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## Original Communications.

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### OPENING ADDRESS MEDICAL FACULTY, UNIVERSITY OF TORONTO.

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of Toronto.

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*The Hon. The Chancellor of the University, Mr. President, Ladies and  
Gentlemen:—*

The first duty that devolves upon me to-night, is that of offering you a hearty welcome on behalf of the Medical Faculty of the University, to the inaugural lecture of this, the fourteenth session, since the restoration of the faculty to its former position in that body; a restoration which has proved, I believe, to have been wise and advantageous to both mother and child. Were proof of this fact wanting, one might point to the advances which have been made in the methods of teaching the various branches of medicine since the re-establishment of that faculty; of the increased number of students in attendance, of the largely increased number of teachers; and last, but not least, of the high standard of medical knowledge required by the university of its medical undergraduates before they are permitted to bear the coveted blue silk and ermine hood, the insignia of the Bachelor in Medicine of the University of Toronto.

In accepting the honor conferred upon me by my colleagues and the University Council, in inviting me to deliver this lecture, an honor I confess I had some diffidence in accepting, I have experienced some difficulty in choosing my text. It is not an easy matter, at any time, to combine the academic with

the popular, and yet, on an occasion such as this, it is not desirable that we should deal with one or the other alone; should an olla-podrida be served up to you this evening as the result of an attempt to combine the two, this difficulty must be my excuse. I would prefer to speak to you chiefly of matters of which I have had personal knowledge, rather than to dive into books, or to deal with matters, which without disrespect, I might designate ancient history, and yet, our art is so intimately connected with past ages that to speak of it at all without reference to them would be an impossibility. And thus, since it happens that this will be the last inaugural lecture of the present century, it has occurred to me that possibly a review of some of the most striking changes which have taken place in medicine during its two last decades, the period during which I am best qualified to speak, may have some measure of interest for you.

First, then, I would notice the marvellous change and improvement in the style of nursing of to-day and that of twenty years ago, in Toronto at least. The soft-voiced, gentle-handed and willing nurse which you see in every hospital, is as different from her predecessors as day is from night. She is clean and neatly dressed, fresh and crisp in her appearance. She is well educated, alert by day or night, unsparing of self, gentle in handling a patient, thorough in carrying out her orders, loyal to the profession—in a word—a lady. Were it not for the assistance that the medical practitioner receives from the nurse, I think it safe to say, we would mourn the loss of many more of our patients than we now do, and that a large number of the intricate and serious operations, which are now so constantly performed, would be impossible. It is a pleasure to be able to testify in this place to the great help afforded and the amount of anxiety spared to the attending physician by the assistance of our willing coadjutors—the modern nurse.

During the last twenty years the enormous advances made by other sciences, or branches of our own art, have done much to equip us to diagnose and fight diseases in their various forms. In bacteriology alone, the labors of our own Grand Old Man Lister, with Pasteur, Koch and a host of other patient investigators, have enabled us to diagnose with certainty and to treat with some degree of success, that one time hopeless, and world-wide disease, tuberculosis. What did we see but a very few years ago? A wife nursed her husband, or a sister nursed a brother, the victims of pulmonary tuberculosis; after a few weeks or months the patient was carried off, to be followed frequently in a very short space of time, by the devoted nurse. Why, because it was not then known that consumption was an infective disease and no precautions were then taken to protect the lives of those who were in immediate contact with the

patient. It is true that some of these cases of direct infection were so striking as to cause some of the most careful and observant practitioners to pause and reflect; dimly groping in the dark after what we know now to be the truth, namely, that tuberculosis is a specific infective disease, due to a micro-organism, Koch's bacillus, which may be, and often is, directly communicated from one person to another.

