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AN ABSTRACT OF THE PRESIDENT'S ADDRESS, DELIVERED BEFORE THE ONTARIO MEDICAL ASSOCIATION.

BY DR. W. H. MOORHOUSE, LONDON.

LADIES AND GENTLEMEN,—Allow me to tender to you my sincere thanks for the kindly spirit you manifested towards me when you elected me to preside upon this occasion over this talented, intellectual, and scientific body. The chair has heretofore been filled by men who are distinguished members of the profession, and I feel justly proud of being permitted to be their successor; but while thoroughly appreciating the honor conferred upon me, I am fully alive to the fact that in honoring me the Association sought to honor, not me alone, but the profession in the western portion of our fair province, and I trust I may do them credit, as their representative, by acquitting myself in a manner worthy of the position. Personally, I feel that there are other members of the profession who could more ably and with greater dignity preside over such a large and representative body, but I trust you will kindly overlook my shortcomings, and extend to me that forbearance and assistance which is so essential in the working of the influential and scientific Association before me.

We have now reached our eleventh annual meeting, and I need scarcely tell you that it is with the greatest pleasure I welcome you here Not only have I the pleasure of extending a hearty welcome to the members of the profession in Ontario, but desire to extend kindly greetings to distinguished members from other provinces of the Dominion and from the "great republic to the south," who have so kindly come to assist us in our deliberations, in the cause of science, during our present session.

The world of science and letters has been aptly likened to a republic, in which there is "no royal road to learning"; and as each individual stands upon his own merits, there being no hereditary privileges, the *least* may at some time be the *greatest*. This thought is well calculated to inspire the younger members of our profession with that zeal which is so necessary in order to excel, and I can say, without fear of contradiction, that no department of the world of science has displayed the same indomitable energy and zest in the search after truth during the last quarter of a century as that of medicine.

As we are all co-workers in this great republic of science, all standing on the same level, being earnest students in the search after truth, we trust that each will freely contribute to the general fund of information during our debates. What more noble object can engage the attention of man, or any body of men, than that for which we have met, viz., the best and most feasible means for the prevention and amelioration of disease?

The ancients appear to have clearly appreciated this fact, as they have expressed it: *Hom-*

ines deos accedunt, hominibus dando salutem. "Men most nearly resemble the gods when they afford health to their fellowmen." They viewed the healing art as a godlike gift for the relief of suffering humanity. Disease, to them, appeared shrouded in mystery, as also the means of affording relief; therefore it was invested with supernatural powers. I may be allowed to ask, what other subject is so abstruse, or so difficult of investigation? Enshrouded in mystery, it is indeed often most difficult to probe the causation of disease to the bottom, and thereby learn the true relationship existing between cause and effect. All honor, then, to those master minds who have striven to elucidate those problems, and have set us in the right direction of thinking and acting in the presence of the destroyer of mankind.

It may take years to establish a science, but when once established, what an impetus it gives, and how it expands our vision and places us on the highway to victory! Great discoveries are only developed and proved at long intervals; they are not the result of accident, but of careful, patient effort. Step by step does the patient toiler arrive at the goal of his ambition. Then the world proclaims him a genius. Genius has been defined as an "infinite capacity for taking pains," with the power for prolonged, close mental exertion, until the subject has been viewed and reviewed in all its bearings, and everything of interest extracted from it. All the great men whom the world has been pleased to place in this rank have been men of education, with trained intellects, who have been taught to observe and reason—Hippocrates, Galen, Avicenna, Harvey, Pasteur, and Koch, were cultured according to the age in which they lived. We are told that force of circumstances would bring men of their ability to the surface, and there is truth in the statement; but nevertheless their training must have pre-eminently qualified them for their work. At the present day this point touches us closely, and I cannot give too much credit to the Ontario Medical Council for the good work it has done towards elevating the standard of medical education in this province. Organized and put into practical operation in 1869, it has been the means of placing medical education upon a permanent basis. Prior to that date, not only did each university have the power of granting the license to practise along with its degree, but there existed also the Homœopathic and Eclectic Boards, with equal power, each having their own standard. Young men are apt to lose sight of the great essential to success, viz., thoroughness of preparation, and not until too late do they perceive the wrong they have done, not only to themselves, but the public at large. The majority of students are inclined to regard the medical profession as a mercenary calling, by which they expect to earn a genteel livelihood, and consequently every effort is made to get the coveted diploma. This temptation naturally draws them to the college which gives the easiest curriculum. So far as the licensing power is concerned, under our present excellent management, all the teaching bodies stand on the same level, and I am pleased to see that the Council is increasing the efficiency of the curriculum by making four winter and one summer session compulsory. By introducing the summer session many minor points of importance can be gone over, which the heavier course of the winter session precludes. The standard of matriculation has also been raised, and as a university course in Arts is most desirable, we think the step should be strenuously advocated until the Council sees its way to make it obligatory.

Our various colleges and universities are becoming alive to the necessities of the day, and in consequence we find more attention being paid to the practical part of the physician's training, such as clinical teaching, the use of different instruments of precision, physiological experiments, etc.

Post-graduate courses should be instituted, where medical men, wearied with overwork, can repair for a short season and refresh themselves both mentally and physically.

The idea, no doubt derived from mediæval times, that it is an act of desecration to dissect a body, still holds sway; for in every community officious people are found who consider it a duty to claim and inter bodies which should be used on the dissecting-table. These subjects were housed and cared for by the civic authorities while living, and now when dead their bodies should furnish material for aiding scientific instruction. Were the law made more ex-

plicit in this matter, it would prevent much interference and vexatious annoyance, and further the study of anatomy, which lies at the foundation of practical medicine and surgery. The holding of *post mortem* examinations in cases of a doubtful character as to pathology affords most excellent tuition. Within the last few years I have found, in my private practice, that such examinations have become much more frequent, the educated class of people, as a general rule, readily consenting to and affording facilities for holding the same.

I especially desire to call the attention of the Association to a portion of the Code of Ethics of this body. It is a matter of regret to many that not only the spirit but the letter of this section is so frequently overlooked. I have always considered that general practitioners ought not to advertise a specialty, at the same time doing general practice, and I would like to ask if it is your intention that this section shall be stringently observed, or is it put there merely as a reminder for those who wish to observe it? Has the Association the moral courage to insist upon the strict observance of this section, or does it consent to relax its stringency?

Ten years ago this Association was founded by men who believed that this large and important province should have a society independent of the Dominion Association, and I need not tell you how prosperous it has become nor what a power it has been for the advancement of the profession. At our annual meeting last June, a communication was received from the Dominion Medical Association requesting us to consider the question of affiliation with that society, and a committee was then formed, with discretionary power, to meet the Dominion Medical Association, which was to convene in this city in September. Your committee were cordially received, and a most satisfactory basis of affiliation agreed upon. We would like to see the terms of affiliation extended to local medical societies, so that they may all work harmoniously for the advancement of our profession and the maintenance of our reputation among the nations of the world.

We are all painfully aware of the fact that our profession has its own troubles and trials with which to contend, and none are more vexatious and harassing to the busy, overworked practitioner than the frivolous actions for malpractice which of late years have been so numerous. As a physician's or surgeon's reputation is his capital, these actions are a great hardship, as they entail both expense and obloquy; for many people, never hearing the true version of the case, consider that the practitioner must have been in fault. The monetary consideration is also a large item, which, along with the loss of time and the worry consequent upon such a suit, makes the defending physician's lot most uncomfortable and embarrassing. In order to lend financial as well as moral support to our fellow-practitioners in distress, as also to encourage them to boldly resist flagrant injustice, I think it very desirable that a "Medical Defence Fund" be raised under the auspices and direction of this Association; but as medical men are like every other class of the community, and therefore liable sometimes to become careless and run over their work without giving it the careful consideration which is necessary to insure success, some of these actions for malpractice may be well-founded; and for this reason it would be necessary to have the objects of the fund clearly understood, and also a provision made for the careful consideration of the merits of each case before assistance is granted the defendant. If the case is one of hardship, in which the defendant is clearly not at fault—and the majority of suits belong to that class—he certainly ought to receive, not only sympathy, but also substantial assistance from his fellow-practitioners.

I would also like to call your attention to the by-law referring to club practice. I can safely say that no profession or calling dispenses so much charity, in the way of gratuitous services, as our own. The very nature of our work makes this necessary to a large extent, but beyond this I think we ought not to be burdened. I feel confident that the profession, to a unit, regard the system of club practice as pernicious in the extreme, and would be pleased were it abolished. There is a great inducement for young men just entering upon practice to engage with clubs from the fact that it serves as an introduction to the public, as by attending the head, they hope to be called to attend the other members of the family. I know of one instance where a medical man has engaged

himself to attend and furnish medicine for a club of eighty families for the sum of two hundred dollars per annum. This agreement embraces all medical and surgical work except midwifery. In club or contract practice there is not the strong inducement that there is in private practice for the constant and assiduous attention which is necessary; and then there comes the temptation, which is often yielded to, to substitute cheap and inexpensive medicine for more reliable preparations. In this way I fear many lives are sacrificed, and the reputation of the practitioner injured. For this state of affairs the profession is alone to blame, and the remedy for the evil lies solely with ourselves, and must be met by the profession rigidly frowning down all contract practice except civil appointments.

I am pleased to find our Ontario medical library in such a flourishing condition, and we hope ere long to have all the great works on medicine, surgery, and science, on its shelves. The establishment of this library will undoubtedly prove very beneficial in advancing the cause of medical science. Many of the books contained in a library of this kind can only be used as books of reference, and consequently are of no use to the busy practitioner except as such, and for this reason are seldom found in private libraries. Books have been beautifully defined as the "windows through which the soul or mind looks out." They enlarge and expand our view, and through them we can, at will, converse with the master minds of the world. History tells us that the chief and most abiding glory of the ancients consisted, not in their conquests and possessions, but in their intellectual advancement as evidenced by their libraries, lyceums, and groves of learning. Canada is now asserting her right to take a place in this great republic of letters, and let us hope that in the near future she will occupy her position with honor and distinction. Shall medicine, the greatest among all the arts and sciences, lag in the race? No; rather let us increase our efforts and establish a museum in connection with our library, as so forcibly urged by Dr. Henderson two years ago.

