but he had evidently taken no pains to arrange the outlines systematically. He rambled so far afield that it was impossible for the students to take notes satisfactorily, his vocabulary was meagre and he spoke hesitatingly and in an undertone. His students left the room mentally and physically exhausted from over-strain, in their efforts to follow him. They were discouraged and dissatisfied and their physical and mental energies impaired for the rest of the day. When students have to attend a number of lectures in succession it is a very serious matter for any speaker to impair their energies. The contrast between the appearance of the same students as they went out from those two lectures was an object lesson for any teacher. It re-called to the writer,—and doubtless will also recall to many of the readers of this Journal—the scenes of a quarter of a century ago in the lecture room of the old Toronto School of Medicine. Many names could be mentioned, but time and space will only permit a very brief reference to three, one of whom is with us still the other two have crossed that "bourne whence no traveller ere returns." Who can forget the strong poise in attitude and infectious zeal of Dr. Richardson as he set out in quest of the Foramen of Winslow whose habitat had hitherto seemed so mythical to the young anatomist. But before the doctor got through, he would have his students, inspired with something of the spirit of the old mariners as they sailed between the "Pillars of Hercules." Dr. Barrett with his systematic outlines, classic language, and chaste eloquence, could make any problem in physiology so inspiring, that he could even discuss the by-products from "natures' laboratory," without disturbing an aquiline feature of the most fastidious student. Who could fail to appreciate, Dr. W. T. Aikins, as in clear fluent terms and in musical cadence of tone he depicted the symptoms of acute synovitis of wrist or ankle. How confidently he would survey the rows of students, as he knew before he asked the question, "Gentlemen what would you do in a case of this kind" that even the youngest of them would promptly answer—"Elevate the part." So

firmly was this sound surgical maxim impressed, that it won fame and other results for some of the graduates, as the following story shows. A farmer of humane tendencies was helping his hired man, about 5 a.m. one stormy winter day to feed the stock, when in the darkness he stumbled over something and sprained his ankle. With self-forgetfulness, worthy of a better fate, he kept going until the wants of the hungry animals were provided for. The pain became so intense that he was obliged to lie down in an empty stall. He dispatched the hired man for the young doctor, who,—after assuring the messenger that he would come as quickly as possible—instructed him to hasten back, spread some horse blankets on the floor, lay his "boss" on them, elevate his feet on the manger, fill his sock with snow, and tie it around the inflamed ankle. The relief was so magical that the young surgeon's fame spread all over the townships. The tale is soon told. The dire calamity, that has befallen so many successful rural practitioners—"Swelled head" and removal to Toronto.

Who can forget such teachers. Will not their students ever be inspired by the same spirit as the poet who—if I can quote correctly from memory—said:

> "When the flood that overflowed the soul
> Had passed away. Then was left
> Deposited on the silent shores of memory
> Images and precious thoughts
> That shall not die, and cannot be disturbed."

The time, physical and mental energies of students are of such vital importance that the governing boards of every educational institution should employ one or more literary detectives to watch the teachers. Any teacher who wasted the time or exhausted the vigor of the students by his faulty methods or defective elocution should be dismissed and, "*en passant*," if this censorship were properly observed over our pulpits, legislative halls, law courts, medical associations, lecture platforms, &c., what a slaughter there would be with "wailing and gnashing of teeth," but it would enormously improve the usefulness of all these institutions and elevate their standard. What about some writers. Well! ask the editors.

*Clinics.*

If much can be said in favor of the concise fluent lecture as a valuable factor in medical education, how much more can be said in favor of a good clinic, where the teacher has a patient on whom he can demonstrate his subject and on whom the student can exercise eye, ear and hand in acquiring knowledge. Two of the most, if not the most, important problems confronting our medical colleges are 1st How to

make the best possible use of the clinical material on hand. 2nd How to secure a more adequate supply. If our young graduates are to go out to their life's work well equipped it can only come from their having had proper clinical facilities for acquiring practical knowledge. It is a very nice accomplishment for a young physician to be able to discuss medical problems and their theories intelligently and eloquently, but it is of infinitely more importance to be able to relieve suffering and restore health.

Every one must cheerfully admit that splendid progress has been made in medical teaching—didactic and clinical throughout our Dominion during the last two or three decades, so that in the medical arena as well as on battlefield we are, in sporting parlance, quite *gamey*. "*Honi soit qui mal y pense.*" But what we have already accomplished, is only as the dawn to the noon-tide splendor of what may yet be done.

In discussing some phases of our educational work recently with one of the University professors (arts), he said that along some lines the United States were leading the world, one instance he gave was the modelling of our medical building after one of theirs. He deprecated the cynical sneer with which the mention of anything American is met by many of our Canadian and British educators. I have heard some of these from sources that surprised me very much. Knowledge is circumscribed by no national boundaries and he is a fool who would allow national prejudices to hamper its progress. It does not impair our Canadian patriotism to glean whatever good things we can from the rich harvest fields of our ingenious resourceful cousins across the border.

A visit to any of the large medical institutions of New York, *e.g.*, The Vanderbilt Clinic or Roosevelt Hospital, conveys a splendid idea of what can be done in the way of clinical teaching. Take for instance the facilities provided for teaching such specialities as nose and throat, eye and ear. Around the walls of a large room twenty or thirty separate apartments are fitted up with everything required for making an examination and carrying out certain lines of treatment. There is a black-board on which the student is requested to make his notes. Rare or difficult cases are examined by the professor then passed round and discussed. The students have to select suitable cases for demonstrating lectures in the class room. In Roosevelt Hospital in connection with the outdoor clinics, for medical, surgical and gynæcological cases there are suites of rooms supplied with all the facilities for examining and giving certain forms of treatment for these cases. There are nurses in attendance. It was the writer's good fortune to meet some English, Scotch, and American physicians fresh from the hospitals of Great Britain and the Continent. They said they had not seen anywhere better facilities for clinical work than in New York.

Every practitioner and every student present or prospective of medicine, who cares a button for his profession, beyond the dollars and cents he can make out of it, should be deeply interested in the clinical phase of medical education, for it leaves its impress for good or evil on the character of our work and on the usefulness of our calling. Space only permits the throwing out of a few suggestions. (I.) A meeting of representatives from the staff of each of our hospitals in towns or cities to consider the problem of furnishing more adequate clinical facilities for our students, and for post graduate work (II.) Every physician should try to interest his well-to-do patients in the vast importance of clinical work as an aid in preserving the health of the people, in the hope of getting grants or bequests for the purpose of providing more accommodation for this class of work (III.) Educate our patients, rich and poor, to know that they may be able to confer the great boon of longer life and better health on themselves and others by submitting their own persons when sick for clinical investigation. One of the most cultured and refined ladies in this city was affected with a rather peculiar form of disease. Her physician suggested to her that it would be of great interest to the medical staff of one of our hospitals, if she would present herself at one of the clinics. She said I will do so with pleasure. On leaving the room after a long and trying examination by twenty or thirty physicians her own attendant went to thank her. She said no doctor, the thanks are all due to you for giving me this opportunity of being of some service to my fellow beings. She donned her seal skin jacket and went out to her carriage happy in the consciousness of that which alone can confer true happiness, viz, of having done a good deed.

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## CLINICAL NOTES FROM ROYAL ALEXANDRA HOSPITAL, FERGUS.

By A. GROVES, M.D., Fergus.

*Intestinal Anastomosis by Elastic Ligature.*

Patient—A boy of fifteen had been kicked by a horse, two years ago, when the small intestine was ruptured in two places. A laparatomy was done and the bowel sutured. Complete recovery followed in a short time without untoward symptoms. His present attack began with severe pain in the abdomen which could only be relieved by morphine or chloroform. Vomiting occurred but was not at all fæcal nor indeed persistent or continuous as hours sometimes elapsed between attacks. Enemata brought away small quantities of fæcal matter, but both pur-

gatives and enemata failed to produce a free evacuation. Tympanites developed suddenly, and at the same time the pain became continuous. A diagnosis of stricture of the intestine with probable adhesions was made and the abdomen was opened by a long incision. The bowels were withdrawn from the abdominal cavity, and two firm adhesions to the abdominal wall separated. A cicatricial stricture was found, the calibre of the intestine at the point of narrowing being about a quarter of an inch. A curved needle threaded with a McGraw Elastic Ligature was passed into the bowel about an inch below the point of stricture carried through the constricted portion and brought out about an inch above it. The ligature, being kept tensely stretched, was fastened by a silk ligature as advised by Dr. McGraw. A continuous Lembert suture prevented any possibility of intestinal contents escaping when the ligature began cutting through. As was to be expected the symptoms of obstruction persisted until the ligature began to cut through, but at the end of forty hours a free evacuation took place, and the case progressed steadily to recovery. The fact that the obstruction is not immediately removed appears to be the only objection to the method in these cases, but where the operation is undertaken in time, and the symptoms are not urgent, the elastic ligature appears to be the very best method of making an intestinal anastomosis.

*Estländers Operation.*

Case I.—A man of forty-five years of age presented himself with an opening in the left chest wall from which large quantities of pus poured out. Three and a half years before, a tube had been introduced at a neighboring hospital, but in some way it had been permitted to drop into the chest cavity where it was allowed to remain. An incision was made extending from the original opening in front to within two and a half inches of the spinal column, sections of six ribs were removed and a piece of stout rubber drainage tube, eight inches long, taken out after an imprisonment of nearly four years, the enormously thickened costal pleura was incised and loosened so that it could be applied to the visceral layer and cut muscular ends were also turned in and stitched so that the cavity was practically filled up. The discharge gradually ceased and the patient went on to complete recovery.

Case II.—A lady who had twice undergone partial operations but who had still a large cavity and a great pus discharge. On account of imperfect drainage her temperature was usually above normal and she had lost flesh to a marked extent. An incision ten inches long gave sufficient space for the removal of the portion of ribs necessary to per-

mit the soft tissues to fall in and be approximated to the visceral pleura. On account of her great weakness it was somewhat doubtful whether or not she could stand the shock of so severe an operation, but although markedly depressed when the work was completed, she reacted well, and at the end of three months had gained twenty pounds in weight. This case illustrates the result that may be obtained when a patient is in an almost hopeless condition as well as the urgent necessity of rapidity in operating.

Class III.—Patient aged thirty-eight years had a right empyema of several months duration from which an enormous quantity of pus escaped through an opening where about an inch of rib had been resected. A long incision through everything down to the bone was made and through this portions of five ribs were removed, the longest piece taken out of any one rib being eight inches, the pleura was incised, loosened and turned in and the cavity further filled up by turning in cut muscles. The patient left the hospital at the end of a month with only a very small discharge, hardly enough to soil a dressing to a slight extent once in twenty-four hours. In doing this operation two things are especially necessary, speed and unwavering thoroughness. The surgeons success will be largely influenced by these two factors, if he is slow he runs a great chance of losing his patient, if he lacks thoroughness he will not have complete recovery. In cutting through the ribs I have found a sharp chisel more useful than anything else. Bone pliers are useful, and so are the various pliers specially designed for operations on the ribs, but a chisel well sharpened meets almost every indication. Ordinarily there is no need of a U shaped flap being raised up nor of multiple incisions. Having explored the cavity with a long probe, a uterine sound is suitable, make the incision in the direction of the long diameter of the cavity and there will ordinarily be no difficulty in removing all the ribs necessary without any secondary incisions. To my mind it is not advisable to cut away the thickened pleura, and it certainly appears like unscientific practice to cut away all the tissues of the wall as suggested by Schede, leaving only the skin and superficial fascia. The removal of any of the soft tissues is not only unnecessary but injurious. It greatly increases the danger of the operation, and if recovery follows the side is weakened and deformed very much more than if all the tissues are left.

# FRESH AIR *vs.* DISEASE.*

By G. E. DEWITT, M.D., Wolfville, N.S.

When using the term fresh air, I mean air devoid of impurities, either from pulmonary exhalations, sewer contaminations, or decayed vegetable or animal matter. The open air may not always be fresh and pure, as there may be present one or more of the objectional elements referred to.

Much has been written of late on hygiene, sanitary improvement, as paramount to a healthy existence. Houses and public buildings have been constructed in the past more with a view to a perfect system of architecture and ornamentation, and non-conducive to the healthy life of the occupants. More earnest and persistent efforts are now being made to adopt a better and more perfect system of ventilation. The change is being brought about by the persistant and practical efforts ot the medical profession in promulgating sanitary laws, the encouragement given to the building of sanatoria and the open air treatment of consumption. We may safely argue that if fresh and pure air is necessary to the well being of the individual to live by and with, it must be and is essentie and indispensable in the treatment of the sick. It is possible that most of the ailments as fevers, rheumatism and other diseases as well, have been coddled too much in an environment where the temperature is kept to 70 or more degrees. It may appear irrational and unsound to advocate the treatment of fever of any type in the open air; but when we are told and know that the tubercle bacilli of consumption will flourish and grow in a heated atmosphere, and do its most deadly work when the temperature is a few degrees above normal, may we not infer that any other disease germs will be more active under the same conditions. I may be met with the objection that we must have our patients suffering with fever where we can produce diaphoresis, and to do this in the open air would perhaps be unwise and unsafe. With some this is not their experience. Diaphoresis can be accomplished in a room to which is admitted the f ee circulation of fresh air as well and conveniently as in a hot room of 70 degrees.

The action of pure air in the treatment of tuberculosis is not directly upon the microbe, we are told, but upon the tissues surrounding it, and if upon the tissues, first through the circulation as its mode of conveyance to the tissues. The same procedure must obtain when the system is invaded with any other disease germ, or to state it briefly pure air

* Read at the London Meeting of the Canadian Medical Association.

acting indirectly through the circulation on the bacilli of consumption must have the same effect upon the germ of any other disease.

Again we find that the inhalation of pure air, or the open air treatment of consumption, has a tonic effect upon the patient; it imparts a feeling of vigor, it stimulates the vital forces to such an extent as to allow the resisting power of the body to destroy the germ, it enables the patient to partake of much more food, an essential to production of resisting power, which after all is the more important factor. If by such means the tubercle bacillus is checked and destroyed, will not the germ of other diseases be subject to the same resisting force? It may be argued that to treat fevers and rheumatism in an unheated atmosphere would be unwise and unsafe—as cold is a vital depressant, and in order to ward off the depressing effect of cold there must be a compensatory force to supply the heat of the body thrown off by radiation.

In the open air treatment of consumption the two main factors in preserving and producing heat are clothing and metabolism. Proper clothing to prevent heat radiation and the ingestion and destruction of fats and carbo-hydrates to increase metabolism. Such food in the acute stage of fever is often impossible, owing to impaired digestion. If however, the emunctories are well looked after, commencing with the alimentary canal, the digestion will soon improve and then with proper and well regulated clothing, the patient can inhale the fresh air without risk and the avoidance of all danger of inhaling the organic impurities of respired air. How often is a convalescence protracted because of vitiated air or an atmosphere laden with respired impurities. On one occasion I was called to see a man who had been bedridden for five years. The room in which I found the patient was smaller than the ordinary bed-room, situated on the north side of the house where the sun scarcely had excess. He was anemic, emaciated, with loss of appetite and had given himself up as past recovery. An examination did not elicit any organic disease; but all of the organs were functionally wrong. Five years previous the man had gone to bed with a real or fancied ailment and for this length of time had inhaled air laden with the toxines of respiration. Taking the patient's wife into my confidence, I told her, that he was being slowly and surely poisoned by his own exhalations and his persistent resistence to allow the air in his room to be cleansed and renovated. After getting the patient out of bed a few times and finding he could manage to walk without much effort, I tried to persuade him to go out of doors, but he declared, to go into the open air, and feel the fresh air on his person, even through a window, would give him a cold and perhaps take his life. I told his wife one day that I thought

we might get the patient into the fresh air by setting fire to his barn. One morning the barn was reported to be on fire, and he got out with considerable alacrity and helped to fight the fire, until it was extinguished. The damage to the barn was slight, but the patient finding that the out door air and exercise and even the excitement did not make him worse, but stronger, he was encouraged to go out every day after and for twelve years he did not need a physician and was able to support his family.

O! the consultations that have been paid for, and fees taken for prescriptions when, what the patient most required was a minimum dose of respired air and a maximum of the fresh and unrespired commodity.

My practice is to get my fever and rheumatic cases into the open air as soon as possible. Twelve months ago I treated a case of chronic rheumatism of the muscels of the neck successfully, by the patient sleeping in the open air on a veranda. For six months previous the ailment had resisted the usual medication with massage until the sleeping room of the house was discarded. An improvement was soon perceptible. The patient made a complete recovery, there has been no return of the malady.

The latter part of June of the present year I was called to see a patient suffering with a toxic neuritis of the sciatic nerve. After prescribing the usual remedies, gaultheria, the salicylates, salol, hypodermics of morphia and atropine to relieve the extreme exacerbations of pain, the application of a hot air apparatus in the patient's room for two weeks, with only temporary relief. I got him out of doors, properly clothed, a change for the better was soon manifest and in two weeks in a tent with the judicious use of massage he made a complete recovery. I do not think his recovery would have been so rapid and complete had he not lived in the open air.

My short experience in conducting a sanatorium for pulmonary tuberculosis, warrants me in corroborating others of much greater experience than I, in treating this disease in sanatoria, who say that incipient tuberculosis can be arrested and cured in the open air, and I may add that I think I am not alone in saying it will not be long before it will be more generally acknowledged that many other diseases of microbic origin will yield more quickly to treatment by a judicious and practical use of fresh air. When we become impressed with the fact that the septic micrococci are more abundant in impure air, or air laden with the toxic impurities from the exhalations of the body, we will more readily believe and realize the necessity of having our patients live in and inhale the pure air where the danger of contact with the septic

micrococci are reduced to a minimum. In advocating the open air treatment for diseases other than tuberculosis, I do not wish it to be understood that I think all diseases can be treated in this way with as little risk as tuberculosis, but I do wish to emphasize the fact that many diseases can best be treated and hastened to recovery by these means. We must not lose sight of the fact that there is much difference between undue exposure and the judicious use of fresh air and when we have learned to live so as to preserve and use it as nature and Providence designed we should, we will not only be fitted with an armamentarium that will aid us much in our encounter with disease, but be better equipped to prescribe the most potent of all remedies, preventive medicine.

## IMPETIGO CIRCINATA.*

By GRAHAM CHAMBERS, B.A., M.D., Toronto.
Physician and Dermatologist, St. Michael's Hospital, Physician Emergency Hospital, etc.

AT the present day the term impetigo is applied to several eruptions of the skin caused by pyogenic bacteria. In some ways this classification is unsatisfactory as two or three of the eruptions are distinct clinical conceptions. This is recognized by Unna, Sabourand and other investigators, who have attempted to solve the question of the rôle of pus germs in diseases of the skin.

Unna believes that there are at least four distinct impetigos, namely impetigo contagiosa of Tillbury Fox, impetigo staphylogenes or impetigo of Bockhart, impetigo circinata, and impetigo streptogenes.

Sabourand makes two divisions cover the whole field. He believes that the streptococcus causes impetigo contagiosa of Tilbury Fox, while the impetigo of Bockhart is always due to staphylococcus aureus or albus. Other physicians who have investigated the question hold views not in accord with either of the above authorities. It is quite evident, therefore, that the question of impetigo is as yet in an unsettled condition. There are several reasons why this should be so, probably the principal being our somewhat limited knowledge of the nature and action of pus germs.

From a clinical standpoint it appears to me that there are at least three distinct skin diseases which are now classed with the impetigos—namely, impetigo contagiosa of Tilbury Fox, impetigo of Bockhart, and impetigo circinata. In addition to these, one meets with cases which, from the character of the lesions, do not appear to belong to any of the above eruptions. These may represent other forms of impetigo or be due to mixed infection.

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

Impetigo contagiosa is a very common disease, particulary in children. It is characterized by the formation of vesico papules, vesicles, or blebs, the contents of which tend to become sero-purulent or purulent. In two or three days, these lesions are replaced by yellowish-green or yellowish-brown crusts. The eruption extends by fresh inoculations. The lesions are superficially situated in the skin. The disease rarely, if ever, leads to the formation of furuncles. This character suggests that impetigo contagiosa is not due to the infection of staphylococcus aureus or albus which are the common causative agents of boils.

Impetigo of Bockhart is of extreme interest as it has the same etiology as coccogenic sycosis and furunculosis. The lesions are always situated at hair follicles. The Impetigo pustule is superficially situated and soon dries up to a thin crust. However, in nearly every case of this type of impetigo the staphylococcus invades more deeply into the follicle, producing folliculitis, furuncles, whitlows, etc. On the other hand, a boil may be the starting point of an eruption of impetiginous lesions. This is frequently observed in the skin in the vicinity of boils.

Impetigo circinata, the form to which I wish to draw special attention, is quite a different type of disease. In contrast to impetigo contagiosa it is most frequently found in adults. The disease is usually contracted in barber shops and is highly contagious. During the last five years the disease has been very prevalent in Toronto Scarce a month passes without a number of cases, generally traceable to a common source, being brought to my notice. In each outbreak there has been from two to thirty cases. The barber shop is such a common source of infection that I usually designate the disease "Barbers Impetigo."

The character of the lesions are usually well defined. They are, as a rule, situated on the face, forehead, ears and neck. In a few cases I have observed small lesions on the wrists. The appearance of the eruption is frequently preceded for some hours by slight itching. The lesions are primarily small vesicles about the size of the head of a pin. They are rarely observed as they readily rupture leaving a small exuding surface. This increases in size by centrifugal extension, forming lesions varying in size from a split pea to a quarter of a dollar. The surface of these lesions is either moist, exuding a clear serous discharge, or covered with crusts. The process of vesication may sometimes be observed in the periphery of the lesions in the form of a slightly raised ring, hence the name impetigo circinata. Vesicles or pustules, except the minute vesicles which are sometimes observed in the early stage of a lesion are never seen; nor does the infection ever extend deeply in the follicles. In fact, the superficial character of the eruption is one of the most marked symptoms of the disease.

The lesions as a rule are discrete. However, in a small proportion of the cases they coalesce, forming a patch covered with crusts and seropurulent exudate. The eruption then resembles very closely pustular eczema. According to my experience, this confluent type of impetigo circinata is found more frequently in children than in adults. In two cases in one family which recently occurred in my practice the father had the discrete, while a girl of three years of age had the confluent form of the disease.

With regard to bacteriology of impetigo circinata nothing definite is known. It is believed to be due to a pus coccus but the particular germ has not been isolated. During the last two years, I had frequently grown cultures on agar from the exudate of the lesions. When the lesions were fresh, as a rule, a pure culture of staphylococcus albus was obtained; but cultures made from older lesions usually had a yellow color due to staphylococcus aureus. These results suggest that the disease is caused by staphylococcus albus.