I well remember a man, known and beloved by many present, respected by all, and who is now, I believe, the father of the medical profession in Toronto—I am speaking of Dr. James Richardson, Emeritus Professor in this faculty—saying to me in his usual forcible and incisive manner, after seeing, in consultation, two fatal cases of phthisis within a few weeks of each other, in the same house: "Doctor, I cannot help believing that consumption is sometimes infectious." I rejoice that, full of years and honor, "the old one," as those who know him best, delight to call him, has been spared to see verified a foreknowledge, considerably anterior to the date of Koch's great discovery. By this discovery many valuable lives have already been saved and in the future the victim of the white man's plague, that plague so prevalent in England, as to have received from our neighbors across the Channel the name of *la maladie anglaise*, will no longer have the door of hope closed against him, but will be told that consumption is curable, and that with care and attention to hygiene, his life will be prolonged, possibly saved.

It has been said that war has been declared by the medical profession upon tuberculosis, and that in time it ought to be stamped out, just as have been, practically, rabies and typhus fever in England, and the establishment of sanatoria for consumptives all over the civilized world, among which our own sanatorium at Gravenhurst is doing excellent work, shows at least that the profession is in earnest in waging this conflict. For myself, I confess I am not so sanguine as to the ultimate extinction of this plague. One great difficulty we encounter at the outset is the deeply-rooted and almost universal belief in the mind of the laity that cold air, or as they call it, "catching cold," is with the consumptive the root of all evil. It will be your duty, gentlemen, to combat this popular error, to teach your patients that sunshine and fresh air, and especially fresh, dry air, are inimical to the growth of the bacillus, and that fresh air, proper food, and hygienic surroundings are more to be relied upon than any medicine in the prevention and treatment of this universal and once hopeless disease.

To impress upon you the importance of this subject, for I deem it one important in the highest degree, and also because in this audience it will readily be understood, I will quote to you the record of an interesting, but costly mistake, made some

years ago in that ever-fascinating portion of the Zoological Gardens in London, known as the monkey house.

Dr. Neill Arnott says: "A new house was built to receive the monkeys, and no expense was spared, which in the opinion of those intrusted with its management could ensure to those natives of a warm climate all attainable comfort and security. Unhappily, however, it was believed that the object would be best secured by making the new room nearly like what an English gentleman's drawing-room is. For warming it two ordinary drawing-room grates were put in as close to the floor as possible, and with low chimney openings, that the heated air in the room should not escape by the chimneys, whilst the windows and other openings in the walls above were made as close as possible. Some additional warm air was admitted through openings in the floor from around hot water pipes placed beneath it. For ventilation in cold weather openings were made in the skirting of the room, close to the floor, with the erroneous idea that the carbonic acid gas, produced by the respiration of the animals, being heavier than the other air in the room would separate from this and escape above. When all this was done, about sixty healthy monkeys, many of which had already borne several winters in England, were placed in the room. A month afterwards more than fifty of them were dead, and the few remaining ones were dying. It was only necessary to open, in the winter, part of the ventilating apparatus near the ceiling which had been prepared for the summer, and the room became at once salubrious. The cause of this mortality was consumption.

There are two other diseases which through the labors of bacteriologists, have, during the last few years, been largely robbed of their terrors, terrors which were not merely those of the mind, for the victims to either of them almost invariably succumbed, namely, rabies or so-called hydrophobia, and tetanus or lockjaw. As soon as bacteriology discovered that these diseases were caused by micro-organisms a cure was sought, not in haphazard, but in truly scientific, manner. Pasteur, by a process of attenuation of the virus, cultivated in some of the lower animals, chiefly rabbits and horses, having produced a remedy which has undoubtedly saved many lives from the most awful forms of death known to mankind. The Pasteur Institute in Paris, and its branch in New York, are to-day monuments to his indefatigable researches.

Diphtheria also, that disease so fatal to children and the *bête noir* of every parent, has by similar means had its mortality very largely reduced. Few deaths among children are more distressing than those caused by laryngeal diphtheria—the little patient, with anxious face, gasping for breath, and

being slowly but surely asphyxiated by the growth of the fatal membrane within the air-passages. Most of us in the past have met with such cases, and have stood by the bedside of the dying, deeply deploring our inability to afford relief. To-day, by the use of antitoxin, a remedy produced by the cultivation of the bacillus of diphtheria, we may approach these cases with much greater confidence than formerly, knowing that if the remedy be properly employed the results are frequently most brilliant; that we shall often attain to the highest aim of our profession—the saving of a human life—and occasionally even earn the everlasting gratitude of our patients.