I cannot conclude my remarks without referring to the excellent work done by our Provincial Board of Health, assisted by the various local organizations, which are now numbered by the hundred where ten years ago scarcely half a dozen existed. By their energy and foresight the public are being educated up to the necessity for systematic cleanliness and ventilation, both in public and private, and by the proper use of disinfectants and the strict quarantining of people and places suspected of being infected contagious diseases have been stamped out. Thus many valuable lives will be saved annually, and the amount of sickness and suffering very materially lessened.

SURGICAL TUBERCULOSIS.*

BY GEO. A. PETERS, M.D., F.R.C.S. ENG.
Surgeon Victoria Hospital for Sick Children; Assistant Surgeon Toronto General Hospital.

It is almost unnecessary to insist in these days on the absolute identity of strumous or scrofulous affections and tuberculosis. Their unity is sufficiently attested by the following facts: Wounds accidentally or experimentally inoculated with tuberculous matter have subsequently become the seat of affections hitherto characterized as "strumous." In the second place it is found that all those diseases known as strumous, show, under the microscope, both tubercles and tuberculous tissue. Thirdly, these affections are shown to be tuberculous in nature by the constant presence in them of the tubercle bacillus. The detection of the bacilli in these tissues is, however, by no means always easy, and one may examine many sections from such a tissue without encountering a single bacillus. It is more than probable, however, that they are not so few as this would make it appear, for they may be in the spore-forming stage, and so not take the stain, or, as Watson Cheyne suggests, they may fail to respond to the ordinary stain-tests at various stages of their growth. Moreover, inoculation of such tissue into the anterior chamber of a rabbit's eye, seldom fails to produce typical tubercles on the iris, and quite recently Mr. Watson Cheyne has performed a very extensive series of inoculation experiments upon rabbits, guinea-pigs, and goats, which have demonstrated, beyond cavil, that precisely similar results follow the injections, whether the injected material be caseous matter

*A paper read at the Post-Graduate course of the University of Toronto, Dec 18, 1890

from a strumous joint or abscess, or an emulsion of a pure culture of tubercle bacillus.

From a histological standpoint the tubercular process is recognized as manifesting itself in two ways; first, in the form of the well-known "tubercle" or "giant-cell system," and secondly, in the less classic, though certainly not less characteristic, "tuberculous tissue," which consists in an infiltration of epithelioid cells. These cells are described by Cheyne as running through the tissues in broad bands, or being found at irregular intervals among the other tissue elements. When giant-cells are present they usually contain bacilli, but bacilli are also found amongst or in the epithelioid cells, often clinging close to the nucleus. On the other hand, they are never found in the inflammatory tissue surrounding the tubercle, unless they have been accidently washed into that position during the process of preparation.

The most potential factors in the causation of the disease are (1) a peculiar vulnerability of tissue, and (2) the introduction through some channel of the tubercle bacilli. That a peculiar vulnerability of tissue to the ravages of the tubercle bacillus is hereditarily transmitted from generation to generation cannot be denied, and the excessive physiological activity present in the neighborhood of growing bone no doubt acts as the determining cause in the lodgment and growth of the bacilli near ossific centres or epiphyseal cartilages. Having once lodged and asserted its baneful influence, the further course of the disease is largely determined by the varying conditions of rest or irritation, and by sanitary or unsanitary environments as regards clothing, food, and ventilation.

Being in possession of these facts we direct our treatment accordingly, and thus it is that attention to constitutional conditions takes precedence of all others. It is impossible to exaggerate the importance of attention to hygienic details in the treatment of tuberculous diseases. Numerous cases are on record in which, under unusually good surroundings, the system has been able successfully to combat even advanced local disease of this nature. Nourishing, easily digestible food, in sufficient quantities and at appropriate intervals, is of the first importance. Scarcely second in this regard must be ranked warm, clean, dry clothing, and abundance of warm, fresh air, both by day and by night. Too often patients who are carefully carried out into the open air during the day are required to sleep in a close, ill-ventilated room, possibly with other children in various conditions of health or disease. Such inconsistencies must be carefully avoided. The most important internal remedy is cod liver oil, and this must be regarded rather as a food than a medicine. As much of this important aliment must be given as the digestive system of the patient will dispose of, and its various preparations should be tried until one is found that agrees well with the patient. A most useful adjunct to constitutional treatment is the application of appliances by which absolute rest to the part is insured. It is not sufficient to put the part physically at rest; it must be given physiological rest as well; it must not be permitted to perform any function. Where this is at all possible, such rest should be obtained for the diseased part, while at the same time all other parts of the body are allowed free and unrestrained exercise of all their functions, so that the patient may move about in the open air. In order to accomplish this the surgeon's ingenuity is sometimes severely taxed, and in some cases, from the nature of the parts diseased, it is impossible.

In disease of the spine various appliances are used with satisfaction. For ordinary cases in which the symptoms are not very acute, nothing is better than a well applied plaster of paris jacket. As the case advances towards recovery this may advantageously be exchanged for a poroplastic jacket, which has the advantage of being lighter and more easily removed for cleansing purposes. In the acute stages, however, a double Thomas' hip-splint, with an extension upwards upon which the occiput may rest, is a very useful apparatus. It is much less uncomfortable than would at first appear, and the patient can be carried about upon this with the greatest ease and without causing any movement of the diseased parts. The occipital extension renders it suitable for cases in which the disease is in the upper dorsal or cervical region, as long as the patient is in the recumbent position; but in these cases, as soon as the acute symptoms have subsided, the jury-mast or croquet-hoop apparatus should be substituted for it, in order to allow the patient to walk about. For disease of the hip

I know of no better apparatus than Thomas' hip-splint. It may be made double where both hips are affected, or where the child is so young that it is impossible to secure a single splint firmly. This splint may be combined with ordinary extension apparatus during the acute stage while the patient is confined to bed, but when he is up the weight of the limb usually produces sufficient extension—the opposite boot being provided with a patten and the patient using crutches. Knee disease, again, is well treated by Thomas' knee-splint. and with this apparatus and a patten under the sound side, the patient can walk well without crutches, and at the same time keep the knee absolutely at rest—physically and physiologically.

Disease of the tarsus, ankle joint, or lower end of the tibia, may be satisfactorily treated by fixing the part in plaster of paris and providing the patient with a peg-leg, into which the bent knee is fitted; or the same splint may be used as in treating the knee. Tuberculoses of the upper extremity are more easily treated, as the parts may be placed at rest without difficulty without confining the patient to bed.

The question of the length of time such treatment should be continued before resorting to operation has been the subject of many discussions. Lister, Cheyne, McEwen, and Barker may be mentioned among those who advocate early operation, and over against them may be placed Howard, Marsh, Bowlby, and others. Without entering upon a discussion of the points for and against early operation, I am inclined to give my adherence to the views of McEwen, Horsley, and others, who operate, if possible, *before* caseation has set in. The results obtained by this method of procedure are most encouraging and in some instances brilliant. When one considers the almost absolute certainty with which a wound may be defended from the attacks of pus-forming organisms in these days of asepsis and antisepsis, it certainly seems justifiable to try to thoroughly eradicate from the system a local focus of disease which momentarily threatens to become general. We have all seen cases in which, as a result of operation, a patient has been almost immediately relieved of a diseased focus, which, under the more considerative treatment of rest, hygiene, and opening abscesses, would have kept the subject an invalid for months and perhaps years. We must not forget, however, that relapses sometimes follow operations, nor must we ignore the fact that an operation may remove such an amount of tissue that considerable disability may result either immediately or remotely.

On the other hand, those who advocate a more considerative line of treatment, simply opening abscesses as they occur and attending to the hygienic welfare of their patients, are able to show some excellent results, both as regards low mortality and the usefulness of the diseased member.

An operation having been decided upon in any given case, the plan almost universally adopted, where it is admissible, is that known as Esmarch's bloodless method. The limb is exsanguinated, either by the application of an elastic bandage or by elevation—preferably the latter—and a tourniquet is applied above the seat of operation. All hemorrhage being thus adequately prevented, the surgeon can make a deliberate dissection of the parts, his vision is not obscured by bleeding, and the healthy can be easily distinguished from the diseased tissues. In removing the diseased tissues, Barker uses what he calls a flushing scoop, by which a constant stream of hot water is kept flowing through the wound, thus washing away the diseased tissue as soon as it is loosened. Every particle of diseased tissue should be removed, and the external openings should be so free as to bring all parts into the view of the surgeon. The after treatment varies with different surgeons. Barker fills the wound with an emulsion of iodoform in glycerine (10 per cent.), then squeezes this out and closes the wound with stitches without any provision for drainage, applying the dressings in such a way that the least pressure will be over the line of the incision, so that any excessive secretion will be squeezed out between the sutures. Lister and Watson Cheyne, after thoroughly clipping away all diseased soft parts and gouging out all the diseased foci in bone, swab the whole wound area with very powerful germicides, such as zinc. sulpb. gr. xl. ad. ℥j, hydrarg. perchlor. 1-500, or ac. carbolic, 95 per cent. They hold that even the pure carbolic does not prevent union by first intention. In addition, they always use iodoform in some shape. The disinfection of the wound

having been completed, thick absorbent antiseptic dressings are applied and bandaged with considerable pressure, so as to limit capillary oozing. The tourniquet is then removed and the part elevated. In this way the interstices of the wound become filled with blood-clot, which becomes organized, and this conduces to the rapidity of healing.

PATHOLOGICAL WEEPING.*

BY DR. OSBORNE,

Ophthalmic Surgeon to St. Joseph's and the City Hospital, Hamilton.

I have ventured to bring before you the subject of excessive lachrymation because it is a form of disease as interesting to the general practitioner as to the specialist. The commonly accepted ideas as to the causative factors of this affection are not beyond criticism, and it appears to me that a modification of them might lead to better results from treatment. In this paper my endeavor will be to show that pathological weeping is due rather to excessive secretion than to an occluded outlet.

We are so accustomed to associate the condition of pathological lachrymation with the idea of an obstructed outlet for tears that the fact of the former existing without the latter is apt to be lost sight of. We must bear in mind that the normal tear passage can only convey a limited quantity of tears, and that any stimulus which produces an excessive flow will tax the ducts beyond their capacity and cause tears to run over the cheek.