The diagnosis of impetigo circinata presents few difficulties. It has to be differentiated from pustular eczema, and other forms of impetigo. When the lesions of impetigo coalesce the resemblance to pustular eczema is very marked; but the history of the development of the eruption of impetigo from isolated foci, together with the presence of discrete lesions in the skin in the neighborhood of the large patches, will give the clew to the diagnosis. Moreover, in eczema there are other characteristic symptoms such as intense itching, more or less infiltration of the skin.

Impetigo carcinata differs from the impetigo contagiosa by the absence of vesicles and pustules, except the tiny vesicles which may occasionally be seen at the commencement of the disease and the slight vesication or pustulation at the periphery of a lesion while it is increasing in size. On the other hand, in impetigo contagiosa, vesicles, blebs or pustles are usually present. Moreover, impetigo contagiosa is essentially a disease of childhood, whereas impetigo circinata usually occurs in adults.

The lesions of impetigo of Bockhart are, as a rule, quite different from those of the circinate form of the disease. In the former the staphylococcus invaded the hair follicles, producing folliculitis and furuncles which are never seen in uncomplicated cases of impetigo circinata.

The treatment of the circinata form of impetigo which has given me the best results is quite different from that of the other forms of the disease. In impetigo contagiosa a mild antiseptic, such as diluted ammoniated mercury ointment, effects a cure in a few days.

In the impetigo of Bockhart the same treatment may be used; but where the staphylococcus has set up a folliculitis, epilation is usually required. In some of these cases, lotions are more efficatious than ointments. Shaving of the diseased areas, as a rule, is useful. In impetigo circinata the medicinal agents should always be applied to the lesions in the form of lotions. They should be antiseptic, soothing and astringent. If the lesions are irritable and moist, I have found that ointments are useless. This I think is an important observation, as it is usually taught in text books on dermatology that application of antiseptic ointments is an efficient form of treatment in all the forms of impetigo. The lotions that I have found most useful are those containing sulphur. blackwash, zinc sulphate lactate of lead, boric acid or acetate of aluminium. In many cases, a lotion containing ʒii. of precipitated sulphur in ʒiv. of lime water makes an excellent application. When the lesions become confluent and the characters of theeruption approach in appearance those of postular eczema. then I treat the case in a manner similar to that which I use for moist eczema. I remove the crust by boracic acid poultice and then apply a lotion containing a ʒi. of liq. plumbi subacet to ʒviii. of milk. A very good plan is to apply a boric acid poultice during the night and the lactate of lead lotion every hour during the day.

## A CASE OF SARCOMA OF THE SMALL INTESTINE, WITH A NOTE ON THE SIGNIFICANCE OF "REBOUND PAIN" IN CERTAIN ABDOMINAL INFLAMMATORY CONDITIONS.

By J. M. ELDER, M. D.
Surgeon to the Montreal General Hospital, Assistant Professor of Surgery, McGill University

*Case Report. H. N.*, Aet. 30, admitted about noon, July 30th, 1903

Complaints. Pains in the stomach.

Present Illness. Two days before admission, patient felt a slight pain in his abdomen associated with general malaise, but remained at work and took his meals as usual. His bowels moved and he noticed some tenesmus and slight nausea after stool, but no vomiting.

The following day he was obliged to stop work and took to bed. The pain had increased but there was no vomiting. Had another stool, which was quite painful.

On the morning of the day of admission he had very acute pain at stool, and also on trying to pass urine. He felt somewhat feverish and called in a physician who sent him to the Montreal General Hospital, where he came under my care in Ward "L."

*Examination on Admission.* Patient is a young man, fairly well nourished. Face somewhat pale, expression anxious, mucous membranes show moderate anaemia. Tongue lightly coated with whitish fur. Complains of pain across the lower part of his abdomen. T. 102°, P. 92, R. 24.

*Abdomen* rather full, symmetrical, not moving much with respiration.

On palpation there is acute tenderness and resistance over the whole of the lower zone, more marked on the right side. In the upper zone there is not much tenderness or muscular resistance.

The "rebound pain" sign was very well marked. (See note.)

There was evidence of some distension of the bladder, giving dulness for about one inch above the symphysis pubis.

*Rectal Examination* showed an acutely tender mass, high up on the right side of the pelvis.

Urine was drawn off and supra-pubic dulness disappeared. No mass was palpable through the abdominal wall, even under ether anæsthesia. Urinary examination gave negative findings.

*Past History.* Patient stated that he had suffered from recurrent attacks of abdominal pain for ten years, severe enough to keep him away from work for a few days each time.

He never had any severe vomiting or, as far as he knows, much fever with these attacks; but a physician, who saw him during such an attack four years ago, regarded it as appendicitis, and advised him to have his appendix removed, which he declined.

He was in average health up to December, 1902, when he had quite a severe haemorrhage from the bowel, severe enough to cause faintness and sweating. The bleeding was preceded by a slight amount of rectal tenesmus, but no pain or vomiting, though he felt nauseated. Within a space of three or four days he passed fresh blood five times at stool. The bleeding then stopped and he went to Bermuda to recover. He improved rapidly and on his return weighed 130 lbs.

He had only been at work about two weeks when, on April 29th, 1903, he had another severe haemorrhage, which he attributed to a strain while at work. He bled four times at this period, the blood was generally, but not always, mixed with faeces. At this period there was no severe abdominal pain, but sometimes he felt a dull ache across his abdomen, passing at times to the perinæum.

On May 2nd, 1903, he was admitted to the medical wards of the Montreal General Hospital, and the following is from the case report written at that time:—

*Past History.* As above.

*Family History.* One brother died of tuberculosis.

*Status Praesens.* Patient somewhat emaciated and rather pale, weight 109¾ lbs. Appetite lost, mucous membranes pale. Dyspnoea and palpitation on exertion since December, 1902. No cough or expectoration. Bowels—regular. Some slight burning pain on passing urine.

*Examination of Abdomen*, negative, except for slight tenderness over the pubes which passed off in a day or so.

*Rectal Examination*, negative, no haemorrhoids. Had one or two tarry stools after admission, but later no blood could be found in faeces, even by microscopical examination. No tubercle bacilli in faeces, and no evidence of pulmonary tuberculosis.

*Test Meal*, negative, and nothing could be made out by inflation of the stomach.

*Blood Examination*, gave no typhoid reaction. Red cells, 2,935,000; white cells, 8,300. Haemoglobin, 45%.

*Urine*, normal.

For the first two weeks in the hospital at this time the patient had slight evening rises of temperature, the highest reached being 100 2/5°, but generally about 99 3/5° reaching normal in the morning.

Under rest and iron the condition improved rapidly, weight increasing from 109¾ lbs. to 123½ lbs. during the five or six weeks stay in the hospital.

No recurrence of the hæmorrhages.

No diagnosis as to the cause of the hæmorrhages could be arrived at, examination showing nothing more than the anaemia of moderate grade which had the characters of a secondary anaemia.

After leaving the hospital the patient remained fairly well for five or six weeks, and had been at his usual occupation for three weeks when the present attack set in.

*Operation.* With a probable diagnosis of acute non-perforative appendicitis, operation was undertaken on the afternoon of the day of admission, when the following conditions were found:

On opening the peritoneum free fluid was found present. The fluid was clear and gave no growth on serum. The peritoneum showed no signs of inflammation.

The appendix was found in its normal position, and not in the pelvis, as we expected. It was not diseased except a partial constriction and adhesions as evidence of former attacks. It was removed by simple ligature and cauterization of the stump.

On exploring the pelvis, a cystic tumour was discovered about the size and shape of a small orange. It was adherent to a coil of small bowel, which it seemed to have dragged down into the pelvis with it, and was also firmly adherent to the floor of the pelvic fascia. This adhesion to the pelvic fascia was clamped and cut, and the tumour delivered with the attached coil of small bowel.

It was then found that the tumour sprang from the ileum, about five inches from the ileo-caecal valve. The tumour was sessile, with rather a small base. Large vessels ran from the bowel wall into the tumour.

The tumour was removed by an oval lateral incision in the wall of the bowel at the site of the growth, and suturing the resulting wound in the bowel wall without complete resection.

The pelvic adhesions were tied off and the abdomen closed without drainage. No enlarged glands in the mesentery or elsewhere, could be discovered at the time of operation. So far as could be determined, the other organs appeared to be healthy.

The Pathologist's report on the tumour, furnished by Mr. W. G. Ricker, was as follows:—

"Specimen consists of a single globular mass, weighing 98 grammes and measuring 6.5 x 5.2 x 5.0 C.M.

The surface is smooth and glistening except for an area of 2.5 x 5.0 C.M., where it is adherent to intestine, a portion of which has been removed in area 3. x 6. C.M., and for a small area of adhesion which has been broken down.

Near the centre of the former portion are two openings .5 C.M. in diam., through which a probe may be passed for several C.M. [These openings before operation had connected the interior of the tumour with the lumen of the gut.]

The smooth surface shows several large blood vessels arising from the intestine. The tumor shows five distinct nodular elevations with a base of I .5 C. M. and height of about .5 C. M. The color of the surface is dark bluish with several gray areas. On palpation the tumor consists of firm masses of tissue corresponding to the gray areas while other portions are soft and give distinct fluctuation.

On section the tumor shows a grayish substance more or less mottled in places by brownish areas. This substance is glistening on the cut surface, has an indistinct appearance of lobulation, is firm and on strong pressure exudes a quite clear fluid resembling serum. In places this is stained with blood. The greater portion of the tumor is cystic, spaces being found which measure 2 C. M. in diameter, and others of smaller

size. These cysts contain red blood clot. The walls of the cystic portions are ragged and necrotic and surrounding tissue has a brownish tinge and is quite friable. Many of these cysts communicate with each other and with the two openings in the portion of intestine described above.

*Mic. Exam.* Sections were cut through the edge of the tumor next the intestine. The mucosa is that of the small intestine and appears normal. The basement membrane is intact and nowhere do the glands appear distorted. The submucosa is of normal thickness and appearance. The layers of the muscularis are seen to be separated in the form of the letter Y. Between the branches is a small mass composed of spindle shaped cells bound together by a very delicate reticulum. In this region individual muscle fibers are seen separated by columns of these spindle cells. External to the muscularis the tissue is composed of a mass of these spindle cells, while here and there the tissue has somewhat of a fibrous appearance.

Other portions corresponding to the firm, gray areas show solid masses of spindle cells. The diameter of these cells is approximately 15-20 M. M., and the length several times as great.

Pathological Diagnosis: Spindle-celled Sarcoma. Probably arising from the intermuscular connective tissue."

The convalescence was rapid and uninterrupted, patient leaving the hospital on the 23rd day after operation and being able to walk with slight assistance. Weight on leaving the hospital on Aug. 23rd was 112 lbs. Patient reported Oct. 24th, 1903. Has felt quite well since leaving the hospital. Weight has steadily increased up to 120 lbs. at present. Appetite good, and bowels move regularly every day without any laxative. He was about to return to his work in a few days.

In connection with this case report, we wish to refer to a report of five cases of sarcoma of the small intestine and a very full discussion of the subject by Dr. E. Libman, of Mount Sinai Hospital, New York, which appeared in the American Journal of Medical Sciences for Sept. 1900—p. 309.

He states that in three of these cases, the clinical picture closely resembled appendicitis, a resemblance not previously noted by any writer.

In the present case the symptoms and physical examination were both strongly suggestive of acute appendicitis, and this evidence, combined with a definite history of former attacks, seemed fairly conclusive. In addition to this the abdominal condition was hourly becoming worse.

In Libman's first two cases, although a history of an acute illness was given, and one case had been sent to the hospital as appendicitis, a careful physical examination revealed a large abdominal mass, not especially tender, with signs of free fluid in the peritoneum, so that a probable diagnosis of new growth was made before operation.

In the third case, the patient was a young man, eighteen years of age, who gave a history of only one day's illness.

On the day before admission he was seized with very severe pain in the right lower quadrant of the abdomen associated with vomiting. His bowels had moved on the day of onset. On examination he showed evidence of general peritonitis, and by rectum a doughy mass was felt high up. There was no history of previous attacks, but it was thought that the peritonitis was probably due to a perforative appendicitis. At operation the jejunum was found perforated from the infiltration of its walls with sarcoma. (Cf. Dr. Molson's case infra.)

This case forms an interesting comparison with ours, where the breaking down area was in communication with the bowel only, and no doubt was the source of the severe hemorrhages for which he was under treatment in the medical wards and outside the hospital.

In the fourth case, the patient gave a history of irregular abdominal pain for two weeks, followed by severe pain, especially in the pelvis, for four days. There had been frequent urination for one week, no fever, chills or vomiting. Examination showed an emaciated patient T. 101°. A tender mass made out in the lower abdomen more to the right side, and a symmetrical bulging could be felt by rectum.

At operation, a hemorrhagic, cystic tumour was found springing from the ileum, and firmly adherent to the floor of the pelvis.

A beginning diverticulum was present at the point where the growth sprang from the bowel. The growth was removed with resection of two inches of intestine, but the patient died three days later from peritonitis.

Microscopically the tumour was found to be a spindle-celled sarcoma, and at autopsy no metastases were found.

This case tallied pretty closely with the one we have just reported. In our case, however, no mass was palpable through the abdominal wall but the whole of the lower abdomen was tender, especially on the right side. The mass felt by rectum, in our case, was acutely tender. The findings at operation were very similar, except that here the tumour was somewhat larger and farther from the valve than was the case in our patient.

A few of the concluding notes from Dr. Libman's article may be of interest to those who have not an opportunity of reading the article in full. As illustrating the *rarity* of the condition, he states that in sixteen years no case of intestinal sarcoma was observed in the Berlin Pathological Institute, with its wealth of post mortem material.

Thirteen cases were seen at Prague in fifteen years out of a total of 13,036 autopsies. Twelve cases in twelve years at Vienna. When it does occur intestinal sarcoma is generally in the small intestine or rectum.

It has been observed in all ages, but most often between the ages of 20 and 40.

It is seen twice as often in males as females.

Flexner has described bodies seen in the sections of the growths, which he believes to be protozoa, and has hinted at an infectious origin of the growths.

A characteristic feature of intestinal sarcomata is the absence of any tendency to stenosis of the bowel by their growth. This is explained on the ground that sarcoma infiltrates the muscular coat of the bowel, producing a local paralysis which tends to dilatation, rather than stenosis, at the site of growth.

When obstruction does occur, it is from mechanical interference, such as invagination, twisting of the mesentery, or from adhesions.

This is in contrast to carcinomata which tend to produce obstruction by stenosis of the gut.

The tendency of the growths to get into the pelvis, and form adhesions there, has been often noted, and was well illustrated by our case. It is probably at first due to gravity and subsequent adhesions due to degenerative inflammations in the tumour itself.

Symptoms may arise from pressure of the tumour on important structures, such as the vena cava, the bile or pancreatic ducts, or the ureters. Breaking down in the tumour may lead to perforation with peritonitis, or to hemorrhage, either into the peritoneum or into the bowels, as in this case.

This latter symptom does not seem to have been noted, or at any rate to have attracted much attention in the cases reported, though it gave such a definite preliminary history in this case.

As regards metastases, these are rare, or none, in spindle-celled sarcomata, frequent and extensive in lymposarcomata.

They seem to be, however, rather extensions of the growth by continuity than true metastases.

As regards prognosis, unless operation is done fairly early, it is almost invariably fatal, the usual course of the disease being less than nine months in duration. The explanation of the sudden onset of acute symtoms, after a long latent existence of the disease, is supposed to be due to hemorrhages occurring in the growth, or to some mechanical factor, such as twisting of the mesentery or of the bowel to which it is attached.

In the latter case, the "peritonism" is analogous to that produced by volvulus or by the twisting of the pedicle of an ovarian cyst.

In the Hospital report of the Montreal General Hospital for 1882, we find a case of Sarcoma of the small bowel reported under the care of Dr. Molson (Can. Med. & Sur. Journal Vol. 10, p. 601). The patient was very weak, and had marked ascites and general anarsarca. He lived only four days after admission. At the autopsy, Dr. Osler found a very large tumour, involving about 18 inches of the jejunum, the walls of the gut being 6 to 8 inches thick in places. The lumen was expanded. There were metastases in the kidney. It was a large round-celled sarcoma and the history of the disease extended over six months only.

NOTE. The sign which made me urge early operation in this case was the presence of "rebound pain."

This sign, although an old one, does not seem to get the routine use in practice, or the place in current text books that I think it deserves. I may therefore say a few words as to its use and significance.

In examining the abdomen of a patient suffering from acute abdominal symptoms, palpation often determines, better than anything else, the acuteness of the process and the urgency of the case.

In such a case one is often able to press quite deeply into the abdomen without causing much pain. This must be done gently at first and the pressure gradually increased, and is done most easily in the quadrants not the immediate site of the disease; and these should be first examined, to accustom the patient to the process.

If this is done, and the pressure suddenly relieved by quickly removing the hand, the abdominal wall will rebound, and the amount of pain produced is the measure of the degree to which the sign is present.

The explanation of the pain and of its significance seems to be as follows:—

It is taken as indicating the presence of tension in an inflamed viscus, those most often concerned being the appendix and Fallopian tubes.

By pressure on the abdomen the contents are crowded laterally, and the intra-abdominal pressure around the inflamed viscus raised. When

done gradually, this may cause relatively little pain. When the hand is quickly withdrawn, however, there is a sudden lessening of pressure outside the viscus (appendix or tube) and, if the fluid within be under tension there is a definite shock to the wall as the pressure change is compensated.

This causes sharp, sudden pain, which is intensified by its unexpected character, and the patient generally gives an involuntary start or cry, at times almost bounding from the bed.

It is, perhaps, a sign most valuable in appendicitis, where the question of when to operate and when to wait is so important.

If it be present, there is tension and danger of perforation, but perforation has not yet occurred.

This warning is especially valuable in cases of the gangrenous type, where the constitutional disturbance may be comparatively slight, but the rapidity with which perforation may occur is unusually great. On the other hand, it is absent where perforation has already taken place and tension has been thus relieved

In such cases there is generally a history suggesting perforation and the absence of this sign is useful only as confirmatory evidence. A marked instance of its value occurred in a case under my care during the past summer.

Patient was a young man who had been ill for one day only. He gave no history of former attacks. Temperature and pulse normal. Abdomen acutely tender in the right lower quadrant and rebound pain well marked. Immediate operation was advised, and at operation a few hours after admission, a distended gangrenous appendix was removed which would surely have shortly perforated. There were no limiting adhesions.

In three cases seen about the same period, perforation was diagnosed and found at operation, the sign being absent in each case.

It is also very useful in another class of cases, in which it is often very difficult to determine the presence or degree of actual disease, owing to the patient being neurotic or malingering.

Instances are not wanting where too much or too little dependence has been placed on the nervous element in explaining the symptoms in such cases.

From the unexpected way in which the pain is produced it is found to be absent in those cases where a neurosis is the main factor or where the patient is malingering.

If it occurs in a neurotic subject however, it is pretty definite evidence of actual disease and the treatment must be regulated accordingly.

The explanation of the presence of the sign in this case of sarcoma is probably to be found in the fact that there was a hollow, hæmorrhagic tumour directly connected with an inflamed viscus—the inflammation being sufficient to produce a condition of general "peritonism," to use Treves' term.

For valuable assistance in the preparation of this article, I am much indebted to my then House-Surgeon, Dr. E. Hamilton White, now of Montreal, for accurate notes kept at the time, as well as for a condensed history of the medical case report; and also to the then acting-Pathologist, Mr. W. G. Ricker, of the Johns Hopkins Medical School, for a very careful examination of, and report upon, the specimen, as well as for a review of the pathological literature of the subject.

## THE PATHOLOGY OF TUBERCULOUS ARTHRITIS—WITH SPECIAL REFERENCE TO THE KNEE.*

By JOHN STEWART, M. B., Halifax, N. S.

AS I have been asked to deal with the pathology of tuberculous arthritis, and as the bacillary theory of tuberculous disease attains its majority in this year, for it is just twenty-one years since Koch's great discovery, I may be permitted to give a short resumé of the pathological work which culminated in the discovery of the tubercle bacillus.

The term "tubercle" is an ancient word in medical literature. Celsus frequently uses it. Etymologically it means a small lump. The anatomist describes the tubercle of the tibia, or the scalene tubercle; the dermatologist speaks of a tubercular syphilide, and there is a condition known as the painful subcutaneous tubercle. And formerly the pathologist applied the term "tubercular" to any nodular or lumpy growth. It was in this anatomical sense used by John Hunter. But the pathological meaning of the word is now restricted to a definite kind of nodule, with very definite pathological properties.

The pathological study of tubercle may be said to have begun about one hundred years ago. In the same year in which John Hunter died (1793), his nephew, Matthew Baillie, published his Atlas of Pathology, the first of its kind and it gave the first accurate description of tubercle as found in the lungs. About the same time, and in the early years of XIX century, Laennac and Bayle in Paris were making clinical and pathological studies of pulmonary tuberculosis and beginning the long argument about the gray and the yellow tubercle, which was to rage for nearly a century. Laennec made two most important observations,

* Discussion at meeting of Medical Society of Novia Scotia Antigonish, July 2, 1903.

He was the first to show that the gray tubercle developed into the yellow, or caseous tubercle (though this was denied by many), and he maintained that tuberculous tissue existed in a diffuse, or infiltrating form as well as in the nodular variety. He also pointed out the similarity in the course of tuberculous disease to that of the infective fevers. These observations introduced a distinctly pathological notion in the meaning of the word tubercle.

During the next fifty years very little progress was made; the chief advance being in a growing conviction of the infective nature of tubercle. And although Nelaton had shown (1837) that the anatomical characters of scrofulous bone were the same as those of tuberculous tissue, few believed in the identity of these diseases. Men spoke of strumous glands, scrofulous joints, and tuberculous lungs, and did not recognize a common factor. The next quarter century, however, was one of rapid advance. The introduction of the modern microscope, and of the methods of experimental pathology brought about a period of immense activity in pathological study. Let us recall the position of affairs about the year 1875. In the first place the histology of tubercle had been pretty thoroughly worked out, and we were familiar with the constituents of the tubercular nodule, the giant cell, the epithelioid and the round cells. The microscope had also demonstrated the identity from a histological point of view of strumous, scrofulous and tuberculous tissue, and, following the nomenclature of Virchow, this kind of tissue, with similar forms found in lupus, leprosy, and syphilis, was termed "granuloma."