The establishment of a school of topical medicine in the Mother-land, where those diseases not met with in temperate climates, but which play such havoc with the lives of Europeans who are compelled to pass their days in the lower latitudes, may be studied, and where medical men may fit themselves to cope with these foes, is a comparatively recent innovation, and one much to be commended.

But little is known of the etiology, or of the best methods of treating such maladies as yellow fever, jungle fever, coast fever, dengue, bubonic plague and leprosy; but the researches which are now being conducted by a devoted band of investigators who have taken their lives into their hands and are passing their days and nights in pestilential countries seeking knowledge, will of a certainty result in benefit to mankind, and are but one more sign of the progress of our great profession at the end of the nineteenth century.

In surgery the advances which have been made during the period referred to, possibly owing to the fact that the results are more readily appreciated, have been even more striking. The number and complexity of the operations performed to-day are almost bewildering.

The brain is no longer a terra-incognita—it has well-known paths and bye-ways to guide us in our operations. Large portions of the skull may be removed with impunity, and the brain itself explored for the removal of a foreign body, a tumor, or for the evacuation of an abscess. It is in abdominal surgery, however, that the greatest change has been wrought. Surgical cleanliness and asepticism are responsible for the unravelling of many a medical mystery, for the dispersal of many a surgical loup-garou. No longer do we look upon the abdominal cavity as a sort of holy ground to be approached only with awe and timidity. Laparotomies are of daily occurrence, and almost every organ of the abdominal cavity has been made to pay tribute to the surgeon.

Hysterectomy, ovariectomy, intestinal anastomoses, resections of portions of the stomach and intestines, excisions of

spleen and kidneys, operations on liver and gall bladder, operations for extra-uterine fetation—all of these are being constantly and safely performed, until a skeptic might begin to wonder whether any one abdominal organ was absolutely necessary to the animal economy. In minor surgery the effect of modern asepticism is perhaps best seen in the treatment of burns and compound fractures, accidents which are among those most commonly met with in our hospital wards.

Who amongst us does not remember the honor of having to dress an extensive burn, day by day, for weeks after its infliction?—the agony and moans of the patient, the horrible stench from the decomposing sloughs, the rivulets of pus flowing from the burnt area, the demoralizing effect upon patients in adjoining beds, so great that it was frequently necessary to remove them from the wards. Not, however, by the employment of antiseptics, amongst which must be placed facile principles, picric and boracic acid, for they exert all the good and none of the ill-effects of other antiseptics, a revolution has been worked in the treatment of burns which I hold to be one of the most striking in surgery. In compound fractures we have the same thing. The patient with a compound fracture of the leg is now confined to bed about as many weeks as he formerly was months, and, moreover, the number of amputations for compound fractures has been greatly lessened.

Conservative surgery has received a great impetus of recent years through the same means. The extensive operations on tuberculous joints, by which many limbs which were formerly sacrificed, are now preserved, and some new methods of remedying deformities, such as Calot's operation for straightening angular curvature of the spine and transplantation of tendons in paralysis are most noticeable.

But gun-shot wounds from the modern arms of precision, both in their infliction and results, are amongst the most interesting and astonishing facts that have come to our knowledge within the past twelve months. The small, nickel-plated, elegant-looking projectile of the Lee-Metford or Mauser rifle, which has replaced the clumsy leaden bullet of the Snider, will traverse the human body, at a distance of two or three miles, as if it were so much paper; but with this comes the comforting assurance that the wounds inflicted by these projectiles, if they do not kill outright, will frequently heal in a very rapid and satisfactory manner. Pus, the bane of old-time gunshot wounds, is practically unknown, this being partly due to the clean-cut nature of the wound from the high velocity of the bullet, and partly, no doubt, to the fact that every one in the field carries with him sewn up in the lapel of his coat, an antiseptic dressing, simple but effective, and easily applied to the wound as soon as inflicted.