Let us consider briefly the physiology of the lachrymal gland. The nerve supply of this gland is derived from the 1st or ophthalmic division of the 5th, which also supplies the conjunctiva and a portion of the mucous membrane lining the nose. The sources of nervous stimulation of the gland are central and peripheral. The central emotional or direct stimulus comes directly from the cerebrum and occurs under the influence of physical pain or some powerful emotion. The tendency to this emotional weeping varies greatly in different individuals, and in some it appears to be almost entirely absent. Peripheral—or reflex—stimulation is produced by irritation of the peripheral terminations of the 1st division of the 5th nerve in the eye or nose, which acts reflexly by stimulating the lachrymal gland to hypersecretion. The flow of tears following the entrance of a particle of dust into the eye is a familiar example of peripheral irritation. Probing the nose causes profuse lachrymation of the corresponding eye, and is another example of peripheral irritation.

Under normal conditions the tears are almost entirely removed by evaporation, only a very small proportion passing into the nose by the nasal duct. When the lachrymal gland receives a central—or emotional—stimulus, the supply of tears is greatly augmented and exceeds the capacity of the lachrymal canals to remove, so the excess streams over the cheek: this is the condition in an ordinary fit of weeping. From this it is evident that even the healthy lachrymal apparatus is unequal to conveying away the increased amount of secretion poured out by the gland when acting under a stimulus. From what has been said it is also clear that mere obstruction to the escape of tears will under ordinary circumstances—*i.e.*, where the tears are secreted in normal amount and are removed by evaporation — produce very slight epiphora. Taking as an example an eye otherwise perfectly healthy, in which the lachrymal punctum is occluded through spasm of its sphincter muscle, here, as in the normal eye, the greater proportion of the tears is removed by evaporation and weeping only occurs when the gland is stimulated, as when the eye is exposed to a cold wind. In such a case as this the overflow only occurs under the same conditions as it would in a normal eye, but it is more excessive, because none of the tears can pass through the natural channel into the nose. Again, it is possible, and not infrequent, to have excessive weeping as a result of irritation of the conjunctiva or nasal mucous membrane, notwithstanding the fact that the lachrymal canals are in a perfectly healthy condition. From the foregoing it is evident that obstruction to the outlet is not the essential factor in the production of pathological weeping, while a stimulus to increased secretion *must* exist in order to produce a continual flow of tears.

Let us now consider the most common form of epiphora, viz., where the nasal duct becomes

*A Paper read before the Ontario Medical Association.

occluded by an inflammatory process and tears pour continually over the cheek. It is evident from what has been said that simple closure of the outlet cannot produce continual weeping, hence some additional cause must be sought for. In such cases a careful examination will invariably reveal the fact that the conjunctiva, or a portion of it—usually that lining the lower lid—has become implicated in the inflammatory process. Here the lachrymation is due to the combined effect of irritation of the conjunctiva and obstruction of the tear passage; the former acting reflexly to produce an excessive secretion of tears, while the latter prevents the secretion passing down the natural channel, and this combination gives rise to the most troublesome form of epiphora we have to deal with. The sequence of events in such cases is as follows: The morbid process commencing in the nose extends up the nasal duct, producing an obstruction, passes along the lachrymal canaliculus, and ultimately reaches and implicates the conjunctiva. The successful treatment of these cases requires something more than simple operative procedures directed to the opening up of the tear channel.

To diagnose the precise seat of the lesion in all cases of pathological weeping is not possible with our present knowledge, but a systematic and thorough examination will leave relatively few cases beyond explanation. In making this examination it is well to have clearly before our mind the normal structure and function of the different parts of the channel for the outlet of tears. The orifices or puncta of these canals are each surrounded by a sphincter muscle, which serves as an aspirator, drawing the fluid into the canaliculus, and at the lower extremity or nasal orifice of the nasal duct the mucous membrane forms two lips, which have a valvular action, serving to prevent mucus from the nose being forced up the ducts when blowing the nose. When a case of epiphora presents itself, we instinctively turn first to examine the puncta Mere occlusion or displacement of these orifices is easily remedied; then the question arises, "Is there any obstruction lower down?" By inserting the blunted needle of a hypodermic syringe into the punctum and injecting water into the nasal duct, we can ascertain whether any stricture exists. It is not within the purpose of this paper to discuss the various means employed to overcome stenosis of the nasal duct, but it is not out of place to remark that if in each case the hypodermic syringe was employed as above indicated to verify the diagnosis much unnecessary cutting would be avoided, with credit to the operator and satisfaction to the patient. As before indicated, mere opening of the nasal duct does not strike at the root of the trouble in pathological weeping; in further proof of this, cases are frequently seen in which the ducts have been—by assiduous probing—rendered so free that the patient is able to expel nasal mucus into the inner angle of the eye when blowing his nose, and still the weeping persists. In addition to any surgical procedures, we must direct our attention closely to the mucous membrane supplied by the 1st division of the 5th nerve. The conjunctiva will be our first care, and it must be closely examined, since a very slight irritation of so sensitive a membrane will produce a copious flow of tears. Stimulating astringent or soothing applications must be made according to the existing condition, and unremitting attention is sure to bring its reward. If the trouble has originated in the nose, that region must be subjected to a rigorous course of cleansing astringent and antiseptic sprays, and a brave effort made to restore it to a healthy condition. The importance of this treatment of the ocular and nasal mucous membranes cannot be too strongly insisted upon, as the success following an operation may depend entirely upon such procedures.

In a certain proportion of cases of lachrymation, the most careful examination fails to reveal the cause. The tear passages are normal, and no trouble is discernible in connection with the conjunctiva or nose. Here we must ascribe the cause to some central irritation, or a lesion involving either the nerve branch to the gland or the gland itself. In such cases, if the weeping is persistent and so severe as to prevent the patient from following his vocation, relief may be obtained by a radical operation for the removal of the lachrymal gland.

In writing these notes I have endeavored to avoid the minutiæ which would only be of interest to specialists, and the entire aim of the paper has been to direct attention to the fact

that the successful treatment of pathological weeping requires something more than mere mechanical opening of the tear passages.

KOCH'S TREATMENT OF TUBERCULOSIS.

BY PROF. R. RAMSAY WRIGHT,
Communicated from Berlin to the University of Toronto.

Before leaving Berlin, I send you a short report on the aspect of affairs pertaining to Koch and tuberculin, as they appear to one who has been studying them chiefly from the scientific side.

You have no doubt given up in despair the attempt to sift for THE PRACTITIONER all the literature which has accumulated on the subject. The recent Surgical and Medical Congresses of Berlin and Wiesbaden respectively showed how opinion was divided even in the most authoritative quarters. On the whole, the congresses mark a slight return movement in favor of the treatment, and Koch himself was not dissatisfied with the reports of the surgeons.

Berlin itself, however, has not recovered from the dejected estimate of the treatment which most of Koch's colleagues have formed. In the Moabit alone is the tuberculin administered to any extent; but there, as many patients as ever are treated—after a method certainly very different from that employed at first. Koch, on his return from Egypt, adopted the dosage which Guttmann and Ehrlich recommended—viz., the administration of doses of $\frac{1}{10}$ of a milligramme and upwards, in such a way as *never* to evoke a febrile reaction after the first diagnostic one. The Moabit clinicians find that such small doses still produce the favorable local reaction, while the general one, with its consequences so weakening to the patient, is avoided. In certain cases the treatment is combined with arsenic, probably with the hope of utilizing the antibacterial virtues of that drug against the tubercle-bacilli, as originally recommended by Buchner. Koch himself seems to think that the repeated stimulation of the tubercular tissue by the minimum doses in question may result in strengthening the protective wall which isolates the invaded cells, instead of breaking it down, as the larger doses seemed to do.

Since his return from Egypt, he has been engaged with a new series of experiments on the separation of the active substance from the lymph, with the view of eliminating possible deleterious ingredients. He showed me a watch-glass full of a white powder obtained (probably by precipitation with alcohol) from fifty grammes of tuberculin. He does not consider the powder in question to be a chemical individual, but a mixture of various albuminoid bodies, the precipitation of which carries the active substance down simultaneously. He is inclined to think that the latter may be an enzyme. If so, it is reasonable to suppose that its proportion to the other precipitated bodies will be by no means constant, but it is also possible that better results may be obtained by this method than with the fluid tuberculin. With the object of ascertaining this studies have been begun in the Moabit with solutions of the white powder, 1-1000 and 1-10000. Decimilligramme doses of the latter are without effect, while two decimilligrammes of the former produce a distinct reaction.

Koch does not intend to publish his investigations until he has concluded the present series of experiments on tuberculosis. He says he has no reason to believe that the tuberculin prepared after his method is the best form in which it is obtainable, and he prefers that other bacteriologists should experiment in other directions, adding that there are probably numerous ways in which cultures of tubercle-bacilli will yield the active substance.

Other bacteriologists naturally think that their researches would be considerably aided by Koch's describing his method first. However, it is not difficult to evoke what Metschinkoff has called the "Koch-phenomenon" on tuberculous guinea-pigs with various ways of treatment of tubercle cultures. I have succeeded in doing so with a product of tuberculous material—very rich in bacilli—from bovine tuberculosis, but the most successful imitation tuberculins are those made in fluid cultures after Hueppe's method. In this way, lymph resembling Koch's very closely may be obtained, giving reactions almost precisely of the same character. Naturally, considerable hesitation is felt about experimenting clinically with such products; but Hueppe, of Prague, has so far advanced with his work as to undertake this in collaboration with some colleagues.

Bacteriologists complain that Koch has not published the protocol of his animal experiments at least. Many investigators have been at work this winter endeavoring to confirm his results, but working in the dark without details as to dosage, extent of the disease from which recovery is possible, etc., has led to many negative results. Hueppe and Klebs are most sanguine in this respect, while Baumgarten and many French investigators have failed to arrest the disease.

During Koch's absence in Egypt, Dr. Kinyoun, bacteriologist to the U.S. Marine Hospital service, and I, began in common a series of experiments on tuberculous guinea-pigs, treating them with large doses of $\frac{1}{10}$ gramme. Several of the animals thus treated are still alive, having survived the untreated control animals many weeks, and having reacted with regard to the local tubercular process in the characteristic way described by Koch. He advised, however, on his return, the adoption of daily smaller—1 milligramme—doses, but as far as our observation goes the larger doses appear at least to produce more visible encouraging results. It is possible that a cessation of treatment may lead to relapse, as the French investigators have found. I shall be able to speak of this in a future communication.