In the second place, the old conflict of the gray and the yellow tubercle was still going on. The French School, following Laennac held that the gray, or miliary tubercle was the initial lesion and that the tubercle, or caseated mass, was a consequence. The German school, headed by Buhl and Niemeyer maintained that miliary tuberculosis was always secondary to a caseous deposit already existing in the tissues, which, might be due to various causes. But there was a third point of more importance than anatomical structure or causal relationship, namely the pathological character of tubercle and its etiology. Ever since the time of Laennec the idea of the infective property in tubercle had been more or less clearly before the mind, but it was the experimental work of Villemin that first afforded convincing proof of its infectivity. He published the results of his researches in 1865. He proved the inoculability of tubercle, and also showed that the so-called scrofulous tissue, inoculated into healthy animals, was capable of producing miliary tuberculosis. And yet other pathologists endeavoring to repeat

his experiments arrived at different conclusions. It was held that the inoculation of almost any kind of material might set up tuberculosis, And so it was that the leading English text book of pathology, in 1875. stated that "no specific inoculation is necessary for the development of tuberculosis." But Villemin was right and, as years went on, his experiments carefuly repeated, and carried out with all the precautions indicated by the rising science of bacteriology, pointed conclusively in one direction. It became impossible to doubt the existence of a virous of some kind, and the pathological concept of tubercle was a chronic infective granuloma. Cohnheim, in the second edition of his work on general pathology, discussing the results of these experimental researches, says, "All these facts speak, as I think, so eloquently and "pointedly for the *infective nature of tuberculosis*, that we cannot allow "ourselves to be shaken in our conviction by the circumstance that the "direct demonstration of the tuberculous virous is still an unsolved "problem." This was in 1881. He had not long to wait for the solution. At a meeting of the Berlin Physiological Society, on the evening of March 24, 1882, Robert Koch announced his discovery of the tubercle bacillus.

How does the tubercle bacillus get into the knee-joint? There are three ways in which we may become infected by the tubercle bacillus, by inhalation, by ingestion. by inoculation. Now in studying the infective diseases we have to note two factors, th · soil and the seed, the infective and toxic action of the germ, and the protective and immunising action of the tissue cells. And it is a difficult problem. Conditions are varying; reactions are intricate; observations are conflicting. Remembering the past, we ought not to be too positive in our conclusions.

But we may feel pretty sure that under some conditions the tissues are more than a match for the invading bacillus and that it is destroyed before it has done any damage. It is probable that every one of us, is at one time or other, and perhaps frequently, the unwilling and unconscious host of the tubercle bacillus. Where the bacillus has effected a lodgement it acts as an irritant, and the re-action of the organism is seen in the proliferation of the epithelioid cells, with a few giant cells, surrounded by an envelope of leucocytes. The bacilli are found in the central part of the nodule, not among the leucocytes. In fact, the very formation of the nodule seems an effort on the part of the organism to check the advance of the invader. And sometimes the leucocyte envelope gives place to a fibrous capsule and the bacillus is shut in; then we have "quiescent tubercle." But no sooner is the tubercle formed than it

begins to degenerate ; the central part undergoes caseation. This caseation is one of the most characteristic things about tubercle. The pearly gray miliary tubercle is transformed, as Laennec held, into yellow tubercle. And when several tubercles have merged together, and the caseating process has extended, large, irregularly shaped caseous masses are the result.

When the resistant powers of the tissues are insufficient and the tuberculosis advances, there are three routes open for it. The first is by direct continuity of tissue. While some tissues such as serous membranes are particularly sensitive to the action of the tubercle bacillus, and others, as muscle, very resistant, the tendency of the tuberculous process is to advance steadily, attacking everything in its way. This method of progress is slow, and quite localized. The most common path of advancing infection is by the lymphatic system. The tubercle bacilli inhaled into the air passages are soon found in the submucous lymphatics, and then in the bronchial glands. Bacilli taken into the alimentary canal reach the mesenteric glands. The cervical glands may be infected from the lymphatics of the mouth and pharynx. But there is a third route, and to reach the joints the tubercle bacilli must get into the blood current. A caseating focus in the lung may break into a blood vessel, a caseating mesenteric gland may return its bacilli and their products into the lymphatics and thence through the thoracic duct into the venous system, and there are also direct anatomical anastomoses between the smaller blood vessels and lymphatics. It is certain that in whatever way they reach it, tubercle bacilli occasionally circulate in the blood.

Now, what determines their deposit in joints ? We know that synovial membranes like serous membranes are readily attacked by tubercle. Then, the arrangement of the blood vessels in the cancellous tissue of bone may have some part in determining the deposit of tubercle. Cancellous tissue is very vascular, and contains large venous sinuses. In these the current of blood must be very slow, and the bacilli, which in other tissues, are swept swiftly on in the blood stream, float slowly through these venous channels and have time to subside, and there come in contact with the endothelium of the blood sinus which is soon attacked. Cheyne has frequently demonstrated the direct development of the endothelium cells of blood vessels into epithelioid cells of tubercle.

And, finally, a joint, even if it has the advantage of a very free circulation is a part subject to a very great strain and what may be called local fatigue, and anything that lowers vitality disposes to an attack of tubercle.

There are two types of tuberculous arthritis, the one commencing in the synovial membrane, the other in the articular end of the bone. In the synovial form the membrane becomes swollen and hyperæmic. The synovial fluid is not increased in bulk but becomes turbid. There is an increase in the swelling and vascularity, the deeper layers become fibrous, the superficial are transformed into a granulation tissue of a peculiar soft gelantinous consistence, hence the name one very common of "gelantinous degeneration." These changes are seen especially in the synovial fringes they grow in bulk, they fill up the angles of the joint and creep over the cartilage. At last the whole is transformed into granulation tissue, opposite surface may coalesce and the joint cavity may become obliterated. At this stage the joint has the appearance of a synovitis, in the characteristic shape, and the bulgings at the sides. The process may be arrested here, a fibrosis taking place with fibrous ankylosis. If the disease extends the ligaments and capsule are soon affected, and they swell and become œdematous and pulpy, the characteristic shape of the joint is lost, it is globular or fusiform, with no special bulging, as all parts are equally softened. The natural color of the skin is still preserved, hence the name given by the Elizabethan surgeon, Richard Wiseman, "White Swelling." Owing to the great softening of ligaments, dislocation may occur, the tibia being drawn back and behind the femur. The granulations of the synovial membrane attack the cartilage and grow into it, gradually perforating it and attacking the bone. The cartilage may peel off in flakes, as in septic inflammation. The bone becomes carious and shows caseating masses, or sequestra, with fungating granulations, and if pyogenic germs gain access we have a mixed infection and true suppuration. This is the usual type of synovial disease. There are three other forms. One is acute miliary tuberculosis, only seen in an acute general infection. Another is the limited thickening, generally seen in the knee joint, resulting in nodular or polypoid growths. And a third is tuberculous dropsy of the joint, the synovial membrane is slightly thickened or coated with fibrin and there is a quantity of thin turbid fluid, often containing rice-like bodies. This is generally seen in young adults, rarely in children, and when it occurs in old people the fluid is as a rule purulent, an empyema of the joint. The synovial type of disease is present in about 25 per cent. of all cases. It is more frequent in the knee than in the hip or elbow.

The osteal type of arthritis results from the deposit of the bacillus in the cancellous tissue. In the knee this is usually in the low end of the femur, Rarely it is primary in the patella. The result of the tub-

erculous process is either the formation of soft caseating deposits, or sclerosis of the bone with separation of sequestra. In either case the infection extends towards the joint and towards the periosteum. If it should happen that the extension is more rapid toward the periosteum or that the surgeon detects the condition and cuts down on the diseased area, the joint cavity may escape. Otherwise the tuberculous ulceration, true caries, works it way toward the joint, erodes the cartilage and attacks the synovial membrane, setting up all the changes which we have already noted in the primarily synovial type.

Perhaps the most important practical point in the pathology of tuberculous arthritis is the recognition of the fact that the disease in the majority of cases occurs in the articular end of the bone, and that if this is detected and the diseased focus removed by timely operation, the disastrous results of extension into the joint cavity may be averted.

## THE TREATMENT OF TUBERCULAR ARTHRITIS—WITH SPECIAL REFERENCE TO THE KNEE-JOINT.*

By N. E. McKay, M.D., C.M., M.R.C.S., (Eng.)
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THERE are broad general principles which should govern the treatment of all inflammations. For example, the affected part should be given absolute physiological rest, and, if possible, the cause should be removed, and everything which favors the growth of micro-organisms should be got rid of, and fresh infection should be guarded against. If there be any constitutional dyscrasia present attend to it as well.

To treat any disease intelligently, we must understand its pathology, causation and natural tendency. In tubercular arthritis we have to deal with (1) enfeebled tissues, inherited or acquired, and (2) tubercle bacilli. The enfeebled tissues or cells are unable to resist the action of these organisms or do so but very feebly ; and the tubercle bacilli and their toxines excite chronic inflammation in the part which results in the formation of tubercular tissue, the characteristic feature of which is its tendency to degeneration and caseation. Chronic inflammation thus induced weakens the already enfeebled tissues still more, and so encourages the spread of the disease locally. Then again, any injury or irritation from whatever cause aggravates the affection and helps to keep up the inflammatory process. The treatment of tubercular arthritis should, therefore, be directed towards removing, as far as possible, the causes and diseases that perpetuate the disease. The treatment resolves itself into general and local.

*Discussion at meeting of Medical Society of Nova Scotia, Antigonish, July 2nd, 1903.

As tubercular disease occurs in persons with weak constitution, the general treatment should be constructive in its nature. It should be a tissue builder. The weak tissues and cells must be strengthened and toned up and thus put in better condition to defend themselves against the ravages of the tubercle bacilli and their toxines. The system must be built up by good hygiene and an abundance of fresh air, either by the seashore or inland, the locality being determined by the idiosyncrasy of the patient, and a good generous diet. The food should be easily digested. A meat diet is to be preferred to a vegetable one. It is claimed that vegetable food, rich in potash salts, favors the growth of tubercle bacilli (Bidder.)

Cod liver oil, iron, quinine, creasote, guaiacol and the bitter tonics are the drugs usually relied upon for building up the system in tubercular arthritis. General treatment in tubercular arthritis does not avail much unless it is supplemented by local means, and if a choice has to be made between the two methods the local should first be tried.

Local treatment may be divided into two classes, viz. :—(1) Expectant and (2) Operative. Which plan to adopt in any given case will depend upon (1) the surgeon's views of the curability of tubercular joint disease by the expectant plan, or (2) his ideas of the dangers of general infection from local foci, or (3) whether or not the disease has ended in caseation—the formation of an abcess.

By the expectant plan of treatment the tubercle bacilli are not attacked directly but indirectly by rendering the tissues better able to resist their destructive action. These organisms get in their deadly work largely by the chronic inflammation they induce and so paves the way for local extension of the disease. By it the tissues and cells are weakened and rendered less able to defend themselves against the ever aggressive attacks of the tubercle bacilli. Treatment should, therefore, be directed towards removing, if possible, all the local agents that may be concerned in the production of the inflammatory process. First, remove the cause, if possible, but unfortunately this cannot be done in infective diseases under the expectant plan ; secondly, give the part absolute physiological rest and elevate the deceased limb. This is done by immobilizing the inflamed joint by some form of fixation splint and the recumbent position. The form of splint will depend upon the extremity and the joint affected. Splint is sufficient where the disease is synovial in origin a[illegible] limited to the membrane. This is known by the absence of nocturnal spasms and rigidity of muscles, and the presence of hyperplasia of the membrane. When the disease, however, affects the articular surfaces—as is indicated by tonic contraction and rigidity of muscles,

pain and nocturnal spasms and flexion of the joint—in these cases the pressure of the two diseased articular surfaces against each other, caused by muscular contraction, aggravates the disease. To overcome this condition, and relieve the pressure and secure absolute rest to the joint, more than the mere application of a fixation splint is required. Here muscular contraction has to be overcome by weight extension. The amount of weight employed has to be regulated by the effect produced. The idea should be, not to draw the two surfaces apart, but to tire the muscles and so relieve the pressure of the two opposing surfaces. When extension does good, pain and spasms will speedily cease. If, however, in 10 or 12 days, pain recurs, but no spasms, it is due probably to over-stretching of the ligaments, and the weight should be reduced. In synovial disease *per se* weight extension should not be used except when deformity is present. This treatment should be continued for 3 or 4 months until good progress is made towards recovery as indicated by the disappearance of inflammatory symptoms—pain and tenderness, after which he may be allowed to go about on crutches—if limb or knee-joint is affected—with a Thomas' splint. Fixation of the joint may be supplemented by other measures from which benefit has been derived in the treatment of simple chronic inflammation, *e. g.*, the actual cautery, counter-irritation and pressure. Massage in the treatment of tubercular joint disease is positively contra-indicated, although of great value in simple chronic inflammation.

The forms of counter-irritation usually employed, and from which benefit has been derived in tubercular arthritis, are the actual cautery and Scott's dressing—unguentum hydrarg. comp.

The best results are obained from the actual cautery in deep seated joints, such as the hip and shoulder, and in spinal caries It does not do any good in pure synovial disease or in superficial joints like the knee. In fact I have seen it do harm here.

Until 1885, it was the treatment *par excellence* for tubercular arthritis of the knee-joint in our Victoria General Hospital. I have never used it for this joint except once, and I am satisfied it did more harm than good, for it so aggravated the disease that I was obliged to amputate the limb subsequently to save my patient's life. I would be sorry to have a recourse to this method again.

Pressure is often employed to overcome chronic inflammation. It is of great value in well selected cases of pure tubercular synovial disease. I usually employ it in combination with Scott's dressing. This (Scott's) dressing is applied with strips of lint around the joint, and to secure pressure the part is surrounded with a mass of cotton wool, over which

is applied an elastic or cotton bandage, care being taken not to interfere too much with the circulation. The pressure should not cause any pain and it should be used only when recovery is taking place. The dressing need not be changed oftener than once a week if it does not irritate the skin. If it does it is better to depend on pressure alone. Pressure, Scott's dressing and a splint of leather, or of silicate of potash or of plaster of Paris may be used in conjunction with Thomas's splint with advantage. The latter splint alone does not ensure absolute physiological rest to the knee, so that it should be supplemented with one of the fixation splints above mentioned. The object of Thomas's splint is to relieve the joint of pressure by transmitting the weight of the body through the tuber ischii.

In my experience I never found young children to suffer much from confinement in the recumbent position, providing they got abundance of fresh air and a generous diet of easily-digested food. When the case has been so improved as to warrant the employment of a splint, I allow my patient to walk about on crutches, and live in the open air as much as possible. The amount and kind of exercise permitted depend to some extent on the joint affected. I always remind my patients that they are invalids, and that they must not join in violent games or engage in unduly-vigorous exercise, as the least injury may bring on a relapse.

Some surgeon's speak highly of Bier's method, which consists in producing venous congestion of the joint, in hope thereby to stimulate the growth of fibrous tissue, and so encapsule the tubercular area and prevent the spread of the disease. The circulation should not be entirely stopped, but the congestion should be maintained for from fourteen to eighteen hours out of the twenty-four, and the treatment continued for some time to effect any good. The treatment may be supplemented with advantage with an injection of glycerine emulsion of iodoform, and rest. I have had no experience with Bier's method myself. It is applicable chiefly in knee and elbow disease.

German surgeons speak well of an injection of a ten per cent. glycerine emulsion of iodoform into the joint. Here the tubercle bacilli are attacked directly. For obvious reasons, the use should be limited to pure synovial disease. The efficacy of the injection may be enhanced by first sterilizing the iodoform in carbolic acid and adding to the glycerine hydrarg. perchlor., 1 in 2000. The amount injected will depend on the joint and age of the patient. In children in knee-joint affection from one to four drams is enough, in adults double that amount may be used. The injection should be made directly into the pultaceous, gelatinous, tuberculous synovial membrane, and only a small quantity

of it into the joint cavity—two drams. The injection should not be repeated oftener than once a week, and when using it the joint should be immobilized to prevent excessive reaction. It may be used in tubercular synovitis in conjunction with rest and pressure, or Bier's method. I have not had much experience with glycerine injections of iodoform, but from what I have seen of it in the surgical wards of the Victoria General Hospital I am not favorably impressed with its use.

Cure cannot be expected to result from the foregoing measures if caseation (abscess) has occurred before treatment has begun. In these cases the most that can be hoped for by the expectant plan is an improvement in the symptoms. The formation of an abscess calls for operative interference. However, when treatment was begun in the early stage, prior to caseation, and if the symptoms improve under the expectant plan, it had better be continued for a year, or until every appearance of disease in the joint has disappeared. On the other hand, if, in spite of a fair and honest trial of these measures, the case goes from bad to worse, and the symptoms become aggravated, or if suppuration has occurred before the case appears for treatment the question of operative interference has to be considered.

The object of operative treatment is to remove all the diseased tissues and the tubercle bacilli.

Expectant and operative measures may be combined in some cases of tubercular knee-joint disease, as, for instance, when an abscess is present, but is not communicating with the joint cavity. The abscess may be dissected away—the ideal operation—but when this is impracticable its cavity should be well curetted and swabbed with pure carbolic acid, and irrigated with boracic acid or some other antiseptic solution, and the wound closed. This procedure may have to be repeated two or three times before a cure can be effected.

It is always better to remove tubercular tissues by clean cutting than by scraping, as the latter drives the tubercle bacilli into the tissues and enhances the danger of recurrence. I have found this mode of treating tubercular abscess very satisfactory. It is much easier to keep the wound aseptic by closing it up. This has been my experience.

Then, again, if an abscess is located in the head of the bone, trephine it and purify it in like manner. However, great care should be exercised not to open into the joint, and it should be immobilized at the same time.

There are three different kinds of operation performed for advanced tubercular disease of the knee-joint, viz. :—

(1) Amputation.
(2) Arthrectomy or erasion
(3) Excision.

Which operation to perform in any given case must depend upon the local and general conditions present, as well as upon the age of the patient.

In weakly subjects, unable to stand the strain of a prolonged operation, and when phthisis is present, amputation should be the operation of choice; similarly, in amyloid degeneration of the kidneys and other organs.

Amputation is the least dangerous. In adults with extensive suppuration, about the joint, and when multiple septic sinuses are present; and in the young, when bone disease is extensive, and in cases of bad recurrences after excision and erasion, amputate.

When the disease has extented to caseation and the formation of abscesses, and the case is going from bad to worse in spite of expectant treatment, excision or erasion will have to be performed. Erasion or arthrectomy means the removal of all the diseased structures only while excision means all this and a formal removal of the articular surfaces of the bones forming the joint besides.

The important question for consideration is which one of these operations to perform in any given case. In deciding which to choose we should consider the following points:—

1. The relative dangers of the two operations.
2. The possibility of dissemination of the disease throughout the body.
3. The chances of recurrence of the disease.
4. The subsequent utility of limb as regards—
   (*a*) Motion.
   (*b*) Deformity.
   (*c*) Shortening.

Both operations are severe and prolonged. The danger in each is from shock and hæmorrhage. These are equal in the two operations.

There can be no doubt but that the danger of dissemination of the disease is greater after arthrectomy than after excision. The danger is enhanced if scraping is used instead of clean cutting. Scraping drives the tubercle bacilli into the bones and fibrous tissues.

With reference to the third point, I am convinced that recurrence is less likely to follow excision than erasion. Foci of inflammation are more likely to escape the attention of the operator in the latter than in the former operation. Diseased centres may exist under the margin of apparently healthy cartilages, in the inter-condyloid notch, and about the crucial ligaments, and be overlooked by the operator. Tubercular

deposits may be overlooked in excision, but the chances are very much less. The danger of a recurrence is therefore much greater after erasion.

The next point to be considered is the subsequent utility of the limb. The promoters of arthrectomy claimed that they could preserve motion in the knee-joint after this operation However, after a fair trial they failed to preserve useful motion in the joint and now have abandoned the idea in toto. Then they admit that firmer and better union is secured after excision than after erasion. This brings me to another point, viz., deformity. There can be no doubt that the weaker the union obtained the greater the danger of flexion and deformity. The union obtained after erasion being less firm—chiefly fibrous—than after excision, the danger of flexion and deformity of the joint must be proportionately greater.

Now, with reference to the last question—the subsequent shortening of the limb. This question, no doubt, is very important especially in children. The future growth of the limb should not be interfered with in either operation if the epiphyseal line is not encroached upon. The mere performance of excision need not necessarily damage the growing cartilage unless the disease has extended up that far. The extent of the disease usually determines the amount of bone to be removed in these cases and not the operation, and whichever one is resorted to all the diseased tissues must be removed. even the epiphyseal cartilage if it should be involved. So that the subsequent shortening of the limb need not be much greater in the one operation than in the other.

It is admitted to-day by the promoters of arthrectomy that excision should be the operation of choice in knee-joint disease in persons over sixteen years of age. Under that age, however, many surgeons prefer arthrectomy, chiefly because they are of opinion that the danger of subsequent shortening of the limb is less, and that this alone should outweigh the disadvantages of the operation. They say excision should never be done in young children. I do not agree with them. The extent of the disease and not the operation must determine the subsequent shortening. In excision, the articular surfaces can be formally removed, even in children, without damage to the growing cartilages. I have often done it, and never had any cause to regret it.

I have done excision of the knee thirty-five or forty times, and the results obtained have been on the whole very satisfactory. No serious shortening occurred in any of my cases, and no deformity. In one case, a child seven years old, where the disease was limited to the synovial membrane, I performed arthrectomy, and I have always regretted having done so as the results were most unsatisfactory.

DISCUSSION.

Dr. Hayes: I am not satisfied as to the primary relation of the tubercle bacillus to tubercular arthritis. I believe that primarily there is something wrong in the trophic centres or in the peripheral trophic nerves. I think in every case there is some established defect to deal with. In the early stage, I consider iron to be the remedy *par excellence*. If the iron is not assimilated, bismuth subgallate, 20 grains, with pepsin, 4 grains, before meals, and the iron taken after meals often has a decided effect. The good from climate is probably due to mental exhilaration, particularly moving from place to place. Often good results are obtained, even when tubercular foci are not all removed, by the production of leucocytosis. In cases of tubercular peritonitis after laparotomy reaction takes place, a new inflammation over peritoneum, and the patient often obtains good health. Here there is always a flooding of leucocytes.

Dr. J. W. Reid: I have seen the actual cautery give good results in Potts disease and in knee cases. Plaster of Paris is often good to ensure perfect rest. If an operation is necessary, the age of the patient should decide what operation. In a child, only remove the diseased tissues. Arthrectomy, I believe, is only recommended as necessary in most of these cases.

Dr. Chisholm: Simple incision into the joint is sometimes recommended, particularly as it is an easy operation. In many abdominal cases a cure results from simple incision; why not also get a cure by a simple incision into the joint?

Dr. C. P. Bissett: There is a difference of opinion whether pleurisy is always tubercular or not. Tapping often effects a cure where indication is tuberculous. One patient I tapped three times, and he appears to be cured.