In the recent war in South Africa in which, thank God, British arms and British pluck have, as they always must, in a righteous cause, prevailed, we have learnt almost all we know of the effects of modern gunshot wounds. Mr. Treves, who went out at the request of the British Government to South Africa as consulting surgeon to the forces, and who, in the battles of Colenso and Spion Kop, was actively engaged in attendance upon the wounded, has placed on record a number of very remarkable gunshot wounds inflicted by the Mauser bullet. Writing from Frere Camp he says: "The great majority of the wounds are by Mauser bullets, some few are due to fragments of shell, and a still less number to shrapnel. The Mauser bullet is a very merciful one, and in no instance have I met with a case in which the head of the bullet had been cut off, as asserted by some. The damage done by the Mauser depends mainly upon the range. At fifteen hundred to two thousand yards it penetrates like a needle. At five hundred yards or less, it will smash a femur or humerus to fragments. When a bone is fractured, the bullet, if retained, is generally found to be much distorted or broken up into many fragments. The shell generally peels off the leaden core. As an instance of the fine hitting of the Mauser, I may mention a case (from the armored train) in which the bullet went through the middle phalanges of the ring and little finger, making four small wounds which healed nicely and kindly. The two bones were fractured, but the man recovered, with sound union and mobile joints. On the other hand I have seen a fracture of the humerus in which the bone was broken into twenty-three small fragments. Many gunshot wounds of the thigh heal by first intention."

*Abdominal Wounds.*—The point of entry of the Mauser is very small, often, as Tommy says, like a bug-bite; it is not difficult to overlook. The point of exit also is often very small, but it is more apt to be slit-like. Several patients have been shot through the abdomen without inconvenience following. In some of these the bowel has been penetrated, as shown by blood in the motions. The hole made in the bowel by the Mauser is very fine and can be closed by from three to five Lembert sutures. Several penetrating wounds of the liver and kidneys have been followed by no symptoms. One distinguished officer had a shrapnel bullet pass through his liver and kidney. He had a little collapse, and beyond some temporary tympanites and hematuria, he had no trouble of any kind.

*Bullet Wounds of the Head and Spine.*—In several instances the bullet has passed through the brain without causing marked symptoms, and perfect recovery has followed. For example, a bullet entered near the vertex, passed through the brain, hard palate and buccal cavity and escaped at the root of

the neck on the opposite side. No discomfort followed except headache and some strabismus. Speaking generally, operations upon the skull for gunshot wounds have done exceptionally well, and such operations have been numerous. I met with four cases of paraplegia on Saturday, the bullet having in each case apparently passed through the cord.

*Bullet Wounds of the Extremities.*—Amputations have been comparatively few. I have seen a Mauser go through the centre of the patella and out at the centre of the popliteal space and lead to no trouble in the joint. In another case the bullet went through the popliteal space from side to side and left the bone and joint untouched, but led to an arterio-venous aneurysm.

*Bullet Wounds of the Chest.*—After penetrating wounds of the lung, there may be no symptoms beyond an immediate hemoptysis, which is not repeated. In other cases there have been surgical emphysema, or hemothorax, a pneumothorax and an example or two of empyema. On the whole, gunshot wounds of the chest do well. Some cases are hard to understand, as, for example, one in which the bullet entered above the clavicle and came out on the inner side of the opposite thigh, there being no symptom except temporary hock. The field dressing carried by each soldier answers its purpose admirably. Tommy has a great regard for it, and takes every care that he has it on him.

*The Spirit of the Wounded.*—On all sides there is evidence that our soldiers behaved splendidly on the field, and I can say that when brought back wounded they were plucky, patient and uncomplaining. Their unselfishness was many times very marked. An orderly was bringing some water to a wounded man lying on the ground near me. He was shot through the abdomen, and could hardly speak, owing to the dryness of his mouth; but he said, "Take it to my pal first; he is worse hit than me." This generous lad died next morning, but his pal got through and is doing well.