I am now on the point of leaving for Toronto, convinced that a long series of investigations will be required before the obscurities of the treatment of tuberculosis by products of tubercle cultures are cleared up, but well satisfied to have been able to watch from a position of vantage like the Hygienic Institute at Berlin the history of this extremely interesting period in the development of bacteriology in its relation to practical medicine.

I intend, on my homeward route, to pay a short visit to the Pasteur Institute in Paris, with the object of completing the study of methods which I have been making during the winter. I hope to send you a short communication thence.

A COURSE of Bacteriology will be given this summer in the new Pathological Laboratory of University College, London, by Professor Victor Horsley. It was expected that it would commence June 1st and continue six weeks.

Selections.

OPERATION FOR FRACTURED SPINE.—At a recent meeting of the Glasgow Medico-Chirurgical Society, an account was given by Mr. D. N. Knox of a case of much interest which had been under his care at the Royal Infirmary. The patient was a pit boy, æt. 13, who was admitted on account of a severe injury to his back which he had sustained through a cage falling upon him. His back was much bruised, he complained of pains of a cramp-like character in his legs, and he could only rest when laid on his side with his legs drawn up. There was a very distinct projection of the eleventh dorsal spine, evidently the result of displacement of the corresponding vertebra. There was complete loss of ability to move the legs the morning after admission, and loss of sensation, but the patient passed his urine voluntarily. An operation was undertaken thirty-six hours after the injury, and it was found that the body of the eleventh dorsal vertebra was fractured, that it was displaced backwards and its spine rotated to the right, and that the upper articular processes were also fractured and displaced. After the theca had been exposed by sawing through the laminæ of the tenth dorsal vertebra the spine was extended, and the displaced vertebra restored to its position. The spinal cavity was carefully cleaned, and, on account of the large amount of bruising, the wound was stuffed with gauze, and afterwards allowed to granulate. The patient rallied well, and on the day after the operation had completely regained sensibility in his legs. The progress as regards motor power was very slow but steady, and at the time the paper was read the patient was able to take a few steps without support. The chief difficulties that had to be contended with after operation were apparently the wasting of muscles, with the proneness of the joints to become fixed, and massage and galvanism were employed with the view of obviating these. There was also difficulty at first in keeping up a good position of the back, the tendency to projection when he raised himself from the recumbent posture being impossible to counteract. Mr. Knox is to be congratulated on his success in dealing with one of a class of cases which have hitherto not been found the most favorable for

operation, and it is to be hoped that the complete restoration of the patient's power is only a question of time.—*The Lancet.*

THE VALUE OF THE TONGUE AS A RESPIRATOR.—J. M. Elborough Scatliff, M.D., M.R.C.S., writes in *The Lancet*:—"It is not generally known that nature has provided each of us with the best respirator always at hand in the tongue. For years I have personally relied on this alone, and have recommended this proceeding to many patients. When facing a cold east wind, or breathing quickly the night air, I never quite close my mouth, but purposely keep the lips a trifle parted, and at the same time curl up my tongue towards the roof of my mouth until the tip reaches as far back as the soft palate, and I gently press the arched under surface of the tongue in sone degree against the hard palate (a little practise soon makes this easy to do). The cold air then, as it enters the mouth, strikes against the under surface of the tongue, as well as the floor and sides of the mouth, and is made to pass in a somewhat circuitous manner between the sides of the tongue and the buccal mucous membrane to the pharnyx, being thereby warmed in its course, so that by the time it reaches the larnyx it is nicely rid of chill, and does not excite cough and catarrh. At the same time a certain quantity of air, of course, finds it way through the nasal passages to the chest, and it is obvious that a larger quantity of cold air can be effectually warmed by this method of procedure than by relying on either the nose or mouth alone. That the large blood-supply of the tongue renders this organ an excellent air warmer must be obvious to all.

DEATH AFTER A DOSE OF SALOL.—Salol is usually considered a tolerably innocuous drug, but there are not wanting clinical observations which tend to show that, under certain circumstances at least, its use may be followed by dire results. Thus a case was some time ago reported by Aufiecht and Behm in which death followed its use in acute endocarditis, and more recently Dr. Chlapowski has published in a Bohemian medical journal an account of a case in which a similar fatal result followed a fifteen-grain dose ordered to a patient who was suffering from severe gastric symptoms, and who was being examined by Ewald's method. After taking the salol the patient became restless and unconscious, the pupils dilated, the pulse became irregular, there was constant vomiting, and the urine became dark, and contained salicylic acid. Death occurred twelve days later. At the necropsy there were found gastritis and hemorrhagic enteritis, a gastric ulcer cicatrised at the cardiac end, chronic endometritis, and a cyst of the ovary. No doubt was entertained that the salol had caused the symptoms of poisoning.—*The Lancet.*

BANANAS AS FOOD AND MEDICINE.—Dr. John Dougall, of St. Mungo's College, Glasgow, has a letter in a recent issue of the *Glasgow Herald* on the banana. He quotes from Stanley's "In Darkest Africa," showing that "for infants, persons of delicate digestion, dyspeptics, and those suffering from temporary derangements of the stomach, the flour, properly prepared, would be of universal demand." During Stanley's two attacks of gastritis a slight gruel of this flour, mixed with milk, was the only material that could be digested. It is odd, also, as pointed out in Stanley's book, that in most banana lands —Cuba, Brazil, West Indies—the valuable properties of the banana as an easily digested and nourishing food have been much overlooked. Dr. Dougall has made some experiments in making banana flour. He concludes that it should be made from the ripe fruit at its place of production. In trying to make it from bananas purchased in Glasgow, he obtained, on drying the pulp, a tough sweet mass like toasted figs, an appearance probably due to the conversion of starch into sugar. Bananas contain only about 50 per cent. of pulp, and of this about 75 per cent. is water; they would yield therefore only one-eighth part of flour.—*Lancet.*

MILK-POISONING FROM COLOSTRUM.—In connection with an outbreak of milk-poisoning which took place a few weeks ago in the west-end of Glasgow, an outbreak marked chiefly by great prostration, vomiting, and purging, a report has been issued which traces the affection to the use of milk from newly-calved cows. Dr. Russell in his report says: "To send for sale as human food the milk of a newly-calved cow is always

inadvisable. All well-conducted milk companies have a clause in their contracts with farmers prohibiting this. The usual words are: 'No milk to be sent from a newly-calved cow,' but one company prescribes 'four clear days from the date of calving.' Another, in Copenhagen, requires an interval of twelve days. The normal constitution of cow's milk is peculiar for several days; Fleming says 'for five or six.' The physiological purpose is to purge the calf, and it is not surprising that the effect on human children may be violent even when the cow is doing well, especially when by any accident the milk is not freely mixed with other milk."—*Lancet.*

PHYSIOLOGICAL EFFECT OF BATHS IN TYPHOID FEVER.—Dr. Kurkutoff, who has examined the physiological effect of baths administered to typhoid fever patients in Prof. Manassein's clinic in St. Petersburg, finds that such baths exert only a slight effect on the assimilation of the fatty constituents of foods, which, as in other fevers, is notably less than in healthy persons, and indeed varies directly with the gravity of the case; but there seems to be a good deal of difference as to the power of assimilation of fatty matter in different cases, probably depending on the functional disturbance in the bowel and on the amount of the individual peculiarities of the patient. In the graver cases the effect of the baths was to improve somewhat the assimilation of fat to the average extent of nearly four per cent. In slight cases, however, the effect was, apparently at least, to diminish the assimilation to the average extent of rather more than six per cent.—*Lancet.*

STRYCHNINE INJECTIONS IN DIPHTHERITIC PARALYSIS.—Dr. W. Rozenzweig, of Neuwied, reports four cases of paralysis of the soft palate after diphtheria, occurring in children of from six to twelve years old, in which a rapid cure was effected by the hypodermic use of strychnine. The doses were from two to three milligrammes, and were injected into the neck. In one case a remarkable improvement was produced by the first injection, and in another a complete cure was obtained by three daily injections. In none of them was treatment required beyond a week. —*Lancet.*

THE
Canadian Practitioner
A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, JUNE 16, 1891.

ONTARIO MEDICAL ASSOCIATION.

This vigorous association has certainly fallen into good hands. The executive machinery works admirably; and, as a consequence, but few ripples rise to the surface in the ordinary routine work of the various sessions of the annual meetings. This year furnishes no exception to the ordinary rule. Success in the highest degree attended the recent meeting. Things went so smoothly and evenly that the association appeared to run along with mathematical exactness without any guiding or directing hands. This was due to the perfect organization which exists, and the circumstances and untiring efforts of the officers and the members of the various committees, especially the committee on "papers and business," and the committee of arrangements.

Dr. Moorehouse, of London, ably represented the west in the president's chair. He and his chief lieutenants worked together in the most cordial way; under such circumstances the happy results, so satisfactory to all, are not to be wondered at. The chairman of the sections, especially Dr. Grasett in the surgical and Drs. Eakins and Meldrum in the medical sections, showed tact and ability which assisted in keeping up the interest in the various sessions. Among those who appeared to take great interest in the proceedings were a number of female doctors and medical students. We can't say that their presence created any very gushing enthusiasm, but no one showed any disposition to interfere with them in any way.

We were pleased at many of the discussions which took place. After all, the members don't

come to such meetings simply to hear papers read, they want to hear and engage in discussions—and if a little spice be added to the same, all the better. It has been found somewhat difficult, if not impossible, to get through the work in two days. Want of time prevented the completion of the programme, and also curtailed many discussions.

The profession of Toronto looked after the visitors very well. The plan of entertaining them at luncheon on the second day was a success. It brought all together in a pleasant way at a very reasonable cost. Our friends from the United States received a cordial welcome and did much to add to the literary character of the meeting. The next meeting will be held in Toronto under the presidency of Dr. R. A. Reeve.

THE ONTARIO MEDICAL COUNCIL.

The report of the committee appointed by the Council to consider proposed changes in the curriculum was presented at the recent meeting, and with some slight amendments, adopted by that body. The changes involved are so radical as to be somewhat startling, especially to those who were satisfied with the old order of things. The following is a brief statement of the most important features:

For matriculation they will require certificates of having passed the departmental university examination for matriculation in Arts, with Latin among the optional subjects compulsory, and the Science subjects in addition.

The course after matriculating will consist of five years, of which the student must attend four full winter sessions and one summer session. Half of the fifth year may be spent in the office of a physician, or in a hospital, at the student's option; but the other half must be spent in a hospital, or in a scientific laboratory, working at physiology or pathology. Arts' graduates, who have taken a Science course, will be allowed a year.