Dr. Marcy: I have listened with much pleasure to the discussion. Some years ago I gave a good deal of attention to joint diseases, and reported one hundred and fifty cases treated by hyperdistention with three per cent. of carbolic acid, and then fixation in plaster of Paris. This was only a tentative study which led up to measures discussed this morning.

Dr. McKay: I would like to say a word in reply to Dr. Hayes. Tuberculosis begins in the knee-joint after a slight injury which the patient neglects, while after a severe injury the patient rests. When affecting the lung after bronchitis, perhaps following la grippe, lowered nutrition is the result and the bacilli get in. In tubercular peritonitis, no one can explain why operation cures; this was found by mistake Dr. Hayes should not say that a new inflammation spreads over all the peritoneum; for, if that were so, likely the patient would die. I consider arthrectomy not worth mentioning.

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

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

### MECHANICAL VIBRATION.

Pilgrim, of New York, discusses this subject in the Boston *Medical and Surgical Journal*, September 10th. He says that vibration is the most abounding and commonest force in the universe with which we are familiar, as witness heat, light, sound, etc. The effects it produces upon nerves are (1) stimulation, (2) sedation, (3) inhibition. Treatment should be localizied and applied between the transverse processes of the vertebrae, which are immediately over the posterior division of the spinal nerves that control directly or reflexly the nutrition of the diseased viscera or area. Every respiratory instrument should combine three distinct features, viz.: (1) Easy adjustment or change of stroke, (2) The localization of the treatment at a given point, and (3) Absolute rigidity of action. The results as stated are:

#### STIMULATIVE.

(1) When applied as a stimulant to the vaso-motor areas in the spine supplying particular organs, the volume and flow of blood to those viscera are thereby greatly increased.

(2) Nutritive processes are consequently improved.

(3) Secretion and excretion are also improved; elimination, the great desideratum in so many diseased conditions of the body, is also increased.

(4) Muscular and general systemic metabolism is enhanced, with greater oxidation and the production of more animal heat.

(5) Improvement in the respiratory function.

#### SEDATIVE.

Its sedative effects are marked in cases of general nervous irritability, excitability, fatigue and, very markedly, in insomnia.

#### INHIBITORY.

The inhibitory power of the mechanical vibratory stroke is demonstrated in the prompt relief of pain and in the dispersion of congestions or engorgements.

The foregoing enumerated effects follow (in varying degrees, of course) from the application of vibratory stimulation to the nerves of the spinal and sympathetic systems. There yet remain to be stated two of the most important physiological results that follow the application of mechanical vibration, which alone would entitle it to a high and important place in physical therapy. These are:

(1) The relief or relaxation of muscular contractures.

In such cases vibration is applied deeply to the affected muscle as well as to its spinal connections. This is done in order to directly excite or stimulate the independent nerve centres, which inhere in all muscular structure.

(2) The removal, through stimulation of the lymphatics and their glands, of many forms of tumors, enlargements, exudates and other products of inflammation; also the relief of varicosities and the dispersion of many varieties of cutaneous eruption

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## RESISTANCE OF TISSUES IN MANUAL REDUCTION OF CONGENITAL DISLOCATIONS OF THE HIP.

Bradford discusses this subject in the Boston *Medical and Surgical Journal*, September 3rd, and describes experiments made upon the cadaver to establish his conclusions, which are as follows:

(1) The resistance offered by the capsule to the correction of congenitally dislocated hips is not more important than that offered by the muscles.

(2) The chief resistance to forcible abduction is from the strong tendon of the adductor magnus.

(3) The resistance to pulling down the head comes from the hamstring group and the long tendon of the adductor magnus and ilio-tibial band.

(4) These resistant tissues can be overcome by small incisions at a distance from the hip.

(5) In the lighter cases manual manipulative reduction is sufficient

(6) In resistant cases, mechanical force which pulls upon and abducts the limb, arranged so as to also directly act upon the capsule, is of assistance.

(7) Where the tendon of the adductor magnus is so strong that an immoderate amount of force is needed in stretching, it would seem advisable to divide the chief resisting tissues rather than to incur the danger of severely bruising the tissues by the force used. The division of the tendon can be done either before the operation of forcible correction or at the same time.

## A TWENTY YEAR TRANCE.

Marguerite Boyenval, of Thenelles, roused from her long sleep on May 26, five days over twenty years since she sank into her trance. She has been under the medical care of Dr. Charlier, mayor of Origny-Sainte-Benoite, and he found that she was becoming tuberculous. and attributes her awakening to the inroads of the disease. Her jaws were clinched, and her case was described as the "summun of the diathese d'contracute," with profound lethargy, mental inertia, and physical insensibility. Her mother fed her during these twenty years by peptone rectal enemata, and through the gap of a broken tooth. A few months ago signs of returning sensibility were apparant. An abscess had to be opened, and the muscular contraction gradually subsided and consciousness returned. She was able to answer yes or no to questions, and exclaimed that the physician was hurting her when he took her arm, and asked for her grandfather who had long been dead. She was emaciated to a skeleton, and her weakness was so extreme that the physician advised absolute quiet; and she thus passed away. The *Gazette Médicale de Paris* of June 5 gives further details, describing especially her abundant blonde hair. The autopsy had not been made at the time.—*Journal of the American Medical Association.*

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## INOCULATION OF SYPHILIS.

In Roux and Metchnikoff's experiments upon the chimpanzee, they chose a syphilitic that presented both hard chancre, and a roseola. Two days before the date of the experiment all external and internal medication was suppressed; the patient was not allowed to wash his chancre with plain water. The chimpanzee selected was two years old and in perfect health. The first inoculation was made upon the scarified epidermis of the perpuce of the clitoris, with serosity that was made to exude from the chancre. A second inoculation, made at the same time as the first, was practiced upon the mucous side of the vulva, but the material for inoculation consisted of the *scrapings* from the chancre, and aside from epithelial cells; lymph, etc., blood was present. The process of these inoculations was made with the greatest possible speed, as if dealing with an extremely fragile microbe that was difficult to preserve.

Of the two inoculation above described only the second took, and twenty-six days after there appeared at the seat of scarifaction a small visicle surrounded by a red zone of congestion, which soon ulcerated and presented all the classical signs of a hard chancre. Following these lesions, there appeared in due time, a chain of indurated lymphatic

glands in the groin, and a papulo-squamous eruption on the skin. Eminent syphilographers, who examined this chimpanzee, unhesitatingly pronounced the case one of undoubted syphilis.

The untimely death of the animal under experiment, in Paris, has temporarily interfered with this work, and prevented the possible development of the later lesions of syphilis.—*The Post Graduate*, December, 1903.

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## SURGERY.

Under the Charge of H. A. Beatty, M.B., M.R.C.S., Eng.
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### THE MOST RATIONAL OPERATION FOR HEMORRHOIDS.

In the *Physician and Surgeon*, September, Emil Ries writes on "The most rational method of operation for Hemorrhoids." The three methods of operating on hemorrhoids most employed at the present time, and most extensively presented in text books are: (1) clamp and cautery, (2) ligature and (3) injection. Ries thinks each of these methods open to serious objections. The injection method is the pet method of the quack, and its disasters are so numerous that it should be employed, or risked, by the reputable surgeon in only a very limited number of slight cases of internal hemorrhoids, and then only under rigid precautions.

In the cautery and ligature methods, the surgeon wilfully abandons the great aim of modern surgery, the primary union of wounds. By the cautery there is left an eschar, and by the ligature method, a mass of dead tissue, which comes away as a slough in larger or smaller particles, leaving an ulcerated surface from which secondary hemorrhage or septic absorption may occur.

An operation for hemorrhoids, which would more closely approach the surgical ideal, should have four qualifications: (1) It should lead to primary union; (2) it should be applicable to all combinations of external and internal hemorrhoids with or without inflammation; (3) it should preserve the natural configuration and function of the anus; (4) it should insure quick and safe recovery with little or no pain.

The writer thinks that the method which satisfies all these conditions is the excision and suture of the hemorrhoids. He does not mean the excision of the pile-bearing area, the so-called Whitehead operation, which for most cases of hemorrhoids is a needlessly extensive procedure.

Ries carries out the operation in the following way: On the second day before the operation, the patient is given half-an-ounce of sulphate

of magnasia, is put on liquid diet, and takes a hot bath, but need not enter hospital. On the day before the operation, the patient continues the liquid diet, enters hospital, takes a bath, and the bowels are washed out with soap-suds, and the patient is shaved. On the following day, the patient receives no breakfast and is put under a general anaesthetic. If the case is one of inflamed hemorrhoids, the whole preparation, except the liquid diet and the bath, is abandoned and the bowel is washed out and the patient is shaved when under the anaesthetic.

With the patient in the lithotomy position, the sphincter is gently stretched and the lower part of the rectum is flushed out with warm sterile water. The hemorrhoids, be they external or internal, inflamed or not, are now grasped one after the other with a simple artery forceps. The forceps is pulled on, and the hemorrhoidal nodule is encircled by two incisions in the longitudinal direction in the axis of the bowel. The nodule is then excised completely as deeply as necessary, and all thrombi that may be present are removed with it. Then a continuous running suture of fine catgut (preferrably cumol catgut) unites the wound—the stitches being placed close to the edges of the incision. The suture goes through the bottom of the wound and is carefully placed so as to leave no pockets. The suture stops all bleeding, so it is not necessary to litigate the small arteries.

After the removal of all hemorrhoids, there is no hemorrhage and no raw surface. The skin is dusted with an aseptic powder, an aseptic pad is placed over the anus, and the patient is returned to bed. The dusting is renewed frequently, at least every six hours, and powder applied copiously. Liquid diet is observed for the next three days. Patients who cannot urinate lying down are permitted to stand up, and the use of the catheter in male patients is avoided. Morphia is sometimes used the first few hours after the operation, never afterwards.

On the third morning after the operation, the patient receives a laxative, citrate or sulphate of magnesia, in small repeated doses, until the desire to move the bowels is noticed. Then the anus is covered thick with aseptic vaselin, over which the first evacuations take place. After each evacuation, the patient is douched off copiously with sterile water and the anus is covered with an ointment, consisting of lanolin and vaselin, in such proportion as to make a rather thick ointment. After the bowels have moved, the patient receives light diet.

From the fourth day on, the patient receives two tub baths daily, and at least every second day a bowel movement is obtained, a laxative being given if needed.

Beginning with the day after the operation, the patients are allowed to suit themselves as to getting up and walking around. From the fourth or fifth day, ordinary food may be eaten, but fruits or vegetables containing indigestible seeds should be avoided.

On the sixth or seventh day, the patient may leave hospital, and is instructed to see that the bowels move at least once a day and to take two baths a day for one week, and one bath a day after that.

Ries says that the results of this method of operating, with its quick recovery, and the absence of pain after the operation, have been most gratifying to himself and to his patients.

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## THE SURGICAL TREATMENT OF VARICES AND VARICOSE ULCERS.

"The Surgical Treatment of Varices and Varicose Ulcers," is the title of a paper by John Rodman in *The International Journal of Surgery*, December.

In pre-anæsthetic and pre-antiseptic days, the excision of varicose veins of the lower limbs was not considered justifiable. In 1845, Dieffenbach declared that while the operation was easy of execution, phlebitis followed by death was the usual termination. Burch, in 1857, declared that the pains of the operation and the uncertainty in regard to its efficacy counterbalanced the discomfort of the varicose veins.

Trendelenburg's operation, which consists in the ligature and excision of the saphena major vein, has given results unattainable by other modes of surgical intervention, and has gained a permanent place in surgery on account of its facility of execution and its proved efficacy. In some cases, however, the cure is not complete after Trendelenburg's operation, and in some cases varicose ulcers which have become cicatrized recur, so that a subsequent operation has to be done for the ligature of other veins which have become dilated.

In 1895, J. L. Petit did the first operation by circumferential incision. Rodman speaks highly of this operation, and thinks the incision is best made at the junction of the middle and lower third of the thigh, as here it avoids the extremely contractile popliteal integument, and also avoids the external saphenous vein which, though often implicated, is never culpable. An incision made at the level of the saphenous opening is too extensive, and the cutaneous nerves are divided high up.

The incision should be made slowly and carefully so as not to endanger the larger veins, and to avoid cutting several large cutaneous nerves. It should be carried down to the aponeurosis fascia, and the veins dissected and ligated one-half inch above and below the incision

and excised between the ligatures. The incision is now closed and a dry dressing applied. The leg is bandaged with the knee well flexed, and the foot of the bed is elevated.

The patient is confined to bed for one week and then allowed to walk on crutches, with the leg bandaged to support the circulation. The leg should be kept bandaged for four weeks to protect the cicatrix and prevent oedema.

## CHRONIC HYDROCELE.

In the *Los Angeles Medical Journal*, November, R. H. Burton considers the treatment of chronic hydrocele of the tunica vaginalis. In all cases of hydrocele, before attempting any form of operation, the surgeon should carefully determine the position of the testicle and cord. Should inversion of the testicle be present, the organ occupies the anterior part of the scrotum, and may easily be punctured by the trocar, while the vas deferens ascends along the front of the cord, and may be cut by the incision for radical cure.

In children, the old method of simple tapping and drawing off part of the fluid, with the injection of a few drops of carbolic acid, usually effects a cure.

In the adult, operative treatment by incision and drainage is almost always followed by infection, and a discharging sinus may last for weeks or months.

The method of dissecting out the sac is also open to serious objection on account of the traumatism produced and the danger of injury to the vas deferens, and because a large denuded surface is left open to infection. Although usually successful this operation is not ideal surgery.

The writer considers that the method known as "incision of the sac," and described as Doyen's operation, is much the best operation for chronic hydrocele. The operation is as follows: An incision of three to five centimeters in length is made over the anterior part of the tumor through the skin, dartos tissue and the sac. After most of the fluid has run out of the sac, it, with the testicle, is easily pulled out of the incision and inverted (turned inside out). Then any little secreting tubercles which appear on the surface are cut off, or better, destroyed by the cautery. Then the opening in the sac, which will now appear behind, is closed with three or four catgut stitches. After all bleeding is arrested, the testicle and sac are placed back in the scrotum. The serous surfaces will now be in apposition with the dartos tissue of the scrotum. The dartos fascia is now closed with a few catgut sutures, and a continuous subcutaneous suture is used to close the skin wound. A dry dressing is applied and the scrotum held up by a suspensory bandage.

# OPHTHALMOLOGY AND OTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M.
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## THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITRE.

Max Ballin, *Detroit Medical Journal*, says the first excision of the gland was done by Watson, in 1875. Kocher has performed operations in over 2,000 cases, 57 for exophthalmic goitre. The rule of operation is, if internal treatment fails after a fair trial, if the symptoms are progressive, if the patient is losing strength and weight, the case should be turned over to the surgeon. Very bad cases, with high pulse rate, should be treated, by rest in bed to get the heart in better condition for operation. Cases should not be allowed to reach the extreme stage of cachexia, when even surgical interference cannot save life. There are two main types of operations; 1. Operations on the thyroid gland; 2. Operations on the sympathetic nerve. 1. Operations on the thyroid gland. Injections of iodine should never be done in exophthalmic goitre, on account of the great danger of embolism. Exothyropexy, which consists of freeing the gland and leaving it outside the skin to atrophy, is not recommended. Resection. If we have distinct nodules of the gland they should be enucleated singly. The operation most commonly preformed is the excision of one side of the enlarged gland. The larger side should be removed. A crescentic incision is made along the sterno-mastoid muscle and is dissected up. All vessels are ligated. The goitre is then freed from its capsule, a step which, on account of adhesions and hemorrhage, is difficult. The gland is pulled out more and more and finally tied off at the isthmus. This requires the thermocautery, or three or four stout ligatures. Suturing with, or without, drainage completes the operation. Ligature is the favorite method of Kocher. He usually ligates both superior thyroids and one of the inferior arteries. 2. Operations on the sympathetic nerve are done mostly after the methods of Jaboulay and Jonnescu, who employ sympathectomy in exophthalmic goitre, in glaucoma and hemicrania. The nerve is reached by a long incision along the border of the sterno-mastoid, and the ganglia found on the deep muscles. Some resect only the upper ganglia, others all three ganglia, or stretch the nerve or make an avulsion of the nerve. All these operations are dangerous, even in the hands of the best surgeons the mortality rate is 8 to 10 per cent. The anaesthetic plays a considerable part in this, hence Ballin uses the infiltration method of local anaesthesia of Schleich (Cocaine 1 per cent of which 4 to 6 ounces are well borne). The second danger is hemorrhage. All vessels should be ligated. Tam

onade and the thermo-cautery should not be used, if avoidable, on account of the danger if secondary hemorrhage. The third and most peculiar complication following these operations is "thyroidism." This means an exaggeration of the symptoms, which are referred to poisoning by the thyroid secretion. How are these post-operative symptoms caused? It seems that the peculiar nervous irritability plus the action of the thyroid poison are responsible. The symptoms are high pulse rate, 120 -160, increased respirations, great excitement, delirium, tremor, perspiration, diarrhoea, and, in extreme cases, attacks of tetany. These complications often end in death. Ballin's conclusions are: 1. Exophthalmic goitre is successfully treated by operation in a great majority of cases, 75 per cent. 2. The death rate is reduced to 6 per cent (Kocher) and, in cases operated on early, as low as 2 to 4 per cent (Rehn). 3. The principal dangers from the operation are, death from the anæsthetic, hemorrhage, and post operative thyroidism. 4. The question, whether or not operations on the thyroid are preferable to those on the sympathetic nerve cannot be decided until we have fuller statistics of results of sympathectomies at our disposal.

## NEURASTHENIC ASTHENOPIA.

Goux, *American Journal of Ophthalmology* finds asthenopia following or accompanying neurasthenia, more common than is generally supposed. The term "neurasthenia" was invented by Baird in 1868 and embraces cerebral, spinal, cardiac, gastro-intestinal, and genital forms, according to the predominating group of symptoms. The cause is essentially heredity, and takes origin in the different diatheses. The diseases may also be due to shock, traumatism etc., but degeneracy forms the ground work. The head symptoms are usually prominent. Vision is nearly normal or even quite so, but there is difficulty and pain in continuous use of the eyes. In taking the fields of vision, the longer the tests continue the more restricted does the field become. The axis of astigmatism is constantly shifting and there is permanent fixing of the streak in using the Maddox prism. Variable astigmatism and uncertain muscular balance are pathomomonic. Color blindness is also said sometimes to be present. Patients complain of twitching of eye lids, lachrymation and neuralgia-supraorbital or ocular. Occasional blurring of the sight is much complained of. Experience shows that the condition is almost exclusively confined to young women, and is often mistaken for hysterical amblyopia. The refractive errors should be corrected. Constitutional treatment may be of some avail, but vigorous physical exercise in the open air and gymnastics indoors will be found most efficient.

## YELLOW GLASSES FOR SHOOTING.

In Germany, a writer, whose name is not given, agitated this question several years ago. As a result, several batteries of artillery equipped their bombardiers with yellow glasses Exhaustive experiments were made in all kinds of weather and under different lights. Reliable data were obtained showing that, in any kind of weather and light, shooting was one third more accurate with yellow glasses. The artillery men could see the mark far better through the yellow glasses and the light was much less disturbing. The results were especially noticeable in a fog, in the dusk, and when the target, for other reasons was less clear. *Annals of Ophthalmology*, July, 1902.

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## NECESSARY ENUCLEATION OF THE EYE.

The conditions and diseases of the eye which make enucleation necessary, Erwin, *Opth. Record* maintains to be as follows: 1. A blind eye, which menaces a sound eye, should be removed without delay. 2. A nearly blind eye, which has set up sympathetic diseases of the other eye, should not be removed, barring disease of a malignant nature, it being good practice not to remove a diseased eye with some sight, even though a sympathetic affection is evident in the other eye. 3. Remove every lacerated eye with a ragged wound in the ciliary region, before it has time to establish sympathetic disease in the sound eye. 4. Remove every eye which contains a growing tumor before it involves the orbital tissues. 5. Eviscerate early in panophthalmitis.

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## REMOVAL OF THE FAUCIAL TONSIL.

Charles M Robertson, *Journ. Amer. Med. Assm. Nov. 28th, 1903.* Robertson reviews the history of tonsillar operations and passes to the practical consideration of the subject. He states that diseased tonsils may be divided into two classes. First, those which, by their enlarged size, produce mechanical obstruction, and, second, those which do not protrude into the pharynx, but which are diseased and produce injurious effects on the surrounding tissues, causing foci of infection.

In the first instance, a mere reduction in size might suffice, whether this be accomplished by excision or shrinking of the gland and in the opinion of the author, is the only place where the tonsillitome is permissible. As to the second class, those which it is impossible to remove with the guillotine, they form the majority of cases which come under the observation of the surgeon. The patient has a history of attacks

of tonsillitis and in some cases of beginning tuberculosis. It has been demonstrated beyond dispute that this gland, when diseased, is a means of infection. It is not hard to believe this if one observes the large quantity of putrid material which can be squeezed out of the tonsil. The part of the tonsil most productive of this process is to be found in the supratonsilar fossa. One is astonished to observe that many specialists believe that a diseased tonsil does no harm, when we are able to demonstrate that it continues to manufacture septic material in which exists virulent bacilli. He proceeds to state his objections to the modes of removal now in use and describes his modified procedure.

1. The Tensillotome. This is regarded by many as *the* way. The only place where its use is permissible, is in young children where the tonsils are so large as to encroach on the breathing space. The cases of dangerous hemorrhage so often reported occur from use of this instrument. The contents of supratonsillary fossa cannot be removed by this instrument.

2. The Snare. A good method but too slow. Hemorrhage is not so great as in cutting methods but still severe bleeding occurs at times.

3. The Galvano-Cautery. The main objection in this operation is loss of the half of the anterior pillar and the danger of middle ear inflammation. Each burning leaves the patient with a sore that is a tedious operation, very bloody and leaves a rough surface.

5. Scissors. After trying all other modes of operation the author has come to depend on this method. After loosening the tonsil in its bed, the tonsil is removed with two or three snips of the scissors. He uses a special curved scissors for the purpose. After a years observation he is satisfied that this is a happy solution of the difficulty. He has not had any difficulty in controlling hemorrhage by dissecting out a bleeding vessel in the fibrous tissue of the tonsil. The vessel then contracts.

(My own experience is that no one method meets the requirements of all cases, scissors, tonsillotome and dissection may each be needed to meet the peculiarities of various cases. In non-operative cases I have found that galvano-puncture and injection of a solution of iodine and iodide of ammonium meet the necessities of the case. To prevent hemorrhage I have always at hand a supply of gallic acid which I apply liberally to the cut surface, if required. G. S. R.)