In speaking of the battle of Spion Kop where the wounded had to be carried down a precipitous descent, and of shell wounds, Treves relates that "in one case a shrapnel had opened the ulnar artery, and the man came down safely with a tourniquet on his brachial artery, composed of a plug of cake tobacco and the tape of a puttie." He adds, "of the many curious tourniquets I have seen, this is the most ingenious." The English medical journals have lately devoted much space to this subject, and numerous photographs taken by that modern and Machiavelian invention, the X-ray, of bullets arrested in their course through the body, and of damage they have caused to the bony structures, have done much to interest and instruct the surgeon in this class of wounds.

Pathology, which goes hand in hand with bacteriology, has grown to be one of the most important subjects that the medical student has now to grasp. Indeed, anatomy and pathology must be looked upon as two of the corner-stones of your medical education. The Senate of the University has long recognized the importance of this subject by appointing a professor in this faculty whose whole time is devoted to its teaching.

The vast number of text-books published of recent years in almost every country of the world on this subject, testifies to the importance of pathological study in the minds of those who should be competent judges of the question. If you neglect pathology you place yourselves in the position of the sailor, who trusts to dead-reckoning, rather than to solar observation, for his position on the chart; and like him, you will frequently find yourselves considerably out of your course.

Chemistry, also, that science which is to the medical student so frequently a stumbling block, and whose range seems to be illimitable, has contributed very largely to our medical armamentarium, as well as, it must be admitted, to the pernicious habit of self-dosing by some of our patients.

Little was it thought when, some years ago, chemistry discovered the beautiful aniline dyes, that the mother substance, coal-tar, would produce such a large family as the well-known coal-tar compounds. And yet it is probable that no class of remedy, during the last ten years, has been more largely employed than these useful synthetical products. And whilst it is true that when taken wholesale by those who know nothing of their dangers, certain unoward results have occurred, yet on the whole they are a class of remedy which are safe and have been almost invaluable to the profession. For local anaesthetics, such as cocaine and eucaïne, are we also indebted to the chemist and physiologist, and as a result of their labors we are now able to perform many operations without inflicting the slightest pain upon the patient, and without subjecting him to the dangers of a general anaesthetic. Indeed, the employment of local anaesthesia in suitable cases, may be classed among the many blessings we enjoy at the close of the nineteenth century.

The greatest attention is now being paid to the matter of sanitation and preventive medicine. Boards of health and medical health officers have been created, and invested with very great power to watch over the public health, to act in emergencies and to superintend the sanitary arrangements of their several districts. Diseases such as small-pox which, in spite of precautions, occasionally find their way to our shores, are thus speedily checked. The quarantine station at Grosse Isle, in the St. Lawrence, one of the great gateways of the Dominion, is a model of efficiency and thoroughness. In this

city. a large isolation hospital for scarlet fever and diphtheria has been built at great expense by the civic authorities, where patients suffering from these diseases are received, and which has proved an inestimable boon to the public as well as to the profession. In rural districts, strict supervision is exercised over water supply and drainage. At the various summer resorts all large hotels are systematically inspected by the authorities; and even in the lumber camps, where occasionally diphtheria of a most virulent type breaks out, on appeal to the Board of Health, a medical man is at once dispatched to the locality to take charge of the sick and to do his utmost to stamp out the epidemic.

Indeed, it would almost appear that at the close of the century, the chief aim of the medical practitioner is to keep the people well, rather than to cure them after illness has fastened them, and whilst this is no doubt laudable, and an example of the greatest amount of good to the greatest number, it is also certainly one cause of impoverishment to the family practitioner, and an argument in favour of payment by the state and municipal authorities for duties now performed by him gratis, such as the notification of infectious diseases, and the registration of births and deaths.