The Council will conduct three examinations:—A primary at the end of the second year, on subjects which have been taught in the first and second years; an intermediate at the end of the third (for Science graduates in Arts) or fourth year, on all the final subjects, which shall be written and oral; a final at the end of the fifth year, on the practical subjects, which shall be oral only.

The number of purely didactic lectures have been reduced about one-half, and new requirements have been added for practical laboratory work.

The curriculum, as amended, is much like the latest curriculum adopted by the Medical Council of Great Britain. It probably demands more in certain directions, but especially in the requirements for matriculation. The leaving examination of the Education Department, as it is modified by the Council, will require a fair knowledge of chemistry, physics, comparative anatomy, and botany, before the student can enter upon his regular medical course.

Altogether the standard, according to the new requirements for a license to practise in Ontario, will probably be higher than that of any other country in the world. We will not undertake, in this issue, to discuss the question; but will simply offer our congratulations to the committee for the thorough manner in which they investigated the whole subject, and for the very able and complete report which they presented.

HIGHER MEDICAL EDUCATION IN PHILADELPHIA.

At the meeting of the Board of Trustees of the University of Pennsylvania, held May 21st, Dr. Pepper made an offer of $50,000 towards an endowment fund of $250,000, and of $1000 annually towards a guarantee fund of $20,000 annually, for five years, conditioned upon the establishment of an obligatory graded four-year course of medical study. This was accompanied by a communication from the medical faculty, pledging themselves to carry out this proposal, and to enter upon the four-year course in September, 1893. It was also reported that the members of the medical faculty had themselves subscribed $10,000 annually for five years to the endowment fund. The Board of Trustees expressed warm approval of the proposed advance in medical education, but postponed their assent until the success of both funds had been demonstrated.

The fine Laboratory of Hygiene, built by Henry C. Lea, Esq., will, it is expected, be

opened in February, 1892. We must congratulate the University of Pennsylvania upon its decision to establish a four-year course; but, at the same time, it seems strange to us in Ontario, where a four-year course has been required for a long time, that such decision was not reached long ago.

ECTOPIC GESTATION.

A very interesting contribution to our knowledge of ectopic gestation was given by Dr. Formad, of Philadelphia, at the recent meeting of the American Medical Association. In 3500 *post-mortem* examinations he had found thirty-five cases of ectopic pregnancy. The women were multipara between the ages of 20 and 40; generally conscious of pregnancy; chronic inflammation of tubes present in all cases. Three were interstitial; one was ovarian; thirty-one had ruptured. The amount of blood found in the abdomen varied from a pint to two gallons. Pregnancy in all cases early, between the first and third month. He considers ruptured ectopic gestation to be the only cause of hæmatocele.

COUNCIL EXAMINING BOARD.

The deliberations and discussions on the committee's report on the medical curriculum occupied so much time that comparatively little interest was taken in other matters. The Education Committee did not recommend many changes in the Examining Board. Dr. R. Hearn will replace Dr. Emory as examiner in sanitary science, and Dr. G. A. Peters was added to the Board in consequence of a request from Dr. Saunders for assistance. Dr. Peters will probably examine in therapeutics and pathology.

BURLINGTON AND HOME CONTEST.

At the recent contest in this division, Dr. George Shaw was declared elected by a majority of four. Dr. Thomas Miller, his opponent, entered a protest, and a recount was made by the proper committee. According to the decision of this committee (which is practically final), Dr. Miller was declared elected by a majority of two.

LONDON LETTER.

INFLUENZA AGAIN—DEATH OF MADAME BLAVATSKY—DEGREE FOR LONDON STUDENTS—EDINBURGH UNIVERSITY—TRICUSPID MURMURS AND RIGHT-SIDED DILATATION—PROF. GAIRDNER ON NEW REMEDIES — BRITISH MEDICAL ASSOCIATION.

The influenza epidemic has shown a large increase during the last week, and fatal cases, chiefly from pneumonia, are reported both in London and in the provinces. Sheffield appears to have suffered severely, for the latest weekly return shows out of 458 deaths from all causes no less than 112 due to influenza. In Birmingham Mr. Bartleet, a well-known surgeon, president of the surgical section at the last meeting of the British Medical Association, died of this mysterious malady after a few days illness. The latest victim amongst the outside public has been Madame Blavatsky, famous as the founder and high priestess of the cult of theosophy. The work of the Manchester Ship Canal has actually been suspended for a time owing to an outbreak of the affection, and one correspondent gives a graphic picture of able-bodied navvies prostrated and "almost crying with the pain." Yet notwithstanding the widespread and fatal nature of this recurrence of last year's attack, nothing like the same amount of interest and excitement has been aroused.

The ancient grievance of the London medical student in not being able to get a degree except under practically prohibitive conditions is to be at length removed. A preliminary draft of the new scheme has been published by the Senate of the University. As the proposal at present stands, it will meet with a good deal of opposition, but there is no doubt that in the long run the student will get what he wants, namely, a London degree on reasonable terms. To a great extent this looks like shutting the stable door after the steed has been stolen. Year after year students have been driven away to Durham, or to the Scotch or Irish Universities, in search of a degree, and have thereby detracted not a little from the fame and emolument of the London schools. No teaching centre has attracted more men than Edinburgh, which has built up a solid and systematic curriculum on the sure foundation of many years' experience. The new

University buildings are magnificently equipped especially for practical instruction in physiology, materia medica, pathology, and public health. The London schools, therefore, will have an immense amount of lee-way to make up. It is indeed a sign of the times when the Senate of the London University bestirs itself in the direction of reform. The Council of the College of Surgeons handed in its approval of the new scheme without consulting the members and fellows, much to the disgust of the latter. An indignant protest has been made, which, however, will probably be ignored by the autocratic clique that stands at the head of affairs in Lincoln's Inn Fields.

Some points of physical diagnosis insisted on in the Edinburgh school seem worthy of attention. They say that the term "apex-beat" is very loosely applied, and it would often be more correct to state that pulsation is visible over this or that area of the chest. What we often call "apex-beat" is nothing of the kind in many cases, but is really the transmitted movement of the right ventricle. The common sign of right-sided dilatation is generally said to be epigastric pulsation, and that condition is undoubtedly present in many instances. Pulsation, however, in the third, fourth, and fifth spaces to the left of the sternum is held to be equally an evidence of dilatation, and also to be more frequently present. Then the teaching with regard to the tricuspid murmur has undergone a complete revolution, for instead of being regarded as of very rare occurrence, it is now held to be one of the commonest. The point of maximum intensity is said to be at the xiphoid cartilage, but this is by no means invariably the case. A typical tricuspid murmur is heard over the whole right heart, but probably attains its maximum intensity over the lower third or two-thirds of the sternum. That these observations must have an important bearing on physical diagnosis is evident. How, for instance, are murmurs of tricuspid and of mitral origin occurring together to be differentiated? To do so by means of the stethoscope is in many cases difficult or impossible, and the observer then has to depend on other evidence, such as the presence of pulmonary congestion or of pulsating veins.

The death struggles of the Koch craze have furnished, as one might expect, a suggestive text both to public speakers and to the medical journals. One of the most striking of these productions has been the address of Professor Gairdner, at Belfast. Amongst other things, he insisted on the absolute necessity of individual observation as well as of scientific co-operation. With regard to the overwhelming number of new remedies, he quoted Dr. Whitla's words: "The indication is not at present for more new remedies, but for better and more precise knowledge of those that are already in our hands. It seems as if one of our very greatest barriers to progress is to be found in the ever-increasing number of new drugs which pours in upon us at a rate which prevents that thorough testing of their qualities and actions so necessary before the range of the new weapons can be accurately determined." The practice of huge American and English drug houses, who are flooding this country with ready-made remedies and cut-and-dry formulæ for every ache and symptom that flesh is heir to, is styled *the new polypharmacy* by the professor. He asks whether he ought to disregard the voice of the charmer and leave the new remedy severely alone. Or should he, on the other hand, strive to extract the greatest amount of benefit, or of credit, or of guineas, out of every new remedy in turn. A temperate review of the rise and progress of the tuberculin craze wound up: "From the wild rush at Christmas, and for some time thereafter, in search of immediate salvation at Berlin, to the contemplative, profoundly sceptical, and even pitiful state of discouragement in which we find ourselves in April, is a long stride in the way of 'reaction', and we can only hope that something of more or less permanent value may survive the discomfiture." Dr. Gairdner suggests the formation of a number of therapeutic committees dispersed all over the country, affiliated to a central authority.

The fifty-ninth annual meeting of the British Medical Association is announced to take place at Bournemouth during the last four days of July. This delightful watering-place on the south coast will afford a pleasant contrast to the scene of last year's meeting, for Birmingham is admittedly one of the very grimiest of our manufacturing towns. Bournemouth has grown immensely of late years, and there is no lack of hotels, as well as of boarding and lodging houses.

Still, the sudden incursion of an army of Association visitors can hardly fail to tax its resources to the utmost. A general invitation has been issued to members of the profession to exhibit objects of interest in the museum. Inventors and manufacturers can also make their entries at a trifling cost for groundspace. In either case application should be sent in to the secretary of the Museum Committee, Astolat, Bournemouth, before the 20th of June next.

D.W.

May 10th, 1891.

Meeting of Medical Societies.

THE ONTARIO MEDICAL ASSOCIATION.

Toronto, Wednesday morning,
June 3rd, 1891.

The President, Dr. W. H. Moorhouse, of London, in the chair.

The meeting was called to order, and Dr. Wishart, the secretary, read the minutes of the last annual meeting. The reports of several committees were presented, after which the ordinary work of the session was proceeded with.

Dr. Teskey, of Toronto, read a paper entitled,

THE CAUSES AND TREATMENT OF CARCINOMA.

He stated that there were two theories as to the cause of cancer, (1) considering it to be an abnormal growth of epithelium, the result of the action of an irritant; (2) that it is due to a special microbe.

The effect of irritation on living normal cells always tends to death primarily, although excessive growth comes on as a sequel. This law is not followed in the development of a carcinoma, where we find pathological, supplanting physiological, processes. Prolonged irritation is sufficient to account for the occurrence of a carcinoma, as in the irritation of the lip in smokers, exemplified also in the development of carcinoma about the genitals, in chimney-sweeps' cancer of the scrotum, in the breast, etc. There is no reason to believe that cancer is hereditary; on the contrary, one's personal experience would lead one to conclude that, as a rule, there is no trace of hereditary tendency.