## STENOSIS OF THE LACHRYMAL DUCT.

In the *St. Louis, Medical Review, Nov., 1903.* Buckwalter draws attention to the causes of stenosis of lachrymal duct and mentions congenital malformations in infants, lack of development, hypertrophic swelling of the lining mucous membrane, malposition of the puncta, and inflammation of the lachrymal sac. Excessive secretion of tears is also a factor in the production of epiphora. He had recently met with a case of graves disease in which this was an early symptom. He calls special attention to the part played in obstruction by the nasal duct. Pathologic conditions in the nose play an important role in the genesis of lachrymal disease.

There is an intimate association existing between the venous circulation of the nasal cavities and the appenadages of the eye, especially the lachrymal ducts. In many cases of excessive lachrymation an inspection of the nasal cavities reveals a hypertrophic condition of the turbinates and general thickening of the mucous membrane of the nasal cavities. In atrophic rhinitis there is often a persistent epiphera due to the accumulation of theacious crusts at the outlet of the canal. Since the starting point of so many cases of lachrymal obstruction is to be found in the nose, particular attention should be paid to the treatment of the nasal passages. In acute cases astringent and sedative agents should be applied both to the eye and nose, such as two per cent. solution of cocain and suprarenal extract followed by a one per cent. solution of nitrate of silver and a spray of liquid vaseline containing menthol, camphor and oil of sandal wood. In the eye a one per cent. solution of suprarenal extract and alum or zinc sulphate should be instilled every two hours. In chronic hypertrophic conditions it is often necessary to resort to surgery, the removal of hypertrophies or polypi. In atrophic rhinitis frequent cleansing is necessary. At the same time probing and the use of the lachrymal syringe should be followed.

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# LARYNGOLOGY AND RHINOLOGY.

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

## THE TECHNIQUE OF MAXILLARY SINUS OPERATIONS.

Holbrook Curtis in the October *Laryngoscope* has a valuable contribution to this question. Having satisfied himself that the antrum disease is not a secondary complication of a frontal sinus, inflammation, or of disease of the anterior ethmoidal cells, and that the cavity has not become merely a reservoir of pus from above, he seeks to determine the following points: (1) Is a diseased tooth the cause of the antrum trouble. (2) Is the discharge of recent origin (acute). (3) Has the suppuration

been of so long standing that the mucous lining of the sinus is affected (chronic). It is the determination of these points that indicates the choice of treatment.

For irrigation purposes in acute cases he finds tr. iodine ℥1, acid carbol ℥ss in a pint of sat. sol. of boracic acid of decided value. When alveolar puncture is used it is not for drainage and Curtis says never should be for any other purpose than to investigate the condition of the antrum and if this decides one in supposing he can cure his case by irrigation the puncture becomes simply the socket of the syringe tip. The author strongly deprecates simple measures in treating cases of chronic antral suppuration, such as intra-nasal irrigation, irrigation through an opening in the canine fossa or through a tooth socket. He says "These methods are described for the benefit of the timid members of our cult who should be characterized as spraying rhinologists (a good term). The nimble-fingered specialists condemn all methods which cause pain; they reduce enormous tonsils by absorption with astringents and remove adenoids with sprays. Frontal sinus and antral disease do not disturb these gentlemen for they refer the patient back to the general practitioner for the cure of the frontal neuralgia and the tic-douloureux, while they still continue to treat the "catarrh."

## THE USE OF ANTITOXINE IN THE TREATMENT AND PREVENTION OF DIPHTHERIA.

R. D. Rudolph, Toronto (*Brit. Med. Jour.*, May 9), has a very instructive article on this subject. He believes every case should be treated with antitoxine as early as possible, and at least 3,000 units should be an average initial dose. Should one not care to make a positive diagnosis from the clinical appearances, he should inject the serum at once, and if the bacteriologist says it is diphtheria, one has stolen a "march" of several hours on the disease, which may mean the saving of the patient's life, while, if it is pronounced non-diphtheritic, no harm has been done. All medicinal or other treatment is considered of secondary importance during the first few days of the illness. The author is firmly convinced of the value of antitoxine as an immunizing agent, and quotes the condition of affairs in the Hospital for Sick Children, Toronto, which strongly prove his contentions. Five hundred units is the ordinary immunizing dose, but 300 seems to be sufficient for children under two years of age. This immunizing dose should be repeated at least every three weeks while any danger of infection lasts. The reviewer of this article in 1896, in the same Institution, carried out the immunizing process, and, while the number of units found necessary was somewhat larger, the effect was, so far as further contagion was

concerned, quite effectual. (*Can. Lancet*, July 1896.) Quite recently, too, in one of the Government institutions, nearly 300 children were immunized, which was the only way of checking the diphtheritic contagion present. In the later instance, 1000 units was mostly employed, and showed, beyond all question of doubt, the great power a physician has at his command to prevent diphtheria; and preventive medicine is the product of the age.

## TONSILLOTOMY.

Steers (*N.Y. Medical Record*, Oct. 3rd) recommended the use of a hook-like knife, modeled from a strabismus hook, with a longer and stouter handle, and with a knife edge on the concavity and end of the hook. The finger of the operator is passed over and around the tonsils to detect any pulsating vessels, and the lower tonsil is seized with a volsellum and drawn toward the opposite side. The hook knife is then passed between the tonsil and the anterior pillar, just beneath what he calls the basement membrane of the tonsil; care being taken that it is not passsed into the tonsil mass. The finger of the operator is then introduced into the wound, and making sure that pulsating vessels cannot be felt, and using the finger as a blunt dissector, the mass is turned out, leaving it attached to the posterior pillar and by mucous membrane only which is then divided. When removed, the base of the tonsil will be found to be covered by a thin membrane, and the dissection has been carried on entirely outside the tonsil. The other tonsil is then treated in the same way. After the wounds were healed, it will be found that the pillars of the fauces stand out in their proper position and their muscles act freely. There will be no return of the tumor, and haemorrhage may be avoided by careful and thorough dissection.

## ADENOID GROWTHS WITH SPECIAL REFERENCE TO ADULT CONDITIONS.

James E. Logan summarises an excellent paper on this subjects as follows (*Laryngoscope*, Nov., 1903):

(1) Importance of early recognition of adenoid growths in children by the general practitioner. (2) Prompt removal when so extensive as to interfere with the development of the child, and especially when the patient has been exposed to any of the exanthemata. (3) When present in patients suffering from the above eruptive diseases, attention must be directed to proper disinfection of the pharyngeal vault. (4) *In patients exhibiting enlarged faucial glands, there generally exists hypertrophies in the vault.* The reverse condition does not always obtain. (5) Hypertrophies of the pharyngeal glands in adults is not a rare condition and, as a rule, is dependent on pathological changes

during childhood and not developed during puberty. (6) Operative interference is warranted in every instance, not only to relieve existing dependent conditions, but to prevent impending complications.

## THE PREVENTION OF THE RECURRENCE OF NASAL POLYPI.

Dr. Eugene S. Yonge, in *The Lancet* for November 7, 1903, enters into a discussion of the causes for the recurrence of nasal polypi after their removal, and also how best to avoid this misfortune, Polypi arise usually in the region of the middle meatus, from the concavity of the middle turbinated bone, from the lower part of the infundibulum, the uncinate process, or the bulla ethmoidalis. When all visible polypi have been removed from the nose, others may still be packed away in the recesses under the middle turbinal, and may rapidly enlarge and develop after the pressure has been removed.

Polypi tend to return so long as any polypoid tissue is left, so that the removal of all such residual tissue which may be visible with forceps, snare, galvano-cautery, or chromic acid, is a necessary part of the treatment. The complete cauterization of the pedicles of the excised growths is requisite, but is often difficult to carry out. The coincidence of polypi with suppuration in the accessory sinuses, especially the ethmoidal cells, is common. Some think that nasal polypi are always due to such suppuration, but this is not the case. It has been noted that there is usually disease of the underlying bone, such as osteitis and periostitis of the ethmoid. Polypi are therefore the outcome of bone disease, and not independent growths. This view is borne out by clinical experience When there are only a few polypi their removal by the snare may effect a cure. If there are many polypi, it will be necessary to expose the parts from which they grew and cut away the diseased tissues. To do this, a considerable portion of the middle turbinate body may have to be removed.

## LARYNGEAL TUBERCULOSIS.

Solis-Cohen recommends the following combination:

℞ Orthoform—
Anesthesin ..... āā ʒi.
Ext Suprarenalis—
Iodoformi..... āā ʒii. M

Sig. To be insufflated into the larynx, especially when painful ulcerations are present, and topically he advises the following:

℞ Guaiacol..... ʒiiss.
Menthol..... ʒi.
Olei Olival..... ʒvi. M

Sig. Apply locally after application of cocaine sol.

# PROVINCE OF QUEBEC NEWS.

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

Dr. Wesley Mills delivered a lecture, illustrated by lantern slides, at the fourth regular meeting of the Montreal Medico-chirurgical Society, on the neurone doctrine, considered anatomically, physiologically, and pathologically. The lecturer proceeded from simple diagrams illustrating the primary concept, to the more complicated pictures of the neurones connected with the special senses. He demonstrated the results of degeneration, together with the methods by which these degenerations were detected, and the means by which they could be explained upon the basis of the neurone theory. He also showed plates in which the ends of one axone apparently passed into and came into actual contact with another cell body. This condition of things he thought had been seen and confirmed by so many observers as to be practically unquestioned at the present day. Nevertheless the original idea would require but little modification to cover the facts recently established. No mention was made of Ballance and Stewart's work on the regeneration of nerves, but from the general trend of the remarks one judged that Dr. Mills held the views of the majority of English neurologists, namely that the results obtained by these experimenters are fallacious. At the close of the address Sir William Hingston thanked Dr. Mills for his able and instructive lecture, and lightly touched upon the advances made in physiology between the time of his student days and the present.

Dr. Elder reported a case of sarcoma of the small intestine removed from a man aet. 30. The patient, who was shown to the members, was admitted to the General Hospital complaining of pain in the abdomen, and giving the following history. For the past ten years he has suffered from occasional attacks of abdominal pain resembling appendicitis. One year ago while in perfect health he had a sudden haemorrhage from the bowel which was repeated five times within a few days. He made good recovery, but in April he had another series of four similar haemorrhages, and in May he entered the medical wards of the Montreal General Hospitial for a recurrence. By this time he had lost 21lb., complained of poor appititte, had evening rises of temperature, and was decidely anæmic. Physical examination was negative and examination of the stools showed no signs of tuberculosis. He was put on light diet and rest in bed, and in a few weeks left the ward weighing 123 lbs., being a

gain of 14 lbs. since admission. In July he again appeared and was admitted to the surgical side, complaining as before, of abdominal pain, but now associated with nausea and tenesmus on going to stool. The lower part of the abdomen was somewhat rigid and tender on the right side. Tenderness was also marked on rectal palpation, although no mass could be felt. The history and physical signs led to a diagnosis of appendicitis and operation was at once performed. Free fluid was found in the abdomen but no signs of peritonitis. Attached to the wall of the pelvis was found a mass about the size of a cricket ball which arose from the small intestine about five inches from the ileo-cæcal valve. It was cystic in nature and was covered with large blood vessels. No glands were enlarged in the mesentery and the tumor was excised and the gut closed. The patient made a good recovery and has now regained his normal weight. The tumour on microscopic examination turned out to be a spindle celled sarcoma.

Dr. Buller read a paper on blindness caused by wood alcohol, and added three cases to the rather meagre literature on the subject. The first case was a young who by accident swallowed about one wineglassfull of wood alcohol and oil of wintergreen, which had been prescribed as a liniment. She was very sick afterwards and complained of headache, but in addition became totally blind within a few hours. Two weeks later there was some improvement so that she could count fingers at three feet, but there was a well marked central scotoma, and vision for green was completely gone. Two months passed under treatment with nitroglycerine, strychnine, and pitocarpine, with no improvement.

The second case occurred in a man who drank a wineglassful of wood alcohol by mistake. He complained of severe headache shortly afterwards and next day he was compelled to give up work on account of dimness of vision. This became very rapidly worse and he remained stone blind for ten days. The disks showed distinct primary optic atrophy. He improved only slightly under treatment.

The third case was a man aet 42, who on three successive days took a wineglassful of wood alcohol. After the third dose he went out on a hunting expedition and on returning in the evening found that his sight was failing, and woke up next morning absolutely blind. As in the other cases treatment was of little avail and when lest seen the patient's vision was only slightly improved.

Dr. Buller emphasized the importance of bringing these facts before the public because wood alcohol was coming into such general use throughout the country. Cases of the kind he had mentioned were becoming more frequent every day, and it was time that a warning was

sounded. He thought that by government authority a label should be placed upon every bottle of this spirit, not merely a poison label, for this might tempt suicides, but one which stated that blindness would result from drinking the contents, this would certainly prevent its use with suicidal intent. Dr. Kerry was pleased that the speaker had brought the matter up, and suggested that one of the reasons why blindness from this cause had become more frequent of late was that the amount of wood alcohol in the ordinary methylated spirits had been increased from 10 per cent. to 45 per cent. quite recently.

The regular quarterly meeting of the Board of Governors of the Montreal General Hospital was held in November last. The president reported that the revenue for the nine months ending September 30th amounted to $90,839, and the expenditure for the nine months to $77,724, an increase in expenditure over the same period of 1902 of $3,758. The medical superintendent read a report of the work of the hospital, both indoor and outdoor. During the quarter 793 patients were treated to a conclusion. There were 55 deaths of which 24 occurred within three days of admission, making the mortality rate for ordinary hospital cases 3.1 percent. The average detention per patient was 21.9 days as against 23.8 days for the corresponding quarter of 1902. The ambulance responded to 379 calls as compared with 320 in the quarter of 1902. At this meeting Dr. D. A. Shirres was appointed neurologist to the hospital, and Mr. Hugh Graham was elected to the committee of management in place of the late Mr. Samuel Finley.

Dr. Armstrong raised the question of the lack of accommodation in the hospital, and was supported in his remarks by several speakers both in regard to the needs of the public and private patients The matter was referred to the consideration of the board of management.

At the annual meeting of the Montreal Maternity Hospital it was announced that the committee had decided in view of the crying need for a new building, and of the very considerable reductions which it had been found possible to make in the proposed plans, by leaving off one wing for the present, to proceed with the piling and preparing the foundations so that the erection of the walls could begin in the spring. The site has already been paid for and with $53,000 on hand, the funds seemed to be sufficient to justify commencing the work on the modified plans.

The lady superintendent's report on the training school for nurses stated that the applications had been 82 during the year of whom 13 were graduates of general hospitals. Twelve nurses graduated, five having taken the full course and seven that of four months. It was

also stated that a scheme had been considered whereby nurses of the General and Royal Victoria Hospitals would receive obstetrical training at the Maternity as a part of their three years course. The carrying out of such a plan would be of great advantage to the three hospitals as well as to the nurses themselves.

The thirty-third annual dinner of the faculty of medicine of Bishop's College was held at the Place Viger Hotel on December 4th. The dinner was largely attended, not only by students and graduates, but by the members of the teaching staff and representatives from other universities.

The toast list, which was long, was introduced by Mr. Crutchlow, president of the student body, and after "The King" had been honored, the toast to "Alma Mater" was proposed by Dr. Hall. "Dean and Professors" was introduced by Mr. Donnelly. Dr. F. W. Campbell, dean of the faculty, in responding, traced the growth of Bishop's College from its commencement thirty-three years ago when it had started with one student. Dr. Macphail proposed "Our Guests." Hon. J. G. McCorkill, Sir W. Hingston, Lt.-Col. Burland, Dr. Wilkins, and Dr. Armstrong replied. "Sister Universities" was proposed by Mr. J. J. McGovern, and replied to by the following: Toronto, Mr. Hughes; Queen's, Kingston, Mr. Costello; McGill, Mr. Miller; Lennoxville, Mr. F. J. Plaskett; Laval, law, Mr. Lamarche; medicine, Mr. Choquet; dental, Mr. Faulkin, and pharmacy, Mr. W. H. Chapman.

Songs were rendered by Messrs. A. E. Wilson, Langlois and Choquet. Drs. Robt. Wilson, F. W. Gilday, W. H. Drummond and Mr. McLaughlan gave recitations.

The following are those who occupied the table of honor: Sir Wm. Hingston, Hon. J. C. McCorkill, Lieut.-Col. Burland, J. H. Burland, Rev. Prof. G. Abbot-Smith, Dr. W. Grant Stewart, Dr. A. Lapthorn Smith, Dr. H. L. Reddy, Dr. H. H. Drummond. Dr. Geo. Wilkins, Dr. F. W. Campbell, Dr. James Perrigo, Dr. J. E. Armstrong, Dr. Andrew Macphail, Dr. Frank R. England.

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At a meeting of the Faculty of Medicine of McGill University, Dr. Klotz, of Ottawa, was recommended to the governors for appointment as Governors' Fellow in Pathology at McGill. Dr. Klotz is a graduate of Toronto University, and for some time past has been conducting researches in bacteriology at the Ottawa Isolation Hospital. The appointment will officially be made at the next meeting of the board of governors.

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Dr. D. A. Sherres has been appointed neurologist at the Montreal General Hospital.

# MARITIME TOPICS AND NEWS.

Conducted by W. D. Forrest, M.D., C.M., B.Sc., L.R.C.P., Lond., M. R. C. S. Eng., Halifax.

## NOVA SCOTIA BRANCH BRITISH MEDICAL ASSOCIATION.

The annual meeting of the above branch was held in the Halifax Hotel on the evening of October 28th, Dr. George M. Campbell, President, in the chair.

The report of the retiring Council showed the average attendance for the past session to be eighteen. The death of Dr. Andrew Halliday and the loss sustained by the branch thereby was also mentioned. The meeting then elected the following officers for the ensuing year: President, F. W. Goodwin, M.D.; vice-president, C. Dickey Murray, M.B.; secretary, W. D. Forrest, M.D. (re-elected); treasurer, A. I. Mader, M.D. (re-elected); branch council, A. C. Hawkins, M.D., M. Chisholm, M.D., James Ross, M.D., T. J. F. Murphy, M.D., T. W. P. Flinn, M.D., Thomas Trenaman, M.D., and G. M. Campbell, M.D. Surgeon-Major Peeke, R.A.M.C., was elected as the branch's representative on the Council and Parliamentary Bills Committee.

On November 11th the branch held a clinical meeting at the Halifax Hotel.

Dr. Hawkins presented a case of chorea. Previous to the chorea developing there was no history of rheumatism, but rheumatic symptoms arose one week after the muscular twitchings were observed. The knees and elbows were then affected. There was no heart lesion, and nothing in the history to explain the cause of the trouble.

She was first on salicylate of soda and then on the elexir lacto pepsin, with iron, quinine and strychnine, together with three minims of liquor arsenicalis to the dose. She was now practically free from the movements.

Dr. Hawkins also presented a case of Friedreich's or hereditary ataxia. The patient was a young girl, and exhibited all the more common symptoms—absence of the patellar reflex, lateral curvature of the spine, pes cavus and uncertainty in gait.

Dr. F. W. Goodwin presented a case of a man who was passing uric acid calculi, and whose urine contained sugar. On opium the sugar disappeared. After this he was on piperazine 15 grs. three times a day, alternating with a mixture of pot. bicarb and tr. hyoscyamus. The gravel ceased, and his general condition was much improved.

Dr. Goodwin also showed a case of congenital syphilis in a young lad. There were two marked syphilitic teeth—the two upper central incisors—periostitis of the left tibia, and a breaking down gumma in the upper eyelid. The patient was on ung. hydrarg locally and cod liver oil internally.

Major Peeke then presented the following interesting case :—

The patient, an artillery man, first came under observation on May 11th last. He complained of pain in the chest, and had a cough with copious expectoration.

There was a pleuritic friction sound on the right side. On May 16th there were signs of fluid on the right side. On May 19th he coughed up an abundance of pus, which contained many streptococci and staphylococci.

The pleura on the right side was then opened, and on exploration a localized abscess cavity was reached. This was drained, and on August 1st he was discharged from hospital. Some days later, after a violent fit of coughing, he brought up what appeared to be a fish bone. There was a history of his having swallowed a fish bone many months previous to this while in Portsmouth.

The symptoms immediately subsided after bringing up this foreign body. Major Peeke thought there was in all probability a communication between the abscess cavity and the bronchus on that side.

The next case shown by Major Peeke was the cervical spine of a soldier who had fallen out of bed while intoxicated and fractured the spine of the fifth vertebra.

When first seen he complained of tenderness and pain in the neck. No displacement could be noted. There was paralysis of the lower extremities. No temperature. He died in the course of six hours. On post mortem there was hæmorrhage and inflammatory effusion into the dura mater. The cord was not much damaged.

Dr. D. A. Campbell presented a case of lupus vulgarus that had been treated and cured by the x-rays. Photographs exhibiting the disease in various stages were handed around.

Dr. Campbell showed a quart preserve bottle filled with round worms. The same had been vomited up by a colored woman who had previously manifested no symptoms.

A vote of thanks was given to Major Peeke for the interest he has always manifested in the society since his coming to Halifax. The Major leaves in January for England, his term of service on this station having expired.

The next meeting of the branch was held at the Victoria General Hospital on the evening of November 24th. Dr. D. A. Campbell ex-

hibited three cases of rheumatoid arthritis in children. Case A.: a female child aged seven—puny and ill developed—giving a history of chronic progressive joint lesions extending over a period of two and a half years.

The case conforms in almost every particular to that type of the disease described by G. F. Still in Allbutt's System of Medicine. In addition to very great involvement of the articulations both big and small, there is some enlargement of the spleen, glandular enlargement not marked, but showing in the epitrochlear and inguinal groups, and more or less fever. For the past six months fever has been rarely absent. There is marked wasting of the muscles, but not the marked joint changes seen in the ordinary cases of rheumatoid arthritis.

The outlook in these cases is not very promising. The condition generally develops before the second dentition and seems to be more common in girls.

Case B. A boy, aged 14, who has been ill with the disease for about fifteen months and is still unable to walk.

Case C. A girl, aged 16, who has been disabled for the past three years. The two latter cases resemble the disease as seen in adults.

Both are doing well under the hot air treatment.

Dr. C. Dickey Murray exhibited two cases. The first was one of the ascending part of the arch of the aorta. The patient had been ailing for six months.

He came to the hospital complaining of shortness of breath and general weakness. Never had syphilis, but had at one time been a heavy drinker. The interesting feature of this case was the marked delitation of the veins on the left side of the chest and arm due to obstruction to the left inominate vein and to the vena azygos minor. He was improving on potassium iodide and tr. ferri perchlor.

The second case was one of splenic anæmia. The patient suffered from loss of strength, great enlargement of the spleen and anæmia. Examination of the blood showed a diminution in the number of the red corpuscles and a proportional diminution in the hæmoglobin.

This patient was on Fowler's solution and potassium iodide as he gave a fairly clear history of having had syphilis some years previous.