It is pleasant to be able to note that within the last few years a great change for the better has occurred in the status and rank of the medical profession in the army, navy and militia forces. For many years this vexed question has occupied the attention of the members of our profession and of the authorities at the War Office in England. Complaints were made that the surgeon was denied proper rank, and for this reason was slighted, ignored in the mess-room, and treated by even junior officers in a cavalier way. The matter came up repeatedly in Parliament, and in spite of opposition by some high in authority at the War Office, rank has been granted to the naval and military surgeon, so that the youngest graduate on joining the forces, receives the rank of lieutenant; and passes by seniority through the various steps of lieutenant, captain, major, lieutenant-colonel and colonel, to the highest possible rank, that of surgeon-general, ranking with major-general. The medical service of the army is no longer a department, but a Royal Corps, and, as such, forms an integral part of the army; the letters R.A.M.C. after an officer's name indicating the words: Royal Army Medical Corps. By this concession, which seems to be very highly valued by members of our profession in the service, a great grievance has been abolished and much unnecessary heart-burning and jealousy done away with.

Some slight changes that have taken place in the faculty since our last winter's session have to be mentioned. The chair in medicine and clinical medicine rendered vacant by the death

last year of the late much-lamented Dr. James Graham, has been wisely and worthily filled by the appointment of that indefatigable worker, the former associate professor, Dr. Alex. McPhedran. The chair in pathology and bacteriology, which, owing to continued ill-health, Dr. John Caven has been compelled to resign, has been offered to, and accepted by, Dr. J. J. Mackenzie. And whilst we much regret the loss of the two gentlemen referred to from the teaching staff, it is not too much to say that the faculty hope and intend that the interests of the students will not, in any degree, suffer by these changes.

I should not deem that I had wholly fulfilled my duty to-night, did I not venture to offer a few words of advice to those of you who, having already embarked upon the study of medicine and put your hands to the plough, do not intend to look back until success has crowned your efforts. And, first, I cannot refrain from noticing with gratification, the pleasant change which has come over the medical student to-day as a whole, and from expressing the hope that this regeneration may long continue.

Rowdyism, which was formerly thought to be inseparable from the average medical student, appears to be a thing of the past. Even the annual Freshman hustle, which was to the Seniors what the great sun dance was formerly to the red man, has for some time been abolished. No longer do the guns in front of the Parliament Buildings belch forth fire, smoke and defiance to the police force on Halloween. The serenade of ladies' colleges with horns and tom-toms by students, their one remaining joy, is still held sacred, and enjoyed by both serenader and serenaded. It is best so. *Tempora mutantur nos et mutamur in illis.*

Remember, gentlemen, there is no royal road to medicine: rather is it a steep Jacob's ladder, up each rung of which you will have patiently to toil until you reach your goal. In a most elegant and learned address, delivered two years ago in this place by my friend and colleague, Professor Cameron, he alluded to the primrose path you would tread in following your medical career. That you may meet with many primroses in your path we all sincerely hope, but of a certainty you will also encounter the thorn. Try to avoid the thorn and to cull the Primrose. It is better for you always—and I am addressing now, more especially, those gentlemen of the first and second year—it is better for you always to pluck the Primrose than to allow the Primrose to pluck you. Work hard and faithfully when you are at work: but as the *mens sana* should go hand-in-hand with the *corpore sano*, do not neglect, at the same time, athletics. A physician is none the less a good practitioner because he plays a good game of cricket or can drive

a golf ball 150 yards from the tee. It is better to shine as a lesser light with a good physique, than to be a prodigy with stooping shoulders, contracted chest, and chronic dyspepsia. It is satisfactory to know that the University of Toronto has always been to the front in the matter of athletics, and it is also encouraging to learn that the result of statistics goes to show that moderate exercise and mental activity are by no means incompatible, but rather the reverse.

Physical exercise, gymnastics—or, according to more modern nomenclature, athletics—have always played a prominent part in the training of the youth of every virile nation. The heroes of Homer wrestle, cast the discus, and engage in foot and chariot races. I quote from an article on physical exercise in Buck's "System of Hygiene:"