It is probable that the disease may manifest itself primarily at some distance from the point irritated. This is illustrated in the two following cases. Case 1. A primary scirrhus tumor in the axilla, developing secondarily to irritation of the thumb-nail. A blow on the thumb-nail led to effusion of blood, which remained unabsorbed, and for three years the thumb remained in an unnatural condition. At the end of that time a lump appeared in the axilla; this was supposed to be an enlarged gland, consequent upon the absorption by the lymphatics of irritating material from the thumb. An operation was performed; the thumb-nail was scraped and some granulation tissue removed, but the lump in the axilla continued to increase in size, and one year after the scraping the patient died from an axillary scirrhus. Case 2. A lymphatic carcinoma developed in the submaxillary region. In the sublingual region there had been a slight abrasion in the mucous membrane, which appeared as a small ulcer, without hardness. Age may be looked upon as a predisposing cause.

One is led to conclude that the evidence put forward by scientific investigators goes to prove that foreign germs have nothing to do with the development of carcinoma. In considering the treatment, it is well to enquire whether or not nature makes any attempt to bring about a spontaneous cure. The cases which occasionally occur of the atrophic form of cancer, where the cells are replaced by cicatricial tissue, appear to answer the question in the affirmative. A case illustrating this condition occurred in a woman who consulted a medical man eight years ago. She was told that she had a mammary cancer, and a bad prognosis given. It was thought that without operation she might live six months; with operation life might be prolonged two years. She declined operation, and one year ago (seven years after the tumor first appeared) she presented herself with a large tumor of stony hardness in the right breast, a small ulcer on the surface, with a retracted nipple. During the past year the size of the tumor has altered little, the ulcer is somewhat smaller, and the patient is still living. There can be no doubt in this case as to the nature of the tumor; it was undoubtedly scirrhous cancer. As to the method of dealing with cancer by operation, one would conclude that if an abrasion, fissure, or ulcer, resists

treatment and will not heal after a reasonable time, say two months, free excision should be performed. If we have presented to us a cancerous tumor definitely localized, we should remove it and cut wide of the disease. In cases in which the glands are involved secondarily, it seems useless to attempt operation; the hæmorrhage occurring during the operation lessens the resisting powers of the patient, the disease progresses still more rapidly, and a fatal termination is hastened.

Dr. Wishart, of London, in discussing the subject, stated that the cancerous process seems clearly allied to chronic inflammation. The infective character of cancer and its tendency to spread through the lymphatics is also seen in inflammatory processes. In cancer, however, we have the occurrence of secondary growths, the tendency to a progressive increase in size of the original tumor, and the fact that it is not affected by palliative treatment; inflammation, on the other hand, exhibits a tendency to recover, and the organism does not lose control over the process. In a large majority of cancers a previous history of injury may be obtained; it has been stated that in most cases of cancer of the breast a history of an injury may be elicited if careful enquiry be made. One authority regards "high living" as a causative agent. It is noteworthy that in Africa, where the inhabitants live on simple food and take regular exercise, there is little or no cancer. Heredity seems to little influence; the whole human race would have probably be affected by this time if the disease were hereditary. In treating cancer the whole disease must be removed, if the tumor be accessible for operation. All suspicious cases should be treated on the same lines when we eliminate all other possibilities in making our diagnosis. If we excise a cancer of the breast, it is always well to remove the axillary glands in every case.

Dr. Groves, of Fergus, stated that although heredity must not be looked upon as a cause, yet there is apparently transmitted in some families a weakness in the resisting power of the individual. Irritation alone is not sufficient; parts of the body most exposed are protected, *e.g.*, the palms of the hands and the soles of the feet. Wherever we have complicated varieties of cell-growth, there we often have the development of cancer; for instance, at the point of junction of squamous and cylindrical epithelium; at these situations we have a tendency to the development of what we call a hybrid growth. Again, where forms of epithelium meet, morphologically similar but differing in function, at such points the hybrid forms are apt to develop; this is found at the junction of skin and mucous membrane. We must have a peculiar character of cell formation, plus the application of an irritant, to produce a cancer. Inflammation may be looked upon as a cause simply as far as it tends to increased cell-growth, but it is not a specific cause; it may in fact be looked upon as one of the irritants acting as an exciting cause. One cannot believe in a spontaneous cure; if a patient recovers who is supposed to be affected with cancer, then we must conclude that our diagnosis has been wrong. In removing a cancer, we must go beyond the visible limits; if the lymphatic glands are involved, we might as well let the patient die without operation, as we cannot save life.

Dr. Senn, of Chicago, considered that there was no subject so barren of scientific and practical interest as the one under consideration. It appears a disgrace to modern surgery that we know little more about the subject now than we did twenty years ago. In studying the histology of a carcinoma, we can hardly imagine any amount of irritation ever sufficient to produce a carcinoma; all evidence is against such a theory. The tendency is for laymen to trace all diseases to injury, and very frequently a tumor may not be noticed until some slight injury to the part calls the patient's attention to it, so that in such cases the tumor actually precedes the injury. Every microbic lesion presents, under the microscope, a picture in which we can trace the action of the microbe on pre-existing tissue, *e.g.*, in a lymphatic gland the tubercle bacilli affects it so that the cells show evidence of histological changes, always observed in the immediate vicinity of the specific virus. In a carcinoma in incipiency, we find a small group of cells, but these differ from surrounding structures, exhibiting from beginning an independent cell-growth, the cells never reaching maturity but showing a marked resistance to retrograde metamorphosis. It is in this connection that we term cancer a neoplasm. Trace a carcinoma from one centre and we find it infiltrates the surrounding tissues,

and the normal cells in the neighborhood play a passive part. There never has been demonstrated the source from which these neoplastic cells come, but we are inclined to think that Cohnheim's theory of embryonic rudiments will one day be proved to be correct. No degree of tauma or irritation will cause carcinoma if the necessary condition of the cells be absent. These carcinomata are hereditary in every instance; in fact, the individual must be born with the essential cause, *i.e.*, the embryonal cells. An individual may go through life with such without developing cancer because the exciting cause has not presented itself.

In the treatment, we must operate early and thoroughly. A cancer of the breast should be treated by removal of the entire mamma and by careful dissection of the axillary lymphatic glands also. The idea that cancer tends to a spontaneous cure must not be entertained for a moment; nature may for a time set up a connective tissue barrier to prevent its growth, but we have yet to hear of a single case which has undergone spontaneous cure. Virchow has shown that this theory of atrophic carcinoma is a most deceptive one; the tumor goes on growing at the periphery, where it does not meet with the mechanical obstacles that it does in the centre.

Dr. Teskey, in reply, stated that he had no doubt cancer was the result of the action of an irritant. High living does not appear to be a cause, as evidenced by hospital practice. The case quoted as atrophic cancer was beyond doubt a carcinoma. The palms of the hands and soles of the feet, although exposed to irritation, are protected by a thick coating of epithelium.

Dr. Oldright then exhibited a patient, and presented a specimen illustrating treatment by

SENN'S DECALCIFIED BONE FILLING.

The treatment was not a complete success in this case, as the wound did not heal by first intention, but this fact afforded an opportunity for observing the process of granulation tissue growing into and incorporating itself with the decalcified bone. The patient was a young man, nineteen years of age, a cattle drover. In March, 1890, he slipped and hurt his leg; there was apparently no fracture; he was sent to Toronto because of persistent hardness in the limb; the leg was kept at rest, an evaporating lotion applied, and a cold coil. In the autumn dead bone was found, and in January, 1891, an operation for its removal was performed. A large amount of bone was removed from the tibia. Considerable difficulty was experienced in its removal, as the sequestra were covered by a shell of dense bone; the operation lasted five hours. The large cavity left was rendered aseptic; after removing all unhealthy tissue a twelve per cent. solution of chloride of zinc was used to swab out the cavity, followed by perchloride of mercury solution, 1-500. Bone chips were cut into strips and packed into the cavity, after first being dusted with iodoform. The edges of the wound were then brought together by suture. Esmarch's bloodless method was employed in operating.

The bone chips were prepared from ox tibia, cut in pieces two inches long, placed in hydrochloric acid to decalcify. The acid is removed by washing in caustic potash, and subsequently the chips are preserved in 1-500 bichloride of mercury solution in alcohol. When about to use the chips, they are first washed in a weaker solution of perchloride, and then powdered with iodoform. This wound did not heal by first intention, but undoubtedly the process of reproduction of new bone in the cavity was much facilitated.

Dr. Senn considered this a case of partial failure; either the bone cavity was not rendered thoroughly aseptic, or the parts were in such a diseased condition that reparative processes were slow to occur. These bone chips are not supposed to replace bone directly, but it is merely a temporary absorbable tampon; further, they are *packed* in and arrest hemorrhage, and they act efficiently as an antiseptic for two or three weeks. The bone chips are entirely removed in the course of three or four weeks, the length of time depending upon the absorbability of the material used, and the powers of absorption of the surrounding tissues. The process of healing in bone is always tedious because there is no support for the growth of blood vessels; if, however, we supply a temporary scaffolding, living healthy bone will grow there. In operating in any case of necrosis or bone inflammation, the operation must be very thorough; we must expose freely, use a chisel; the trephine is useless, and may be

looked upon as an obsolete instrument in bone surgery. When the whole cavity is exposed, sequestra are removed, and the inner lining of the cavity left is scraped away with a sharp spoon, or round chisel, until all affected tissue is removed. Now, prepare the cavity for packing by chemically disinfecting it with chloride of zinc solution, or better, peroxide of hydrogen; the latter permeates more deeply. Then irrigate with perchloride of mercury; dust with iodoform; then pack in the chips (these chips are now kept stored in ethereal solution of iodoform, five per cent., ready for use). After the packing, the periosteum is stitched over it, because we must see that the chips are surrounded on all sides with healthy living tissue. Failure in Dr. Oldright's case was probably due to the unsatisfactory condition of the surrounding soft parts. In cases in which we obtain an antiseptic condition of the parts, we find that granulation tissue is soon substituted for the chips. Many erroneously believe that the chips are used for the permanent replacement of the new bone, but this is not so; they are replaced by granulation tissue, first of all, an early definitive healing takes place, and eventually regeneration of the entire bone is brought about.