Dr. James Ross showed a man having an ulcerative syphilide on the right side of his nose. Dr. Ross gave the differential diagnosis between this condition, lupus vulgarus and rodent ulcer.

Dr. Chisholm exhibited a man who had suffered from a compound fracture of frontal bone, caused by the kick of a horse.

When seen first the bone was protruding for about half inch and was splintered. The bone was freely moveable. Dr. Chisholm fixed it

in position by driving a piece of galvanized iron down through the external angular process of the frontal bone and into the malar. The result obtained was a good one.

Dr. Chisholm then showed a case of double talipes equino-varus that was successfully operated on by him. Operation: The knife was entered one-half inch below and a little to the front of the tip of the inner malleolus. It was then pushed forwards, sideways till it reached the tendon of the tibialis anticus. It was then turned and the tendon cut. At the same time the tissues beneath were cut to the bone by raising the handle and sweeping it forward till the blade cut all the ligaments and lastly the tibialis posticus just as the knife was to be withdrawn.

After this the meeting adjourned to the large dining room of the hospital where supper was served.

## PERSONAL.

Dr. H. M. Hare has removed his office from Agricola Street to 35 Hollis Street.

Dr. D. G. J. Campbell (Dal. Univ., 1902) is taking a post graduate course at Johns Hopkin's University, Baltimore.

Dr. Monson J. Wardrope has opened an office at Springhill. Dr. Wardrope was formerly at New Campbelltown, C. B.

Dr. D. T. C. Watson, a recent house surgeon at the Victoria General Hospital, has opened up an office on Spring Garden Road.

Dr. J. A. McKenzie, assistant medical superintendent at the Nova Scotia Hospital for the Insane, was recently married to Miss Gentles of Dartmouth.

The death took place at 303 Pleasant St., on December 7th, of Mrs. Lowerison, wife of Dr. E. H. Lowerison, of Halifax, The doctor has the heart-felt sympathy of all his friends in the medical profession.

Dr. Kenneth A. Mackenzie, late house surgeon at the Victoria General Hospital has opened an office for the practice of his profession at New Campbelltown, Cape Breton. Dr. Mackenzie was gold medalist of his class at Dalhousie.

Major Peeke, of the Royal Army Medical Staff, who has been stationed in Halifax for some years past, leaves for his home in England in January. Major Peeke will be much missed by his friends in the medical profession. While here he always showed an interest in medical matters, attending regularly the meetings of the local society and taking part in the proceedings. The N. S. Branch of the B. M. A. showed their appreciation of him by appointing him their representative on the General Council and Parliamentary Bills Committee.

# MEDICAL SOCIETIES AND GATHERINGS.

## TORONTO MEDICAL SOCIETY.

Stated meeting, November 5, 1903.

The second meeting of the 25th Session of the Toronto Medical Society was held in the new medical building, Toronto University, at 8.30 p.m. The president and first vice being absent, the chair was taken by Dr. Bryans and the second vice-president.

The minutes of the last meeting were read and adopted.

Dr. McIlwraith read the paper of the evening, "Forcible Dilatation of the Os Uteri."

He divided the subject into two heads. When and How. When. (1) In labors that do not depart much from the normal type except in point of the time limit; or when a mal-position is present; or in which there is an early escape of the water. In these cases the patients and parts are normal.

(2) In cases in which dilation is not so much a matter of election as one of necessity. As in eclampsia, accidental hemorrhage. In these cases we are dealing with patients who are in a pathological condition and with uteri that are in an abnormal condition.

(3) In abortion and premature labors.

(4) In placentia previa.

How—(1) Manually.

(2) By bags Champetier de Ribes, Barnes, Voorhees.

(3) Metal dilator as Goodell, Bossi, etc.

(4) Drugs, cocaine, etc.

The dangers mentioned were sepsis, shock, hemorrhage, laceration.

*Discussion.* Dr. Oldright asked if cocaine soln. would stand boiling? What strength was used and how applied? He described Molesworth's bags.

Dr. Moore asked how much cocaine soln. was taken up by the pad?

Dr. Carveth discussed the metal dilators and the effect of anaesthetics.

Dr. Hay thought the Champetier de Ribes bags would stand boiling as rubber gloves did, and said that they would dilate the uterus more than the cervix.

Dr. Webster said that the bags would push the presenting head away. Prior's metal dilators would not slip. The two index fingers would often do better than two on one hand.

Dr. Freel asked if there was any benefit from very hot douches?

Dr. Bascomb said that the occasions were very rare where there were severe pains and good contraction and no effect upon the cervix. The use of a sedative would often act very well.

Dr. Bryans related a case where the use of chloral had allowed the patient to go on for a month before confinement.

Dr. G. B. Smith said that even very slow manual dilatation would produce laceration at times. He asked if it was good practice to repair cervical laceration during the bearing period?

Dr. A. Fletcher said that the greatest obstacle to manual dilatation was the presence of old scars which would almost invariably tear again. He related a case in point.

Dr. Smith said that time was the best dilator.

*Reply.* There was danger of laceration from stripping the cervix back after the forceps were on. It was difficult to tell the quantity of cocaine used, and there might be danger from absorption. Dr. Carveth had said that the use of dilators had forced fluid through the tubes into the abdomen. This was new to him. It required prolonged boiling to sterilize the bags and they would not stand it. Hot douches did harm by removing the vaginal secretions.

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## THE CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

The following are the reports of Mr. Chrysler, the Solicitor, Dr. Powell, the President and Dr. J. A. Grant, the Treasurer. They show the good work of the Association, and its claims upon the medical profession.

OTTAWA, Sept. 16th, 1902.

*To Dr. R. W. Powell, Chairman of the Executive Committee:*

DEAR SIR,—At your request, I beg to report briefly with regard to the litigation of the Association during the past year.

In the month of January last, I received instructions from you to act as solicitor and counsel for the Association, and to consider generally the position which the Association should take with reference to claims against its members, and to defend pending cases when required.

The first case in which a claim was made was on an action brought against Dr. Thomas Norton, of Shelbourne, Ont. It was decided to undertake the defence of Dr. Norton's case, and, later, of the case of Dr. Telford, of British Columbia.

The case of Dr. Norton has been proceeded with to the completion of the pleadings, which were closed some time about the 15th May. Since then, no proceedings has been taken, and I do not know whether it is the intention of the plaintiff to go on with the case or not.

The next court at Orangeville will not be held until November.

In the case of Dr. Telford, in British Columbia, the Board had not received notice from Dr. Telford that proceedings had been taken against him until he had already instructed a solicitor to conduct his defence. It was thought advisable, under the circumstances, to write to Dr. Telford that the Board would assist him in his defence and would allow the solicitor to continue to act in the case for them as well as for Dr. Telford. I have not heard recently anything about this case and am not aware whether further proceedings have been taken. The long vacation in British Columbia is just over, and it is possible that this suit may again become active.

I think it is possible that the Association may become a very valuable means of assisting the members of the medical profession from oppressive, and, in some cases, disastrous, actions which usually are brought by irresponsible men. It is desirable, however, that the Association should be fully supported by the profession, and that an organization should be completed, covering the different provinces. In every case, it should be possible for the Board of the Association to correspond with some reliable and leading member of the profession in the district in which a case arises, and obtain from him an impartial opinion as to the character of the member attacked, and the propriety of the Association undertaking the defence.

Your Board has not sufficient experience to speak confidently as to the success of its work, but it is, I think, highly probable that the best result of the existence of the Association will be in the deterrent effect it will have upon plaintiffs without means, who seek to recover money from members of the profession for alleged mal-practice, and which, in many cases, would be paid through fear of the injury to the physician's professional prospects.

If your Board is re-appointed and desires my assistance for another year, I shall be glad to meet with them at an early date and assist in preparing a set of regulations covering doubtful questions, as these can be much better dealt with upon some general principle before special cases arise.

Yours truly,

(Signed) F. H. CHRYSLER

Solicitor, Canadian Medical Protective Association.

OTTAWA, August 24th, 1903.

*To R. W. Powell, Chairman of the Executive Committee:*

DEAR SIR,—At your request, I beg to report to you with regard to the litigation and claims made against the members of the Association during the period which has elapsed since the date of the last annual report. My last report was dated the 16th September, 1902, and contained a summary of the steps taken in cases reported to the Association up to that date.

The first case there mentioned is the case against Dr. Norton, of Shelbourne, which, at the date of the last report, was pending. The case subsequently was brought to trial at the sittings of the Court at Orangeville, in the fall of 1902, the witnesses were brought to Court and counsel was prepared for the trial, when the plaintiff proposed to abandon the action, and accept the judgment dismissing without costs. As the defendant and his local solicitor agreed that there was no possibility of recovering costs from the plaintiff, this settlement was accepted.

The cases against Dr. Telford, of Chemanuis, B.C., has not been proceeded with, according to the latest information received from his solicitor, Mr. McPhillips of Victoria, and it is not likely now that anything more will be done in this case.

These are the two cases which were pending at the date of the last report. Since then an action was brought against Dr. McCabe of Hamilton, by a man named Jackson, and, after enquiry, the Association decided to assist Dr. McCabe in his defence and this was accordingly done. The action was brought to trial at Hamilton in the month of March before a judge and jury, and, after a contest lastings over two days, a verdict was entered for the defendant with costs. It is not likely that any costs will be recovered from the plaintiff.

Two other claims are pending at the present time; one of them against a physician at Moose Creek in which a writ has been issued, and one against a member of the Association at Truro, Nova Scotia.

The general result of these proceedings has been to amply justify the existence of the Association. As mentioned in my last report, it should be clearly kept in mind that the object of the Association is to assist its members in cases where they are wrongfully sued, and not to defend or assist in defending those who are guilty of malpractice. For this purpose it is desirable that your Board should enquire carefully into the circumstances before undertaking to assist in the defence of any case, and that they should reserve to themselves the liberty of withdrawing from a case if they should discover later on that it is one in which such assistance is not deserved. Such discrimination requires careful and

thoughtful consideration of the cases as they arise, and provision for independent advice from local correspondents in the different provinces and districts may, therefore be considered desirable at this time to strengthen the Board, or to provide for its reorganization in some manner which will be adequate to secure these results in the future.

F. H. CHRYSLER,
Solicitor, Canadian Medical Protective Asssociation.

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OTTAWA, August 24th., 1903.

GENTLEMEN:—In presenting you with the affairs of the Association this second year of its life I have in the first place to express my deep regret that I have not been more successful in influencing men to join.

I issued two appeals the first year each costing us as I told you about $100 before the entire profession was reached and the net result was 221 members but even so we were able to report a successful initial year and we were the means of being of substantial use to more than one of our members. It is not necessary to reiterate what I then reported nor the strong memorandum which I read from our solicitor Mr. Chrysler.

I was encouraged to go on by the hearty words spoken by some of our friends at the Montreal meeting and when the year was up I again issued my appeal for new members and I earnestly requested the then members to try and influence others, in their circuits to join, because I feel it is manifest that more can be done in this way than by all that I can say on paper.

THE CANADA LANCET wróte a strong article also and we had reprints made of this and circulated throughout the Dominion. The net result of this work, to say nothing of my correspondence, is that I am here to report to you the total membership for 1903 is 252 an increase of 31 and this with a total of about 5,500 practitioners.

We have fought out cases again this year and we have been successful and thus far I am encouraged, but when I tell you that one of these cases this year cost us $360 to handle you will understand that we may at any moment get into a serious position and be stranded for the want of funds and then we of the Executive will be obliged to reply possibly to an urgent appeal from a member wrongly threatened with an action that he must fight for himself and that his brethren throughout the Dominion, any one of whom may get into trouble any day himself, don't care to bother themselves about assisting him.

Gentlemen this is what it means because for the first time in our history we have a way open to us to be of untold benefit to one another by simply joining this Association at a cost of $2.50 per year.

I suppose it is useless for me to go on sending circular notices broadcast. I have nothing stronger to say than I have said.

I want your advice now what we had better do. Our financial statement which I will read you is a poor showing and we owe our solicitor $169.57 balance in connection with the cases already handled.

I feel very little enthusiasm has been shown speaking generally and yet I am positive that if we have patience a way will yet be found to attract members to our ranks.

We can, if you wish, try the experiment of once more circularizing the profession generally on Jan. 1st and then it seems to me we might arrange a system whereby through some book publishing house the canvassers going about among the profession pesonally could have with them application forms. In this way I feel satisfied a great many members can be secured from the cities. Men are apt to disregard circulars and once read they are put aside for future attention and then lost and the subject forgotten, but a personal appeal will have a much better result. Then again a standing advertisement in a few of the leading medical journals might be the means of keeping the Association in the minds of many men who have forgotten to join.

These remarks are based on the assumption that our usefulness has been proved and that it is desirable that we continue the good work. One thing is essential, however, and that is more members. If it is not worth this small fee to join and if we are not fulfilling the requirements let us agree to disolve. It will cost very little because we owe no bills except the balance mentioned and there is about enough on hand to pay that.

Each case that we agree to defend costs about $350 and if we happen to strike a crop of them in any one year we will be bankrupt.

I wish to make a suggestion that if carried out will I think add to the usefulness and influence of our Association. The Executive have felt from time to time great responsibility in deciding what action to take in certain given cases and we think that the central Board at Ottawa should be enlarged and that they select the Secretary and Treasurer or else combine the office in one as Secretary-Treasurer.

This can easily be done and the office work handled by one man who is familiar with business affairs.

The resolutions at Winnipeg provided for a President, a Vice-President, a Secretary and a Treasurer and these constituted the Executive.

The Vice-President lives at Sherbrook and when I accepted the Presidency I pointed out that the Secretary and Treasurer must be at Ottawa and so two Ottawa men were elected.

I would be glad to enlarge this Executive greatly, but it is not practicable to have meetings of such a body except at great expense.

I think if my suggestion is followed at this meeting we will be able to make a better shewing next year.

Finally I wish to thank the Association for their confidence and I beg to assure the members that I wish them to consider me absolutely in their hands and that if a change is desired not to hesitate to elect another to take my place.

Respectfully submitted,

R. W. POWELL,
President.

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Since the above reports of Dr. Powell and the Solicitor were written, and submitted to the meeting at London, the action against Dr. Watts, of Moose Creek, has been brought to trial, and a verdict rendered in favor of the defendant. But the expenses to the Defence Association amount to $252.

On the 14th November, 1903, a writ was issued against Dr. Bird, of Gananoque. The case is one of an action arising from death due to tetanus, alleged to have been caused by vaccination.

TREASURER'S STATEMENT.

| RECEIPTS. | | DISBURSEMENTS. | |
|---|---|---|---|
| Balance in bank Jan. 2, 1903 | $145 17 | Legal expenses | $373 72 |
| Ontario, 139 members | 347 25 | Printing and stationery | 91 25 |
| Quebec, 35 members | 87 25 | Postage stamps | 60 25 |
| New Brunswick, 14 members | 35 00 | Clerical assistance re circulars | 28 50 |
| Nova Scotia, 17 members | 42 50 | Auditor and bookkeeper | 26 00 |
| Manitoba, 10 members | 25 00 | Travelling expenses | 25 00 |
| North-West Territories, 10 members | 25 00 | Bank charges on cheques deposited | 6 45 |
| British Columbia, 28 members | 70 00 | | $611 17 |
| Accrued interest | 3 75 | Cash on hand | 169 75 |
| | $780 92 | | $780 92 |
| | | Account outstanding due solicitor | $172 95 |

R. W.

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It was moved by Dr. Ferguson, of London, and seconded by Dr. Hodge, of London, that the Canadian Medical Association in annual session assembled in London, August, 1903 do endorse and commend the work of the Canadian Medical Protective Association. Carried.

# UNIVERSITIES AND COLLEGES.

## UNIVERSITY OF TORONTO MEDICAL STUDENTS' BANQUET.

The seventeenth annual banquet of the medical faculty and students of Toronto University, and the first since the federation with Trinity, was held 10th December in the big hall of the university gymnasium. With over 100 members and guests of the faculty seated at the head table, and a large majority of the school's nearly 700 pupils filling the body of the room, the affair was a genuine and gratifying success.

President G. M. Shaw, who occupied the chair, introduced the toast list by proposing the health of the King, which was honored with true student fervor. The next toast, that of "The Empire," was proposed by Hon. President Dr. H A. Bruce, who took occasion to refer to the Chinese wall which had hitherto prevented a graduate of one province from practising in any other in Canada. He also spoke of the disadvantage under which Canadian medical men suffered in having no standing in the United Kingdom or the other colonies.

Mr. J. M. Clark, K.C., responded eloquently to the toast of "The Empire" in the absence of Sir William Mulock, who was unable to be present.

Hon. Richard Harcourt, in proposing the toast of "The University and Its Medical Faculty," said that the gathering of students before him was probably the finest ever convened in Toronto. The thanks of all true friends of education were due to President Loudon, Provost Macklem, and Dean Reeve, who had so tactfully conducted the negotiations which led to the federation of the two schools.

Mr. Harcourt said he was pleased to see the marked progress being made in medical science, and there were many indications that Toronto University would not stand still, but would reach after still higher ideals. To achieve this end, the ablest men in the profession should be enabled to give their whole time to research and instruction. It would soon be found imperative that the university should have the sole and independent management of an hospital of its own, and as a graduate of the university, Mr. Harcourt said he would be happy to give any assistance in his power to bring this about.

He closed with a tribute to the philanthropy and altruism of the profession, which conferred so many benefits on mankind, in many cases with no recompense save the sense of duty done.

Prof. Ramsay Wright responded on behalf of the faculty, as President Loudon was too ill to be present. He spoke of the need for endowed chairs for anatomy, pathology, therapeutics, and hygiene in the school. Prof. Temple also spoke briefly in response to the same toast.

"Sister Professions" were proposed by Provost Macklem, and responded to by J. A. Patterson, K.C., on behalf of the law; Prof. Robertson for divinity, and Hon. Dr. Montague for medicine.

"Sister Institutions," proposed by Mr. A. B. Durwin, were represented by the following gentlemen:—McGill, Mr. Magee; Queen's, Mr. McCullough; Bishop's, Mr. Donnelly; Trinity, Mr. Kee; London, Mr. McMillan; Victoria. Mr. Pearson; Osgoode, Mr. McDonald; 'Varsity, Mr. Gilchrist; S. P. S., Mr. Gillespie; Dental, Mr. Clarkson; Knox, Mr. McKay.

Dr. Marlow and Mr. McMillan spoke for "The Ladies," and Dr. Wishart and Mr. Kerswell for "The Freshman."

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## COLLEGE OF PHYSICIANS AND SURGEONS.

The results of the December examinations of the College of Physicians and Surgeons of Ontario were handed out recently. They are as follows:—

Final—Lazelle Anderson, Ingersoll; J. Brown, Forester's Falls; J. H. Boulton, Picton; Emma Connor, Stirling; N. Davis, Fallowfield; J. E. Davey, Waterford; H. R. Elliott, New Sarum; W. J. Fischer, Waterloo; J. J. Fraser, Huttonville; W. A. Groves, Fergus; J. N. Gunn, Ailsa Craig; B. J. Hazlewood, Bowmanville; H. Logan, Meaford; W. R. Mason, Ottawa; T. McPherson, Stratford; A. P. F. Nelles, Windsor; P. J. Pattee, Hawkesbury; J. Roberts, Hamilton; J. J. Robertson, Belleville; J. M. Stevens, Chatham; H. E. Service, Peebles; R. J. Trumpour, Toronto; R. G. Williams, Meaford; O. C. Withrow, Woodstock.

Intermediate—J. H. Boulter, Picton; W. S. Fawns, Udora; J. J. Fraser, Huttonville; W. J. Fischer, Waterloo; W. A. Groves, Fergus; H. C. Jamieson, Guelph; F. Large, Listowel; W. R. Mason, Ottawa; C. M. Mackay, Woodstock; T. McPherson Stratford; A. P. F. Nelles, Windsor; F. J. Pattee, Hawkesbury; J. Roberts, Hamilton; J. J.

Robertson, Belleville; J. M. Stevens, Chatham; W. H. Secord, Brantford; H. E. Service, Peebles; R. G. Williams, Meaford; A. Wilson, Russell.

Primary—E. T. Atkinson, Barrie H. G. Blair, Ashton. J. H. R. Brodrecht, Berlin; Edith Beatty, Fergus; George Boyd, Gravenhurst; J. Brown, Forester's Falls; J. H. Boulter, Picton; D. H. Boddington, Leamington; J. W. Cook, Strathroy; E. S. Conboy, Dovercourt; W. S. Body, Windsor; Mary Callaghan, Toronto; T. A. Davies, Toronto; T. B. Edmison, Brighton; F. G. Ellis, London; J. J. Fraser, Huttonville; R. J. Foster, Kagawong; W. J. Fischer, Waterloo; A. J. Gilchrist, Toronto; G. R. Gilmour, Brockville; E. B. Hardy, Toronto; J. A. Kane, Orillia; J. I. Morris, Hamilton; W. R. Mason, Ottawa; J. H. McPhedran, Wanstead; J. McLellan, Toronto; T. McPherson, Stratford; A. P. F. Nelles, Windsor: W. J. O'Hara, Hagersville: F. J. Pattee, Hawkesbury; J. J. Robertson, Belleville; T. D. Rutherford, Delmer; J. A. Spiers, Drumbo; J. M. Stevens, Chatham; G. Stewart, Ruthven; W. H. Secord, Brantford; R. W. Tisdale, Lyndoch; J. H. Todd, Toronto; F. J. Walker, Petrolea; A. Wilson, Russell.

## THE PLACE OF BIOLOGY IN A MEDICAL CURRICULUM.

From the report of the General Medical Council of Britain we quote the following:—It is, we believe, quite open to discussion whether biology should be included at all in the curriculum for a minimum qualification, which term may be applied, without any disrespect, to the diplomas of the bodies with which we are concerned. A university degree, if it is to justify its existence, should connote more than the minimum amount of knowledge both in extent and variety, but it is not claimed that any such necessity exists in connection with the licences to practise conferred by the licensing corporations, which have, it must be remembered, their own higher tests, which are not now under consideration.

If we were pressed for an opinion on this point we should be obliged to admit that, overburdened as the student's curriculum is with subjects, elementary biology is the subject which could best be dispensed with.

Chemistry and physics a student must learn if he is to understand the later subjects of his curriculum, but much, perhaps all that is valuable, in the course of elementary biology might be imparted in the anatomical and physiological courses, if those subjects were dealt with on somewhat broad lines. And we think that it would not be denied that it would be much better for the student to obtain a reasonable grasp of the principles of the two physical sciences than to fail to achieve that end because a third subject has been packed into an already overfull year.

# THE CANADA LANCET

VOL. XXXVII. JANUARY, 1904. No. 5.