AFTERNOON SESSION.

The President, Dr. Moorhouse, read the annual presidential address, an abstract of which is published in the columns of THE CANADIAN PRACTITIONER. He was followed by Dr. Senn, who read a paper on the surgical treatment of intussusception. This paper will also appear in full in these columns.

The Association then divided into sections.

MEDICAL SECTION.

Dr. Eakins, of Belleville, was elected president; Dr. Thistle, of Toronto, secretary.

Dr. J. E. Graham, of Toronto, read a paper on

THE DIAGNOSIS OF TYPHOID FEVER.

In no other disease is a correct diagnosis so important as in typhoid fever, for in no other disease is the proper management of the patient so important and so productive of good. Tubercular meningitis in children, and acute tuberculosis, are often mistaken for typhoid. Attention to the pulse, the nervous phenomena, and the condition of the abdomen, should render this mistake rare. In typhoid the delirium does not deepen into coma, the headache disappears, and there is an interval between its disappearance and the rise of temperature. He cited the case of a bank clerk who, during his office hours, was so drowsy, and made such mistakes, that he was sent home. On his way home he consulted a physician; stopping in at the druggists, he fell asleep while waiting for his prescription to be made up. For some days his temperature was normal, his pulse, 60. He would sleep twenty-two hours out of the twenty-four, and when awake he had spells of delirium. Dr. Workman, who saw him with Dr. Graham, was inclined to think the case one of those rare cases of narcolepsy. Later on in the disease there were tonic spasms, and difficulty in deglutition; when asked a question, as much as three-quarters of an hour might elapse before an answer was given. There was, during life, neither roseola nor enlargement of spleen. Autopsy showed the liver normal, spleen a little enlarged, characteristic typhoid intestinal lesions, and an increase of the ventricular fluid.

Typhoid occasionally wears a renal mask. A case was cited in which the patient came suffering with a seeming acute nephritis, was stupid and irritable, and had albumen in the urine. On the third day the tympanites, roseola, and enlargement of the spleen manifested themselves, and the case thereafter ran a typical course. In such a case the customary purgative treatment of nephritis might prove very harmful.

Typhoid occasionally has a pneumonic mask. A case was cited commencing with lobar pneumonia, the pulmonary symptoms quickly subsiding, but the temperature remaining elevated, and the case running the usual typhoid course.

It is sometimes difficult to distinguish malarial remittent from typhoid fever. An examination of the blood, during the paroxysm, with a very high power microscope, would reveal the presence of the plasmodium malariæ.

A case was cited in which an autopsy had shown cirrhosis of the liver and an abscess of one of the mesenteric glands; yet during life there had been the typhoid facies, pyrexia, enlargement of the spleen, roseola, and tympanites.

Pyæmia was often difficult to distinguish from typhoid. The presence of bacilli in the

blood, the use of Ehrlich's urine test would help in the diagnosis. The urine, or the blood from the roseola, might be examined for the typhoid bacilli. Puncture of the spleen of a typhoid patient to procure a sample of blood was not permissible, although it had been done by several German physicians.

In the discussion which followed, Dr. McPhedran referred to the abortive cases in which Ehrlich's test failed. Tubercular meningitis in children he considered very difficult of distinction from typhoid. Fortunately typhoid in them is of such a character that a diagnosis is not absolutely essential.

Dr. Sheard asked how one would distinguish septicæmia, which had been to him the most difficult to differentiate. Acute tuberculosis might easily be taken for typhoid.

Dr. Graham replied that he had never been able to get the characteristic reaction from Ehrlich's test in septicæmia. In tuberculosis this test was useless, but examination of the sputum might clear up the case.

Dr. H. Arnott, London, read a paper entitled, "Is Alcohol a Stimulant?" and Dr. T. Millman, of Toronto, a paper on "Epileptic Insanity." Both of these papers will appear in THE CANADIAN PRACTITIONER.

Dr. R. W. Bruce-Smith, Seaforth, read a paper on

A NARROW PREPUCE AND PREPUTIAL ADHESIONS IN CHILDHOOD.

Dr. Smith narrated two cases occurring recently in his practice, in which convulsions were quite frequent, despite the use of bromides, etc. The children had apparently become chronic epileptics. After circumcision the fits disappeared completely. The necessity for careful examination of the genitals, in boys manifesting nervous symptoms, was emphasized by the speaker.

Dr. Howitt, of Guelph, opened the discussion, and related a case of irritation and convulsions becoming more frequent, until there was perhaps one fit a week. Bromides were given without affording any relief. The prepuce was long, contracted, and adherent. After circumcision the fits and other symptoms of irritation disappeared completely. In another case there were no convulsions, but the child, after a prolonged period of failing health, crying, and peevishness, passed into a condition of semi coma, so that the case resembled tubercular meningitis. The prepuce was dilated and smegma cleared out; recovery was complete and lasted for one year, when convulsions occurred. Circumcision was now performed, with complete and permanent relief from all the symptoms. In a third case there were symptoms of septic endocarditis, and a mitral regurgitant murmur was present. The prepuce was long and contracted; when the glans was cleared, ulceration was seen to have taken place. Circumcision was done in this case also, and was followed by a disappearance of the symptoms, the murmur only remaining. Dr. Howitt considered that in this case the ulcerations present beneath the prepuce originated the septic condition resulting in endocarditis.

SURGICAL SECTION.

Dr. Grasett was elected chairman, and Dr. Primrose, secretary.

Dr. H. Mynter, of Buffalo, read a paper entitled,

IS EARLY RESECTION OR CONSERVATIVE TREATMENT ADMISSIBLE IN COXITIS?

A better knowledge of the pathology of the disease has led to improved methods of operating. The tubercular disease begins, in the majority of cases, in the bone, and secondarily affects the joints and epiphyses; sometimes, but rarely, it begins in the synovial membrane. In early cases a focal process may be observed, and the majority of cases begin as an ostitis, and not as an arthritis. The head of the bone is frequently the starting-point; it may begin in the shaft of the bone and work its way up. Primary disease of the acetabulum is rare. We find a little focus lined with unhealthy granulations, detritus, and sometimes a sequestrum. Changes occur in the joint itself; the whole synovial membrane may be eventually changed into granulation tissue. The symptoms of coxitis may be insignificant until the synovial membrane is affected. Starting pains at night indicate implication of the bone in the neighborhood of the articular cartilages. There is an abnormal position of the limb; the cartilages become eroded and the bone is found in a condition of osteo-porosis; the head becomes small from pressure; and the acetabulum becomes

deepened by the same process. In the case of a patient who was sick only two weeks, an abscess was opened on the side of the right femur; the abscess did not appear to be connected with the hip-joint, but symptoms of coxitis subsequently manifested themselves, and a large abscess was found inside the pelvis Chloroform was administered; it was supposed that the floor of the acetabulum had become perforated, and the head of the bone was consequently removed. The ligamentum teres had disappeared and the head was found rough and eroded. A perfect recovery with normal joint is rarely obtained without operation, and it is after years of suffering, during which the patient is subjected to a multitude of dangers by extension of the disease. An early operation is the only thing which can arrest the disease. Why wait for abscess? The pathogenic virus of tubercle is not pyogenic, and under favorable conditions will not give rise to an abscess. The results of conservative treatment are not reassuring. The decreased mortality with improved methods of operating render it necessary to consider this method in a different light from formerly. It has been suggested, in disease of the acetabulum, that the acetabulum should be excised, but it is difficult to get the entire disease removed. As regards the comparative results of conservative treatment and operative measures, we must remember that cases left late must be considered apart altogether from early cases, and those treated in hospitals with trained nurses from those treated at home. In the majority of cases an operation of exsection performed early gives the best results.

Dr. G. A. Bingham, Toronto, then read a paper on

THE SURGERY OF TUBERCULOSIS.

The two forms of treatment, viz., expectant and operative, may be discussed. In the expectant form of treatment we insure rest for the part, constitutional treatment, and subdue local inflammation; the soil is by this means rendered unsuitable for the development of the virus. The soil appears to be more suitable for tubercular processes between the third and the tenth year; if the tubercle be kept in check until that period be past, then the individual is comparatively safe. The progress of an ordinary inflammatory process may determine the production of tubercle, and thus we often find that trauma precedes the disease. Unhealthy surroundings also favor its production.

The excisionist looks upon tubercle as a malignant disease requiring removal. Entire removal precludes the generalization of the disease and shortens the period of suffering. Erasion is only of value where disease is confined to the synovial membrane or near the ends of bones. The non-operator is apt to consider that the quiescent tubercle is dead, whereas it is only sleeping. The early diagnosis of cases of tubercular disease is important. So long as the disease does not proceed unfavorably, rest is the chief thing. Caseation may, however, occur, and operation becomes necessary; the disease must be entirely eradicated, whatever method we may employ. We are led to conclude that in certain cases rest, constitutional and hygienic treatment, will prove efficient. If caseation has occurred, and the disease has extended beyond the articular ends of the bones, erasion should be done. If confined to the synovial membrane aspiration will suffice; and if the disease is very definitely localized, it may be removed by the sharp spoon. Early operative interference undoubtedly shortens the suffering.

Dr. Mynter considers arthrectomy to be the complete removal of the whole synovial membrane of the joint plus the local focus. In the knee the process is usually an extra-articular affection, whilst in the hip we usually have an intra-articular lesion. A boy, æt. 10, limped, and was treated conservatively; on coming to Dr. Mynter there was found, on examination, a very tender point on the internal condyle; this was operated on and a local tubercular focus was successfully removed. The boy recovered completely. Another similar case occurred in a child, æt. 2; a tubercular focus in the upper part of the tibia was diagnosed, the patient complaining of excessive pain on pressure at one point. The local focus was removed, and recovery took place. These cases lead one to conclude that we have a local process pure and simple to begin with, and points of tenderness should be sought for and their significance understood.

Dr. McFarlane stated that there was considerable dispute as to the starting point of the disease; as to whether it was in bone, cartilage,

or synovial membrane. In the hip it may begin in the ligamentum teres. It is very desirable to make an early diagnosis, but this is not always possible. A boy in the General Hospital at present is suffering from acute osteomyelitis; it began at the ankle; the tender and swollen part was cut down upon and diseased bone scraped out. Very shortly after a similar condition developed below the knee and was similarly treated. The child is improving; there was no joint implication in the case.