## EDITORIAL.

### A DOMINION PUBLIC HEALTH DEPARTMENT.

Some time ago, in THE CANADA LANCET, we referred to the importance of the study of public health. It was then pointed out that the death rate in Great Britain has fallen from 24 per thousand to 19 per thousand, due to better sanitary conditions and the influence of preventive medicine. This is equal to the addition to the population of Great Britain of 240,000 annually. A reduction of the death rate in Canada by one in the thousand would be equivalent to an addition to the population of 5,000 annually. Based on Canadian expectancy, the actuarial value of a life is $6,000. This would be a saving to the country of $30,000,000 a year. It is when health matters are presented in this form that the great importance of sanitary matters and preventive medicine looms so large in the public eye.

The Canadian Medical Association has given its endorsation of the establishment of a Public Health Department. Both at the Montreal meeting in 1902, and at the London meeting in 1903, the Association urged the matter on the Dominion Government. At London, August, 1903, the Committee reported as follows:—

OTTAWA, Aug. 24th, 1903.

*To the President and Members of the Canadian Medical Association.*

GENTLEMEN:—Your Committee, consisting of Dr. T. G. Roddick, M.P., Dr. E. P. Lachapelle and Dr. R. W. Powell, convener, acting under instructions from your President had the honor to wait upon the Prime Minister to present to the Government the resolution passed at the last meeting of your Association on the question of the creation of a Department of Public Health under one of the existing Ministers. The whole matter was gone into carefully and your Committee endeavored to press upon the attention of the Government the great desirability and importance of placing all matters included under the term Public Health with which the Dominion Government has to do upon a higher basis than now obtains.

It was pointed out that this Association, representing the whole Dominion in which there were over 5,500 practitioners, had concluded that it would be in the best interests of the general public welfare of the Dominion that this should be done and that the time had come when Canada should be elevated from the entirely secondary place she now occupies among the nations in this branch of the public service and that she should at once have a status conferred by Parliament whereby all questions relating to sanitary science and public health should be dealt with from a central authority to be known as the Publich Health Department.

Many matters of detail were not particularly discussed at the interview inasmuch as your Committee felt that their duty consisted chiefly in pressing upon the Government the main idea by endeavoring to show that the present system of having the various subjects scattered through several Departments with consequent multiple division of authority was not calculated to impress the public with the great importance of the administration of this branch of the public service.

Your Committee moreover insisted strongly that our profession was a strong active body of earnest workers and their number and influence entitled them to this consideration which was for the public welfare and not in any way directly or indirectly for their personal benefit and finally it was pointed out that the skeleton of this plan is already well laid and a Director General of Public Health holds an appointment to-day, an earnest hard-working, able official, at present issuing his orders *in re* quarantine from the Department of Agriculture, which is an anomaly *per se* and lessens the authority in a measure, and yet he has nothing to say as regards sick seamen, sick Indians, adulteration of food, vital statistics, and and has no laboratory under his control.

The Prime Minister was most courteous and listened patiently to the arguments set forth and finally authorized Dr. Roddick to place a resolution upon the order paper with a view to having a discussion in Parliament before the Privy Council took up the matter in earnest.

Sir Wilfrid Laurier also stated that in the absence of the Minister of Agriculture who was familiar with the whole question he would not willingly go into the matter at greater length with a view to legislation, in the Minister's absence.

Dr. Roddick's resolution was as follows :

"That it is expedient, in the public interest, to constitute a Department of Public Health for the Dominion, charged with the execution of the various duties which are or may be imposed upon or assumed by the Government for the protection of the public health, and the preven-

tion and mitigation of diseases. And that such Department of Public Health be administered under the direction of a Minister of the Crown, in conjunction with one of the existing Departments of the Government."

That they have a warm advocate in Mr. Fisher who is thoroughly alive to the necessities of the case and if his colleagues in the Government would carefully consider this matter and the justice and importance of the claim for consideration, we as a profession are making, they would readily acquiesce. Some difficulties naturally stand in the way and some difficulties are easily introduced into the way but a way can be found for this measure to be put through as has been found for other measures and will be found for future measures if only there is a willingness on the part of the Government to place this matter in the position it ought to occupy. Let me say that Parliament is still in Session and therefore it may yet transpire that the final decision of the Government may not be adverse and the delay will be found to be due to the great strain of urgent public business of weightier moment.

Your Committee express the hope that their efforts have not been entirely in vain and they beg to report that in their opinion the profession as a whole must continue to press their claim for a proper recognition of this question at the hands of the Government by influencing all those with whom they may come in contact and moreover by continuing to further influence public opinion by definite announcements from time to time in the form of resolutions emanating from this parent Association and others of a like character throughout the Dominion.

Respectfully submitted on behalf of the Committee.

R. W. POWELL,
Convener.

The following resolution was unanimously adopted :—

*Resolution re Public Health Department.*

Moved by Dr. Adam H. Wright, Toronto, and seconded by Dr. H. H. Chown, Winnipeg, That

"Whereas this Association at its meeting in Montreal in 1902 placed itself on record by Resolution to the effect that it is expedient that a Department of Public Health be created by the Dominion Government, and administered under the authority of one of the existing Ministers of the Crown.

"It is further Resolved at this meeting to again press upon the attention of the Government that Canada is not preserving her status among the nations in this branch of the public service and that it is anamolous to have the various matters connected with the administration of Public Health so far as it appertains to the Dominion Government spread throughout four or five departments.

"It is further resolved that in the opinion of this Association the profession of medicine in the country, being actuated in this matter solely in the best interests of the public welfare and with an earnest wish to place Canada on a par with other civilized countries is entitled to expect that the Honourable the Privy Council of Canada will at an early date take this question into its best consideration so that by the time our Association meets again in the Autumn of 1904 we will be made officially acquainted with the decision.

"That a copy of this Resolution be transmitted by the Secretary to the Right Honourable the Prime Minister, to the Honourable the Minister of Agriculture and to the Honourable the Privy Council of Canada through the Hon. R. W. Scott, Secretary of State."

The efforts to establish a Health Department for Canada meets with our hearty approval, and we hope that the time is not far off when the Government of Canada shall act in this matter.

## FOUR WORTHY ASSOCIATIONS.

1. First comes the Canadian Medical Association. This is our national medical association and should be well supported by all the provinces. This association has done much for the medical profession of Canada in the past, and is destined to do still more in the future. It meets in Vancouver sometime in August, and it is to be hoped that the attendance will be large. No doubt many of the eastern men will avail themselves of the reduced rates to pay a visit to the western provinces, which promise so much for the future of the Country. The president, Dr. Tunstall, of Vancouver, and his associates are making great efforts to secure a large attendance and to provide an excellent programme of papers and social functions. Dr. Tunstall paid a visit to the eastern cities a short time ago in the interests of the Association. When in Toronto, he met a considerable number of practitioners at the King Edward Hotel, and was greatly encouraged by the promises of assistance he received on that occasion. In further issues we shall have more to say upon this subject, but, in the meantime, we urge upon as many as possible to attend the meeting, and take part in it by contributing papers, or exhibiting cases.

2. Next comes the Ontario Medical Association. This is our provincial association, and deserves well at the hands of the profession of the province. It is impossible to estimate how much this association has done for the medical interests of the profession of Ontario. It is an annual period of reunion and takes the place of a short post graduate course of study.

Much useful information is distributed at these annual gatherings. It is not asking too much to suggest that it would be more in the right direction if practically all the practitioners of the province sent in their annual fees, even if they could not attend the meeting. This would enable the officers to issue the proceedings in book form, of which the members would receive a copy. At the meetings in June 1903, Mr. I. H. Cameron, of Toronto, moved, seconded by Dr. McKinnon, of Guelph, that at the meeting of 1904 the Ontario Medical Association shall become a branch of the British Medical Association. This will require careful consideration. If it means the taking of the British Medical Journal, the annual fee will become $5.00 at least. A week prior to Dr. Ross's departure for Egypt and other eastern places, he entertained at dinner at the King Edward Hotel the officers and members of the various committees. At this gathering, the affairs of the Association were fully discussed, and many of the preliminary arrangements completed. On this occasion, Dr. Tunstall, of Vancouver, and Dr. J. Alex. Hutchinson, of Montreal, were present. Much useful work was done for the Canadian Medical Association as well as for the Ontario Medical Association.

3. The third association that should appeal to every physician in Canada is the Canadian Medical Protective Association. At another page, we give much valuble information regarding this Association. On former occasions we have called attention to the splendid work this association is doing for its members. But why should it not be in a position to do the same for every practitioner in the Dominion? The officers of this Association are now making an appeal for additional members; and we sincerly trust the appeal shall not be in vain, but yield excellent results Those who are members, or who intend now to remit their fees, can be of great service to the Association by speaking to their neighboring practitioners, and doing a little missionary work for the Association. A study of the suits against practitioners reveals the facts that in almost every instance the suit is an unjust one, and the plaintiffs have no means. This means that these suits are usually speculative ones, and that the defendants, when they win, cannot recover their costs. The expenses in these cases are always heavy. Mutual co-operation among the doctors for their own protection against such actions is one of the most praiseworthy efforts before their attention at the present moment. The Annual fee is $2.50; which is the only source of revenue, but it is enough if the profession will only respond to the call of the officers, who are: President, Dr. R. W. Powell, Ottawa; Vice-President, Dr. J. Camarind, Sherbrooke; Treasurer, Dr. J. A. Grant, Jr., Ottawa; and Secretary, Dr. F. W. McKinnon, Ottawa.

4. The fourth association for which we wish to speak a good word is the Ontario Medical Library Association. There is now a large collection of books, and the list is growing rapidly. The time has come when there ought to be a home for this valuable collection. In time, the profession in Ontario would accumulate a valuable library. All over the province there are doctors who could donate books or journals, and aid by an annual or occasional fee. The home for the library would also be a sort of head quarters, or Toronto home for the profession of Ontario.

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## SOME FEATURES IN THE LIFE OF GERMS.

It is now settled beyond dispute that the same germ does not always produce the same result. The conditions of the animal that is experimented upon influences the effects of the germs very much. If a pigeon be starved it is a ready prey to anthrax; but can resist it if well fed. Fowls are susceptible only when chilled. Young rats are sensitive, whereas old ones can resist the infection.

It is impossible, in the laboratory, to duplicate some of the experiments produced by disease-germs and the condition of the animal attacked. While it is true that the pneumococcus is the cause of pneumomia, still it appears that a chill to the skin is necessary to give rise to the conditions that favor the growth of the germ. In like manner, the germs that inhabit the genito-urinary channals remain dormant until a distended bladder is emptied, or the person has a chill, or suffers the shock of an operation, when cystitis, or pyelitis may suddenly appear.

Much of the injurious effects of germs in the body may be due to the dead proteids that accompany their growth. Large quantities of dead or living harmless bacteria injected into the system may prove fatal by the contamination of the blood by these proteids. The hay bacillus can be as fatal as are dead, or living, pathogenic germs. This would tend to narrow down the specific influence of germs, apart from the effects of their products.

The colon bacillus and the bacillus typhosus have some close affinities. There are some high authorities who regard them as modifications of the same germ, as descended from a common ancestral form. The colon bacillus is now natural to the intestinal canal, and may be a modified form of the bacillus typhosus. On the other hand, the colon bacillus under certain conditions of an unsanitary character may become the bacillus typhosus. In the normal condition of the intestines there is reason for the opinion that the colon bacillus performs some useful purpose. If the conditions are changed and the intestines are injured,

or inflamed, the bacillus may become highly pathogenic. So, too, if it enters some other tissue. In the pleural cavity it may give rise to an abundant empyema. Different locations and different feeding make the differences in these instances.

By the quality of the culture medium, the bacillus anthracis can be changed from the most virulent type to a harmless putrefactive organism. This is only an instance of what can be done with almost all pathogenic germs. Nature is doing the same thing all the time. Diseases are thus constantly changing in their type, as to their severity, or leniency. The pathogenic characters are constant only in so far as their environments are constant. The most virulent type of diphtheria can be modified into a mere saprophyte. It is not uncommon to find a virulent type of the Klebs-Löffler bacillus in healthy persons, which under favorable conditions may produce diphtheria in the same, or another person. It is not possible therefore to be too dogmatic in the matter of diagnosis, because the germs of diphtheria may be found.

The bacillus tuberculosis is an excellent example of the modifications arising from the different environments in which the bacilli may live. Avian, bovine, and human tuberculosis have relationships to each other and yet they have some marked features wherein they differ from each other. The bacilli as obtained from man, can, with difficulty, be made to grow in the calf; but once they have done so, they can with ease be made to grow in another calf. The calf, as a new culture ground for the germs taken from the human body, has modified them, with the result that they now prefer the calf and readily infect it. The seed, and the soil, and the crop are here most beautifully related to each other. The high grade apple can be grafted on to the hardy seedling. The is, no doubt, for all varieties of tuberculosis a commou origin. The different animals and birds are just so many different culture media that modify the germs, as may be done, under certain conditions, in the laboratory.

All this leads to the sure ground that the germ is not the sole cause of infective and infection diseases. The germs must be evolved; and there is good reason for thinking that many germs may be harmless, or highly pathogenic, according to the culture medium, or animal they have lived in. Perhaps nowhere is this so well seen as in the venereal diseases. By frequent irritation and dirty habits comparatively mild germs become virulent, and there results gonorrhoea and chancroids, which are only short removes from urethritis and simple ulcer.

For many of the above thoughts, we express our indebtedness to Dr. G. Frank Lydston's Article in the *Journal of the American Medical Association.*

## SLEEPING SICKNESS, AFRICAN LETHARGY, TRYPANOSOMIASIS.

Trypanosomes were found in the blood of a mammal by the late Dr. Timothy Lewis in 1877. In 1880 Mr. Evans, V.S., found them in the blood of horses, mules, and camels, suffering from the disease known as surra in India. In 1896, Dr. Bruce proved that the nagana, or fly disease of horses in some portions of Africa was carried by a biting fly and that the infective agent was a trypanosome. More recently Dr. Forde, Dutton, and Manson have shown that the same form of parasite, or trypanosome is present in the blood of man when afflicted with the sleeping disease.

The flies which carry the trypanosomes are of the *Genus Glossina.* They have also been called the Tsetse Flies. The particular fly which carries the trypanosome that causes the sleeping disease is the *Glossina palpalis.* It is dark brown, the legs are sometimes buff-colored. Several diseases of animals are caused by different varieties of trypanosomes, carried by varieties of the *Glossina* flies. These diseases are nagana, surra, dourine, and caderas,

The following facts are now fully established: That sleeping disease is due to the presence in the blood and cerebro-spinal fluid of a species of trypanosome. That it is a very common and fatal disease in many parts of Africa, especially the West Coast; that monkeys are susceptible to sleeping sickness, and always yield the same trypanosome in the blood and cerebro-spinal fluid; and that the trypanosomes are conveyed from the sick to the well by the Tsetse fly, *Glossina palpalis*, alone.

The real credit of discovering the relationship between the trypanosome hæmatozoa and sleeping disease is due to Dr. Castellani. He found these parasites always present in the cerebro-spinal fluid of those ill with the disease. An interesting fact is brought to light to the effect that about 28 per cent. of the native population in areas, where sleeping diseases abound, have the trypanosome in their blood. In non-sleeping disease areas the trypanosome cannot be found in the blood of any of the natives.

The disease can be communicated experimentally from man to the monkey. An injection of cerebro-spinal fluid from a person with sleeping disease was made into the body of a monkey. Seventeen days later, trypanosomes were found in ths blood of the monkey. The animal died about two months after the injection. Experiments were conducted to ascertain whether the *Glossina palpalis* could convey the disease from a sick person to a monkey. For this purpose, the flies in a cage were allowed to feed on a sleeping sickness person, and were then allowed to

feed on a monkey. The result was that the animal was infected with trypanosomes. Tsetse flies caught along the lake and brought to the laboratory gave trypanosomes to three monkeys.

In Journal of the *American Medical Association*, for 21st November, 1903, there appeared an article by Professors Novy and McNeal, of Ann Arbor, dealing with the artificial cultivation of the trypanosome. In some of the experiments several generations of the cultures were obtained. By cultivation, the virulence of the trypanosome can be modified, and it may be possible in this way to secure the means of immunization. Intraperitoneal injections of virulent cultures of the trypanosome caused the death of mice and rats in 7 or 8 days. Thus we have clear scientific proof that the trypanosome is the organism of the fatal sleeping disease.

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## GOITRE, ITS FORMS AND TREATMENT.

In an address delivered before the Medical Society of Plymouth, Dr. James Berry divides goitre into the bilateral parenchymatous, the solid and cystic encapsuled tumors, exophthalmic goitre, and malignant disease. In the treatment of these cases, attention should be given to their causes. In the parenchymatous variety, and in its early stage, a good deal can be done for the patient. There seems to be good reason for thinking that this condition is due to some poison in the drinking water. By proper change in this the case is often greatly benefitted. In old cases, where the gland has become fibrous and hard, and in the cystic and adenomatous, mere change of water will effect no improvement.

The two drugs of most value in the treatment of goitre are iodine and thyroid extract. In the case of old parenchymatous, cystic, or encapsuled goitres very little is to be expected from medicinal treatment. In soft encapsuled adenoma, in young people, drugs may be beneficial. The external application of tincture of iodine is sometimes useful.

The surgical removal of the gland is conducted in two ways, the extra-capsular extirpation, and the intra-capsular enucleation. In the first method a careful dissection is made, avoiding all important structures, and tying all the vessels before they are divided. In the second method the capsule is divided and the gland cut into, until the tumor is reached. By a careful blunt dissection it is removed. This method is only suited to the encapsuled form of goitre. If attempted in unsuitable cases there may be considerable risks, one of these being hæmorrhage. In large encapsuled growths it may be well to do a resection-enucleation, as by this method most of the large vessels are tied, and the bleeding is thus under control.

Multiple encapsuled tumors add greatly to the difficulty of enucleation and the amount of hæmorrhage. Solid adenomata in young persons, if embedded in much parenchymatous goitre tissue, are very difficult to enucleate, and the extirpation of one lobe of the gland is usually easier and safer. If there be several tumors, or cysts, enucleation is not a suitable operation. For the majority of parenchymatous goitres no operation should be performed. They usually yield some to medicinal treatment, or they do no harm. For mere deformity, a parenchymatous goitre should not be removed.

Two forms may cause much dyspnoea, and demand an operation: The rapidly growing form in boys. or girls, about puberty; or that in which there is a small, deeply seated, tumor behind the clavicle or sternum.

Operation is very seldom justifiable in exophthalmic goitre. In malignant cases it should be performed only if there is very good reasons to think that the disease can be eradicated.

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## SOME MISTAKES IN PRACTICE.

It is not the intention in this article to discuss mistake of treatment, either medical or surgical: but some mistakes that are of a business nature.

One of the first in importance, and a rather common one, is the habit of allowing accounts to run on too long without being rendered. This is bad for both the doctor and the patient. Business men do not follow such a careless practice. They render their accounts promptly. If these are not paid they cease doing business with persons. Carelessness in the matter of rendering accounts, leads to carelessness on the part of the patients in the matter of paying their doctor's bills; and therefore the doctor is sure to lose amounts that otherwise he might have collected. The tendency of business is more and more towards the no-credit system. Doctors should try to approach this method by shortening the credit term as much as possible.

Contract practice is another great evil. There is no need for its existence. Careful study of the experience of medical men, as drawn from this actual work, goes to show that practices are not built up by this means. It is quite a mistake. Then, again, the educative effect upon the public is not good. No practitioner seeks his own best interests, when he allows himself to be elected to attend a certain number of persons, at a stipulated amount per capita in advance. And whatever does himself harm, does the profession as a whole harm. Societies and cor-

porations should be taught that the medical profession is not up for auction to the lowest bidder. Societies and corporations may very properly engage the services of medical men; but the basis of the contract ought always to be, pay for the services rendered, On the amount of attendance rendered under contract practice, the doctor loses, take one contract with another. It would pay the profession, as a whole, therefore to abandon the present system of contract practice.

Another mistake made by too many medical men is that of not mingling freely enough with members of their own profession. To associate with each other is of much importance. It tends to create a liberal spirit. This is one of the great advantages of attending medical associations. There is both a social and an educational side to these gatherings. They go a long way to remove prejudices, by bringing members of the profession into contact with each other in another way than in the formal meeting in consultation. Then there is the stimulus to thought and study caused by a free and friendly discussion of cases and papers. As no two persons' reading and experience can be exactly the same, there is always something to learn from each of them. Meet often and exchange thoughts freely. Such conferences and discussions will do much to remove jealously. Persons who meet often in friendly debate will be much more likely to treat each other generously than those who have not thus come together.

## ARE THE ANGLO-SAXONS DYING OUT?

Such is the the title of Mr. Havelock Ellis' article in the November number of the *Independent Review*. In the article it is shown that at one time Spain held the supremacy in Europe, and at a later period France became the dominant power, which reached its highest point under Napoleon, when it broke. From that period the palm of ascendancy has been with the Anglo-Saxons. During the Victorian era there was an amazing expansion of the Anglo-Saxon influence in Great Britain, North America, and Australia.

But Mr. Ellis points out the decline in the British birth rate during the past generation. In 1876 it was 36.3 per 1,000 of the population Since then the birth rate has fallen by 20 per cent.; and, in some of the larger cities, by as much as 40 per cent. Against this must be set a lowered death rate, which is mainly made up by a saving of life in the older rather than in the younger years. Corresponding with this lowered birth rate, there has been a falling off in the marriage rate. But it must be noted that the marriage rate is sometimes high, when the birth rate was low. There has been a marked tendency for the postponement of

the average age at which marriages take place. In Britain the tendency is to marry late and have few children. But in addition to this, there has been a steady tendency for the vigorous to emigrate. This has been very marked in the case of Ireland. This lowered birth rate has been noted, however, in the United States, and has been the subject of much comment. The average number of children in an Anglo-Saxon family in America in Franklin's time was eight. At the end of the nineteenth century, the number of children to the family had fallen to from one to four. Nor does there appear, in the United States, to be much difference between the upper and lower families. In the United States the general level of the birth rate is maintained by the foreign population.

Turning to Canada, it is found that among the Anglo-Saxon families the birth rate is much the same as in the New England States. In Quebec, among the French Canadians, the birth rate is over 35 per 1,000 of the population, and an average of 9 or 10 per family. In Ontario, the birth rate is only 21 per 1,000.

In Australia and New Zealand the same condition is found to hold true. Among the English speaking families the birth rate is rapidly declining. In Queensland it fell in ten years from 37 to 27 per 1,000. In New Zealand, with all its wealth and social advancement, its low death rate, and comparatively high marriege rate, the birth rate is steadily falling; and appears to do so inversely with the prosperity of the country.