We can arrest tubercular disease by conservative treatment, and therefore one is not inclined to open the joint early. Complete excision is safer than erasion, because of less likelihood in the former of any diseased tissue being left behind.

Dr. B. E. McKenzie, Toronto, narrated the case of a small lad in whom he successfully removed a small tubercular focus from the head of the tibia. The joint trouble usually arises in the bone. True conservative treatment is that of rest for the part when the nidus is confined to the bone, rather than after the joint has become affected. Referring to a case mentioned by Dr. Mynter, he thought it unlikely that operation could be deemed necessary four weeks after the commencement of the tubercular inflammation. Fixation may be complete and at the same time the patient may be allowed to move about. Statements of cases dismissed as "cured" in two or three weeks are fallacious; they tend to the production of adduction, and not for two or three years can the patient be looked upon as *cured.* Very often the operator neglects the proper mechanical apparatus after operation, and therefore so many relapse-cases occur if not properly followed up.

Dr. Oldright has had cases in his practice of perfect recovery by rest without operation, and without recurrence after some years. The limb is more useful if no operative measures are resorted to.

Dr. Bingham stated, in reply, that there is considerable confusion in the minds of some as to the meaning of a "cure." A tubercular focus may become encapsuled and lie quiescent, but it is liable at any time to light up to activity.

Dr. Burt, of Paris, read a paper on "Short Notes on Injuries of the Skull, and Epithelioma of the Larynx."

Dr. Holmes, of Chatham, then read his paper on "Appendicitis."

These papers will appear in full in THE CANADIAN PRACTITIONER.

EVENING SESSION.

Dr. McPhedran read a paper on the

CARDIAC PHENOMENA OF RHEUMATISM.

The so-called cardiac complications are really an essential part of the disease. The ordinary view of rheumatism is that the joint changes, pyrexia, and perspiration, are the sole necessary phenomena; but all the other more unusual manifestations, such as tonsillitis, fibrous nodules, erythema nodosum, and heart affections, are also integral parts.

The heart affection may be the sole manifestation, or it may be combined with any or all of the classical rheumatic phenomena. The heart is affected oftener than any single joint, and any attack is liable to have a concomitant heart affection. As rheumatism is often so obscure in children, it would be well to examine the heart in all pyrexial attacks in children. In the adult there is a relation between the severity of the symptoms and the frequency of the heart affection. In young subjects the liability to the heart affection seems to diminish with increasing age, as shown by the following table:

1 to 10 years,	83	per cent.	have	heart	lesions.
10 " 20 "	69	"	"	"	
20 " 30 "	51	"	"	"	
30 " 40 "	30	"	"	"	
40 " 50 "	21	"	"	"	

From this it appears that in infancy rheumatism always attacks the heart. Many of the seeming rheumatic affections of the joints in children are really due to septic infection; in other words, are cases of osteomyelitis.

It is difficult to say why the heart is chosen out as the point of attack. Anæmia may be the cause. This idea seems to be borne out by the frequent occurrence of rheumatism in young females who are very liable to anæmia. Endocarditis is the most common form, and the mitral valve is most often involved. In children the cardiac phenomena, at first mild, soon return and become fatal, the lesion increasing with each attack. The inflammatory process is circumscribed in the endocardium because of its want of vascularity. The mitral valve is most

often affected, because its central parts have a good blood supply. The aortic valve has not such a good vascular supply and is therefore more apt to escape. The cardiac murmur, according to Sibson, is not the sign of a commencing endocarditis, but occurs when the inflammation is passing off. The first sign of mitral obstruction is seeming reduplication of the first sound, heard only at the apex; of mitral incompetence, prolongation of first sound heard at apex. Murmurs occur earlier in rheumatism than in such diseases as typhoid. Pericarditis and myocarditis are often overlooked and misinterpreted; they occur most often in first attacks, severe attacks, and between the ages of fifteen and twenty-five years. Severe and fatal cases may occur without any symptoms. The immediate prognosis of the cardiac lesion is favorable, because in young children in whom the lesion is most apt to occur compensation is more quickly established and is more complete, therefore it is but seldom that cyanosis or dropsy are seen. In older patients the prognosis depends on the extent of the sclerotic and atheromatous changes. In the well-to-do the prognosis is better, because they are subject to less exposure and to less violent exertion.

Unfortunately, there is no treatment by which we can prevent rheumatism; the great object should be to save the heart; this may be done by arresting the rheumatic process with alkalies or the salicylates, by promoting excretion in order to purify the blood, by good nourishment in the form of light liquid food, and by rest. Great caution should be observed in the use of alkalies in anæmic cases, for they, by increasing the anæmia, may cause the cardiac lesion. In such anæmic cases iron is preferable. Rest should be insisted on in children, particularly in boys.

Dr. Macallum, of London, said that the endocardium was subject to the same sclerotic changes as the aorta; these were seen chiefly at the valves, but might exist on any part of the endocardium. The myocardium might also be affected, but it is impossible to express an opinion as to its condition, save after microscopical examination. The dilatation of the heart was due, *not* to want of contractility, but of elasticity. Rheumatic patients should have special attention paid to the heart, owing to the round cell infiltration and vascularisation of the endocardium. He believed that for a year after convalescence the patient should be put on a course of alkalies, iodide of potash, and iron; the iodide of potash given for the same reason as in aneurism.

Dr. Sheard, of Toronto, did *not* think that second attacks of rheumatism were more likely than primary ones to produce cardiac lesions. A slight swelling, a tumefaction, as it were, of the valves, he considered the real cause of the first appearance of the cardiac murmur. Each recurring attack increased the deposition on the valves. He did not agree with the reader of the paper in believing that pericarditis was often overlooked. He had seldom seen it *post mortem*; it was easily diagnosed, and hence he was led to believe it of rare occurrence in rheumatism. Endocarditis was the lesion nearly always present. Præcordial distress might be the only sign of it—might occur even before a murmur was to be heard. The heart was best treated by rest. Iron is useless in the anæmia of endocarditis unless the patient was enjoying perfect rest. He believed this to be true of the use of iron in all cases of anæmia, due to any cause whatsoever. Time and again he had seen this in anæmic girls. He preferred salicylates to the alkalies. He would use alkalies for twelve months after the attack.

Dr. McPhedran, replying, said that he failed to see the similarity of argument for the use of potassium iodide in aneurism and in rheumatism. Dr. Macallum, no doubt, thought that it would act as an alterative, removing the cell infiltration. He objected strongly to the iodide in any event, for it tended to produce anæmia, and this was the great thing to avoid. The tumefaction, adduced as a cause of the murmur, he did not consider a sufficient cause, nor did he believe it such an easy matter to detect the cardiac lesion, endocardial or pericardial, in the first attack. His experience, substantiated by *post mortem* evidence, was that pericarditis occurred more generally than was thought to be the case. Time and again in hospital practice he had been chagrined to find, on *post mortem*, well-marked pericarditis, which had not been diagnosed during life. He had not been alone in this, for his colleagues had equally often met the same fate. Præcordial distress, insisted on as a symp-

tom of simple endocarditis, had, in his opinion, no such significance. Every practitioner knew that when a patient came complaining of præcordial distress, the chances were that the stomach, not the heart, was diseased. He wished again to emphatically protest against the protracted use of iodides, alkalies, and salicylates, on account of the anæmia produced by them.

(To be continued.)

Obituary.

FORDYCE BARKER, M.D., LL.D.—America has lost one of her best and noblest physicians by the death of Dr. Fordyce Barker, on Saturday, May 30th, from apoplexy, after an illness of two days. He was born in Maine, in May, 1818, and was therefore seventy-three years of age. He studied in Edinburgh and Paris for some time after graduating in his own country, and on his return commenced to practise in Norwich, Conn. In 1850 he went to New York, where he resided for the remainder of his life. He was well-known as an obstetrician, and his book on "Puerperal Diseases" has been read by physicians in all parts of the world.

Personal.

DR. J. E. BOWMAN (Tor. '89.) has been appointed medical superintendent of the Long Island Home for the care and treatment of mental and nervous diseases. The home is Amityville, Long Island, on Great South Bay.

DR. BRETT, of Bannf, was in Toronto during the second week in June.

DR. J. S. GRAY, of Winnipeg, was in Toronto June 10 and 11, attending a meeting of the Canadian Order of Foresters, of which he is a prominent member.

DR. GEORGE M. GOULD, of Philadelphia, has been appointed editor of the *Medical News*.

SIR HENRY THOMPSON, of London, England, was recently indisposed, and his condition caused considerable anxiety among his friends. We are pleased to learn that he is now quite well.

DR. P. H. BRYCE, of Toronto, described the best methods of handling milk on dairy farms, at the recent meeting of the American Medical Association.

Births, Marriages, and Deaths.

BIRTHS.

BAINES.—At 194 Simcoe Street, on Friday, May 9th, the wife of Dr. Allen Baines, of a son.

FREEMAN.—At Walkerton, on Friday, May 15th, the wife of W. F. Freeman, M.D., of a daughter.

WALLACE.—On the 17th May, at 165 George Street, the wife of Dr. Wallace, of a son.

MARRIAGES.

BUCKLAND–BURDETT.—In San Francisco, April 29th, Emma, eldest daughter of Robert Burdett, Collingwood, to Owen Buckland, M.D., of San Francisco.

MCMAHON–THOMPSON.—On Tuesday, June 2, at Toronto, Dr. McMahon to Miss Theresa Thompson.

DEATHS.

WAGNER.—On the 27th May, at 21 Gerrard Street East, Percy C., fourth son of Dr. W. J. Wagner, aged 4½ years.

Miscellaneous.

The next meeting of the American Association of Obstetricians and Gynæcologists will be held in the city of New York, Thursday, Friday, and Saturday, Sept. 17, 18, 19, 1891. Drs. Adam Wright (President) and James F. W. Ross are at present the only members from Canada, but it is expected that several Canadians will be admitted to membership at the next meeting.

THE fifty-ninth annual meeting of the British Medical Association will be held at Bournemouth, July 28 to 31 inclusive, with Dr. W. F. Wade as President. Among the addresses delivered will be that in Medicine, by Dr. Thomas Lauder Brunton, lecturer on Materia Medica and Therapeutics at St. Bartholomew's Hospital, and that in Surgery, by Dr. John Chiene, Professor of Surgery at the University of Edinburgh.

THE annual meeting of the Manitoba Medical Association was held at Winnipeg on June 11th and 12th.