From England and all the great countries which she has planted all over the world, we thus find the same report that the birth rate is falling among the English speaking people.

## THE STUDY OF INSANITY.

On 29th September, 1903, a deputation, headed by Dr. W. N. Burnhardt, waited upon Premier Ross, and outlined a scheme for the study of insanity. In addition to what is now being done for the insane, it was contended that an institute for the study of insanity should be established. At the head of the institute there should be a director, who would have jurisdiction over all the institutions. He would have power to study the insane during life, and examine their brains after death. It was asked that a sum of money be set aside for this purpose.

From the daily press of December 14th, 1903, we take the following item: " Dr. W. N. Barnhardt has had several interviews lately with Hon. J R. Stratton in connection with the question of providing more extensively for the pathological study of insanity at the Provincial asylums. It is believed that much advance could be made in the knowledge

of causes and cures for insanity if more efficient study could be carried on. Mr. Stratton has given no definite promise that the plan would be carried into execution, but admitted the wisdom of some such course, and it is not unlikely that he will lay the matter before the House at its next session."

We do not propose entering into the merits of the establishment of an institute for the study of the pathology of insanity. But what we do propose saying, and saying with all the emphasis at our command, is that if such an institute shall be established, it must be placed under the control of one who would give dignity to the work and who would be acceptable to the medical profession. There should be no tolerance shown to any one who either now or in the past has or had any associations with any irregular form of practice.

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## PERSONAL AND NEWS ITEMS.

Dr. Scott, of Newmarket, has made a satisfactory recovery from his recent illness.

Dr. M. F. Haney, an old resident of Humberstone, died at his home 3 December, aged 79 years.

Dr. Brett has been appointed lecturer on Materia Medica for the new Medical College at Winnipeg.

Dr. Herbert L. Barber, Bowmanville, is taking a post-graduate course in medicine in New York City.

It is reported from Dawson City that Dr. Macfarlane died there on 8th of December, 1903. He was a native of Stratford.

Dr. Herod, late of Toronto, is installed in the village of Niagara Falls, in the office long occupied by the late Dr. McGarry.

Dr. Fletcher, who opened up an office some two months ago in Forest, has gone to Oil Springs where he will practise.

Dr. J. A. McLeish, of Parkhill, well known in town and vicinity, has taken into partnership, Dr. I. W. Irwin, of Lindsay.

Dr. H. J. Anderson left 18th November for Essex, to commence the practice of medicine as assistant to Dr. Brien of that place.

The wedding of Miss Florence Mildred Arnold and Dr. W. J. McKenzie, both of Kingsville, took place on Wednesday, Nov. 25th.

Dr. J. Nisbet Gunn, who has just returned from a year in England and on the continent, intends practising in Clinton, Ontario.

Dr. Joshua Warner, of East Angus, the pioneer physician of the district and the oldest resident in Wesling township, died 22 November, aged 89.

While leaving the post office recently, Dr. Canfield, of Ingersoll, slipped and fell on the steps, sustaining a sprained ankle and other injuries.

Dr. Herbert C. Featherston, late of Hamilton, reached Toronto 10 November, returning from Edinburgh, Scotland, where he received the degree of L. R. C. P. & S.

Dr. Warren, of Whitby, was in Toronto to the General Hospital for a broken shoulder blade, the result of being thrown from his buggy, in the latter part of November.

Dr. and Mrs. D. S. Bowlby, of Berlin, left on 4th December, for Toronto, en route for New York, and expect to sail very soon for Naples, and will be away some months.

Herbert Tandy, B. A., final year medical student of Queen's, has been appointed by the medical board of the general hospital to succeed Dr. W. S. Murphy as a house surgeon in that institution.

Dr. Ross, of Belleville, has been offered and accepted the position of foreign medical and general representative of a leading Canadian life insurance company, and left for Calcutta about the 1st of December.

Dr. Frederick Parker will take over Dr. W. M. Egberts' practice in Milverton, about the first of December. Dr. Parker has been practising the last eight years at Bruce Mines, Dr. Egbert will visit the hospitals of Europe for some months.

Dr. Fred B. Carron, Brockville, has received an important appointment from the C.P.R. steamship line as surgeon on the steamship Empress of India. He will leave on the 15th December for Vancouver, from which place he will sail on the 27th for Hong Kong, China.

The following item is from the *Toronto Globe* of 19th December. "The transmission through Canadian mails of 'Physical Culture,' a magazine published in New York, has been forbidden. It is understood the offence was critical references to several Toronto physicians by use of their initials, from which they have been identified."

Dr. Chamberlain, Inspector of Prisons, had a moose in cold storage which was one of the largest ever brought to Toronto. It occupied the larger part of a box car and weighed about 1 400 pounds. It stood over six feet at the withers, and the antlers spread 52 inches. From tip to tail the measurement was 8 feet 6 inches and at the shoulders its girth was 7 feet 6 inches.

At a meeting of Queen's medical staff last night the resignation of Dr. Herald as secretary-treasurer of the faculty was accepted, and Dr. W. T. Connell was appointed to the vacancy. Dr. Herald retires after eleven years' service, but still retains his position as professor of clinical medicine. Dr. A. R. B. Williamson was appointed lecturer on medical jurisprudence and toxicology.

With profound regret the word reached St. John, 16th November, announcing the death of Dr. J. A. E. Steeves, which took place Saturday morning at Phœnix, Arizona, the cause being heart trouble. Just six weeks prior to his death the late Dr. Steeves was wedded to Miss Murphy, the former matron of the Provincial Lunatic Asylum and later of the Rothesay College.

Dr. John C. Mitchell, of the Toronto asylum staff, has been appointed by the Ontario Government, medical superintendent of the new Provincial epileptic hospital now under construction at Woodstock, which, it is expected, will be completed early next year. The appointment has been made now to give the superintendent an opportunity of visiting some of the best institutions in other countries, before it is necessary to undertake the duties of the opening of the new hospital.

Dr. Mitchell has been connected with the Toronto asylum for over two years and is a past president of the Ontario Medical Association.

The directors of Park, Davis & Co., at a meeting held two weeks ago, selected E. G. Swift, Mayor of Walkerville, now completing his third term, to succeed the late William M. Warren, as General Manager of the company. Mayor Swift is at present the Manager of the Canadian Branch of the Company at Walkerville, and began his successful business career with Park, Davis & Co. about 22 years ago, progressing from the management of one department to another, until ten years ago he was made the first manager of the Walkerville branch.

The American Congress on Tuberculosis will be held at St. Louis on October 3rd, 4th and 5th, 1904. Many distinguished savants from all parts of the world will be in attendance. Authority has been given the executive committee to invite eminent scientists from foreign countries to contribute to and attend the Congress. Several thus far have been invited. That eminent scientist, Prof. Dr. Maurice Benedikt has accepted and will give a paper on "The Toxine of Tuberculosis." The Congress is going to be a very representative gathering; and, no doubt, much good will come from its deliberations. It is to be hoped that many from Canada will find it possible to attend the meetings.

Dr. Walter F. Langrill, Medical Health Officer of Hamilton, has been appointed by the Board of Governors of the City Hospital, medical superintendent of the hospital, to succeed Dr. McLaren, recently resigned. There were a good many applications. Dr. Langrill's salary will be $1,800 a year, the same as was paid to Dr. Edgar, predecessor of Dr. McLaren. The last medical superintendent received only $1,000 a year. Dr. Langrill's new duties will begin the first of the year. The board decided to co-operate with the authorities of the Toronto General Hospital in an effort to get the Government to increase the hospital grants. It was suggested that the timber limits might be utilized to get the extra money.

## BOOK REVIEWS.

### TEXT BOOK OF DISEASES OF THE EYE FOR STUDENTS AND PRACTITIONERS OF MEDICINE.

By Howard F. Hansell, A.M., M.D., Clinical Professor of Ophthalmology, Jefferson Medical College; Professor of Diseases of the Eye, Philadelphia Polyclinic; Ophthalmologist, Philadelphia Hospital; Consulting Ophthalmolgist, Chester County Hospital, etc., and William M. Sweet, M.D., Demonstrator of Ophthalmology, Jefferson Medical College; Assistant Ophthalmic Surgeon, Jefferson Medical College Hospital; Assistant Ophthalmologist, Philadelphia Polyclinic; Consulting Ophthalmologist, Phœnixville Hospital, etc. With chapters by Christian R. Holmes, M.D., Casey A. Wood, M.D., D.C.L., Wendell Reber, M.D. With 256 illustrations including colored plates. Philadelphia: P. Blakiston's Sons & Co., 1012 Walnut Street, 1903. Price $4.00 net. Messrs. Chandler & Massey, Toronto.

This book has been designed for medical students and general practitioners, and all through the work this design has been kept in mind, in that none of the rare or incurable affections of the eye are taken up in great detail, and much space has been devoted to the description of the more common diseases and their treatment. The chapter on refraction, following the modern text books, is brief and to the point, with no superfluous information on optics; and yet explains the principles of lines and prisms in a clear and practical manner.

The various operative procedures are thoroughly gone into, and the chapters devoted to this part of the work are particularly well illustrated.

As one would expect in such a book little space is given to theories of disease and their etiology, and consequently nothing new is put forward as to the causation of sympathetic ophthalmia or of optic neuritis following disease of the brain, although the mechanical theory of the latter condition is favored.

Modern methods for diagnosis and treatment by means of the x-rays and Haab magnet are well explained and illustrated.

Special chapters on three different subjects have been contributed by able writers. Dr. C. R. Holmes of Cincinnati, treats of diseases of the lachrymal apparatus, orbit, and cavities accessory to the orbit, in which the anatomy and pathology of the parts are described and illustrated by original and instructive plates. "The Pupil in Health and Disease" is the title of a chapter by Wendell Reber of Philadelphia which contains a short though complete resumé of the more important facts in connection with the pupillary reactions. The explanations of the phenomena are terse and plain, but hardly as full as might be expected in a chapter devoted to the one subject. Dr. Casey A. Wood, of Chicago, has a chapter on ocular symptoms in general disease, which gives a summary and description of most of the diseases in which ocular changes are to be expected. These two chapters are a valuable addition to the work and will be much appreciated by the general practitioner.

The authors have suceeded in their endeavor to bring out a book which will appeal equally to the medical student and medical practitioner.

## FOUR EPOCHS OF WOMEN'S LIFE.

The Four Epochs of Women's Life. Second Edition, Revised and Greatly Enlarged. Maidenhood, Marriage, Maternity, Menopause. By Anna M. Galbraith, M.D., Author of "Hygiene and Physical Culture for Women; Fellow of the New York Academy of Medicine, etc. With introductory Note by John H. Musser, M.D., Professor of Clinical Medicine, University of Pensylvannia. 12 mo. volume of 247 pages. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Cloth, $1.50 net. J. A. Carveth, & Co., Limited, 413 Parliament St., Toronto. Messrs. Chandler & Massey, Toronto.

This work, written for the instruction of the laity on subjects of which every women should have a thorough knowledge, is indeed a timely and excellent one. The fact that a second edition has been demanded in such a short time is sufficient proof that women have at last awakened to a sense of the penalties they have paid for their ignorance of those laws of nature which govern the epochs of their lives. The language used is clear and comprehensive, yet, withal, modest, and the meaning easily grasped even by those unfamiliar with medical subjects. As a further aid a comprehensive glossary of medical terms has been appended.

In this new edition the author has made some excellent additions. viz; A section on "The Hygiene of Puberty;" one on "Hemorrhage at the Menopause a Significant Symptom of Cancer;" and one on "The Hygiene of the Menopause." These sections make the work the very best on the subject we have seen, and physicians will be doing a real service by recommending it to their patients.

## NEPHRITIS.

A clinical Treastise on the Pathology and Therapy of Disorders of Metabolism and Untrilim. by Prof. Dr. Karl Von Noorden, Physician in Chief to the City Hospital, Frankfort. Translated by Boardman Reed, M.D., Professor of Diseases of the Gastro-Intestinal Tract, Hygiene and Chinatology, Temple College, Philadelphia. E. B. Treat & Company, New York. Price $1.00.

Dr. Von Noorden occupies a high position as an authority on diseases of metabolism and nutrition. Sometime ago, we reviewed favourably his short treatise on obesity The present book is a companion one, and deals with the very important subject of nephritis. This little book on nephritis is a genuine little classic. Dr. Von Noorden breaks away from many of the accepted views, both on the pathology and treatment of nephritis. He calls strongly in question the notion that milk is the best diet, and urges care in the administration of liquids. He rather favors their restriction in many cases. His advice on treatment is very full. We can recommend the book with much confidence.

## MODERN SURGERY.

Modern Surgery : General and Operative. Fourth Edition, greatly enlarged and entirely reset. By John Chalmers DaCosta M.D., Professor of the Principles of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia. Handsome octavo volume of 1099 pages with over 700 illustrations, some in colors. Philadephia, New York, London : W. B. Saunders & Company, 1903. Cloth, $5.00 net ; Sheep or Half Morocco, $6.00 net. Agents J. A. Carveth & Co., Limited, 413 Parliament St., Toronto.

This work presents in concise form the fundamental principals and the accepted methods of modern surgery. Obsolete and unessential methods have been excluded in favor of the living and the essential. The author's extensive experience as a teacher is evident throughout the entire work, the statements being clear and to the point.

The progress of surgery in every department is one of the most notable phenomena of the present day. So many improvements, discoveries, and observations have been made since the appearance of the last edition of this work that the author found it necessary to rewrite it entirely. In this fourth edition the book shows evidence of a thorough and careful revision, and there has been added much new matter. There have also been added over two hundred excellent and practical illustrations, greatly increasing the value of the work. Because of the great amount of new matter it has been deemed advisable in this present edition to adopt a large type page. This is a great improvement, rendering, as it does, the work less cumbersome. The book will be found to express the latest advances in art and science of surgery. We certainly recommend it.

## A MANUAL OF THE PRACTICE OF MEDICINE.

A Manual of the Practice of Medicine. Sixth Edition, thoroughly revised, enlarged and reset. By A. A. Stevens, A.M., M.D., Professor of Pathology in the Woman's Medical College of Pennsylvania; Lecturer on Physical Diagnosis in the University of Pennsylvania; Physician to the Episcopal Hospital and to St. Agnes' Hospital; Fellow of the College of Physicians of Philadelphia, etc. Handsome Post-octavo of 556 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Flexible Leather, $2.25 net. Agents J. A. Carveth and Co., Limited, 413 Parliament St., Toronto.

The popularity of this manual on the practice of medicine can be attested for by its numerous editions. The work covers completely the ground gone over by the student, especial stress being laid on diagnosis, differential diagnosis, and treatment. Each disease is treated in a concise, clear, and scientific manner, and the reader cannot fail to grasp the author's meaning. This sixth edition has been entirely reset and greatly enlarged, without changing, however, the original style of the work. Many articles, notably those on diseases of the digestive system, diseases of the myocardium, malaria, diseases of the blood, gout, diseases of the spinal cord and larynx, have been entirely rewritten, thus bringing the work absolutely abreast the times. After a careful examination we can unhesitatingly recommend this book to students.

## EGBERT'S HYGIENE.

A Manual of Hygiene and sanitation by Seneca Egbert, M. D., Professor of Hygiene in the Medico-Chirurgical College of Philadelphia. New (3d) edition, enlarged and thoroughly revised, in one 12mo. volume of 467 pages with 86 illustrations. Cloth $2.25 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

The demand which has so soon made possible and necessary a new edition of this work proves two things conclusively—the interest of the profession and laity in Hygiene and Sanitation, and the author's success in furnishing a clear, trustworthy and complete resumé of his important subject. Dr. Egbert is to be congratulated upon this exceptionally valuable little volume. It is throughly practical, in every detail and contains an enormous amount of authoritative information. The present edition has been carefully revised to date. Every line has been scanned for a possible chance for improvement, and notwithstanding the author's care to keep it as concise as possible, and his endeavor to prune carefully, both the old and the new growth, the volume has increased by more than one-third over its orignal size. This growth in size and corresponding cost, has, however, been off-set by the increased demand, so that the publishers have not beeu obliged to advance the price of the book.

If, then, the most modern, complete, trustworthy, interesting and practicle manual on Hygiene is wanted by student, practitioner or layman that demand is most satisfactorily met by Egbert.

## ROGER ON INFECTIOUS DISEASES.

Their Etiology, Diagnosis and Treatment by G. H. Roger, Professor Extraordinary in the Faculty of Medicine of Paris, etc., translated by N. S. Gabriel, M. D., New York. In one octavo volume, of 864 pages, with 43 illustrations. Cloth $5.75, net. Lea Brothers & Co., Philadelphia and New York, 1903. Toronto: Messrs. Chandler & Massey.

This volume comprehends almost the entire scope of internal medicine and touches upon many of the principles underlying modern surgery as well. It could not have been prepared by a laboratory investigator, however brilliant, nor by a clinician, however extensive his experience; its creation remained for one who combines the instincts and training of a student in original research with almost unprecedented opportunities for clinical investigation.

Never losing sight of the fact that the purpose of the laboratory is to amplify and explain clinical observations, Professor Roger has pursued clinical and experimental researches in the closest relation to each other. In this work he unfolds the knowledge of his subject by simple and practical methods. He first studies the pathogenic agents, inquires into their distribution in nature, the conditions under which they attack man and their modes of invasion. Full consideration is then given to their influence upon the human economy and the reaction of the latter upon the invaders. Ample time and space are devoted to questions of diagnosis and prognosis and that the work is eminently practical is shown by the fact that more than a quarter of the volume is devoted to treatment both preventive and curative.

Professor Roger has had opportuuities for the study of infectious diseases which rarely fall to the lot of any man. In the hospitals under his charge are received all cases of contagious diseases which occur in Paris and he has personally attended more than 10,000 patients during a period of five years. The effect and purpose of this work is to harmonize any seeming antagonism between experimental researches and clinical observation and to reduce the theories of infection and immunity to a basis of practical utility.

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## WATHEN'S EPITOME OF HISTOLOGY.

Lea's series of Medical Epitomes. A Manual for Students and Physicians. By John R. Wathen, A.M., M.D., Professor of Surgery, etc., formerly Professor of Histology and Pathology, Kentucky School of Medicine, Louisville, Ky. 12mo, 220 pages, 114 illustrations. Cloth, $1.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1903.

Dr. Wathen has written much more than a compend. His experience in teaching the subject has posted him thoroughly on the needs of the student—the difficulties to be met, and the best way to acquire a

solid knowledge of this most important fundamental branch of Medicine. This little volume presents a compact compendious teaching manual. The amount of well-arranged information it contains is amazing, and its value to the medical student, especially when used in connection with a larger reference book such as Szymonowicz's sterling work, cannot well be over-estimated.

The author has not only given clearly and concisely the essentials of his subject proper, but he has also included references to Embryology that will greatly aid in a correct undertanding of Histology and a better appreciation of Pathology.

A special chapter is devoted to the technique of preparing and staining tissues.

Illustrations are used throughout the volume wherever the understanding can be better helped by the combination of text and pictures, and the price ($1.00), based upon the certainty of a very wide usage, is low enough for every student's purse.

## DAWBARN ON MALIGNANT GROWTHS.

The treatment of certain malignant growths by Excision of the External Carotids by Robert H. M. Dawbarn, M. D. Professor of Surgery and Surgical Anatomy in the New York Polyclinic Medical School and Hospital, visiting surgeon to the City Hospital, New York, etc. (The Samuel D. Gross Prize Essay) 8 vol. pages XIII-192. Extra Cloth, price $2.00 net, delivered. Philadelphia, Pa., F. A. Davis Company, Publishers, 1914-16 Cherry Street.

This is a most interesting book, because it is so original. Very considerable amount of evidence is collected in support of the thesis that cutting off the blood supply from cancer and sarcoma is followed by valuable results. The cases cited are instances of these malignant tumors of the jaws, tongue, throat, mouth, antrum, naso pharynx, neck, face, and lips. The histories of 24 cases of cancer, 20 of sarcoma, 2 of indefinite nature, and 2 of angioma are given. The method of ligating the extemal carotid and its branches are given with much minuteness. Attention is also given to Dr. Wyeth's suggestion of injecting melted wax or boiling water into the vessels to cause their obliteration. The wax mixture consists of 7 parts bees wax, 1 part almond oil, and 1 part salicylic acid. This has been successfully employed. The hot water has only been made use of as yet on dogs, where it certainly obliterates the arteries. These attempts to treat in operable cases of malignant disease in the above regions are worthy of great attention. We can recommend this book as one of much originality and interest to the profession.

## ATLAS OF THE EXTERNAL DISEASES OF THE EYE.

Second Edition, Thoroughly revised. By Prof. Dr. O. Haab, of Zurich. Edited, with additions, by G. E. DeSchweinitz, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania. With 98 colored lithographic illustrations on 48 plates, and 232 pages of text. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Price, $3.00 net. Agents, J. A. Carveth & Co. Limited, 413 Parliament St., Toronto.

This Atlas on External Diseases of the Eye forms an excellent companion-book to Professor Haab's "Atlas of Opthalmoscopy and Opthalmoscopic Diagnosis," and is just what might be expected from an author of such wide clinical experience and trained observation. Starting with examination of the eye the student is easily and gradually led from one examination to another, thus becoming familiar .ith the best methods of investigating the eye for the detection of disease. In the chapters on diseases of the eye which follow, the most important diseases are clearly described and the best therapeutic measures recorded. The text has been amply illustrated by a series of beautiful chromo-lithographic plates, to each one of which a clinical history is appended. This second edition has been thoroughly revised and brought down to date, and a number of new chromo-lithographic plates added. As in the first edition valuable editorial comments are introduced, and reference made to many of the modern thereapeutic agents.

## THE PHYSICIAN'S VISITING LIST.

Lindsay and Blakiston's visiting lists for 1904 is in the 53rd year of its publication. By the time any book is fifty-three years before the medical profession it is pretty well known. This visiting list is one of the most useful we are acquainted with. It is got up in a most attractive form, and bound in an excellent quality of limp leather. There are a number of useful tables. It is issued by P. Blakiston's Son & Co., of Phildelphia, 1012 Walnut St. Price $1.00. Messrs Chandler & Massey, Toronto.

## A CORRECTION.

In our December issue, in reviewing the following works of Messrs. W. B. Saunders & Co., of Philadelphia, we omitted to mention that Messrs. J. A. Carveth & Co., of Toronto, are the Canadian agents. These books are: "A Text-book of Clinical Anatomy," by Daniel N. Eisendrath; "A Text-book of Obstetrics," by Barton Cooke Hirst; "American Text-book of Surgery," by Keen and White; "A Text-book of Operative Surgery," by Warren Stone Bilkham; "A Text-book upon the Pathogenic Bacteria," by Joseph McFarland; "A Text-book of Pathology," by Alfred Stengel.