"The Greek gymnasium, as it existed during the best period of Grecian civilization, was a unique institution. It was not merely a training school for the young, but a resort for citizens of all ages, where philosophy, arts, and the sciences were cultivated in connection with a discipline of the bodily powers. In time the institution became universal throughout Greece and her colonies; every city had its gymnasium, or perhaps more than one, and Pausanias speaks of it as a sign by which a Greek city could always be recognised. All the appointments were of the most attractive character. The gymnasium consisted of a large square enclosed by walls, situated, where possible, near a stream to afford bathing facilities; planted with plane-trees for shade, and decorated with works of art to cultivate the sense of beauty, and inspire ambition by the example of heroes. A portion of the ground was covered by a roof for protection in winter, and the larger gymnasia contained numerous buildings devoted to various purposes. Within the enclosure was room for ball-play and a running course, a stadium (606 feet) in circumference, covered with sand to make the running more difficult, and surrounded by an amphitheatre for spectators. The careful attention paid by the Greeks to the hygienic details of exercise, deserves a brief notice.

"Before exercise began the body of the gymnast was oiled and covered with dust and sand, partly to protect the skin from injury and from the chilliness of the air; partly to lessen perspiration, the loss of which was supposed to diminish strength, and partly to afford the contestants a better hold in wrestling. After exercise in the sun, the dusty body was cleansed in a cold bath, thoroughly scraped with a strigil and again salved with oil, the result being a firm, brown and glossy skin, a healthy tissue indicative of the general vigor of the body. The dispirited army of Agesilaus needed only the sight of the soft, white skins of the Persian prisoners who had been

stripped in its presence to revive its courage, and excite the derision of the foe it had needlessly feared."

And, although in the rigor of a Canadian climate, we cannot expect to emulate the ancient Greek and appear on the campus in a state of nature, still many of their sports find favor with us to-day. Thus we have running, jumping, throwing the discus or quoit, games of ball and boxing. Bicycle races, it is true, have replaced the chariot races, at least in the university games; and the scraping with the strigil was probably only more painful, and not more effectual than the massage we see so lovingly lavished upon the limbs of the running man in this year of grace, 1900.

Do not burn the midnight oil, there is no necessity for it, neither is there for the old-fashioned wet towel about the forehead. Do all your reading between Monday and Saturday at noon. It will not profit you, nor is it right, to work on the seventh day. Abstain from alcohol altogether, and from tobacco to excess. Take notes of interesting cases you meet with during your student life, and carefully preserve them in a book kept for the purpose. You will probably never get such opportunities when once in practice, and you will find them of the greatest interest and value to you in your professional work. Be thorough in all your work and do not neglect minutiae. It is easy to dissect out a muscle, difficult to follow the ultimate branches of a nerve or artery, but as a rule much more important.

The late Sir Wm. Gull, who rose to the highest eminence in his profession, and who for many years enjoyed a most fashionable and lucrative practice in London, used to say that he had made his way without assistance or outside interest, entirely by thoroughness in work and attention to detail, and was fond of quoting this favorite doggerel to his students :

"If I were a tailor, I'd make it my pride  
The best of all tailors to be ;  
If I were a tinker, no tinker beside  
Should mend an old kettle like me."

By this he meant to emphasize the old familiar saying, "Whatsoever is worth doing is worth doing well," a proverb which, though old, is very true, and which you will do well to bear in mind throughout your professional career.

To those of you who are more advanced in your medical studies and who will shortly be leaving these halls to launch your canoes on the sea of life, I would say this : You will not forget, I know, when you go out into the world that you are educated gentlemen, members of a most ancient and honorable profession, whose first duty should always be to those who

trust you with their lives, and often with their most sacred confidences. Remember that your profession is not a trade, that it should not be followed solely for a monetary consideration, but that a higher and more elevating standard is yours. "To you much has been given, from you shall much be required."

A few weeks ago whilst reading in the old land the diary of an officer in the Gordon Highlanders, who was besieged for four long months in Ladysmith, a daily record of hunger and havoc played among that stalwart and plucky garrison by those twin pests, dysentery and enteric fever, and of the never ending work performed by the medical staff, I came upon these words:

"We are feeling a bit off color to-day, owing to the sudden death of our poor little doctor.

"He went into hospital only two days ago and died at ten o'clock last night. The post-mortem to-day showed it to be perforation of the bowels, due to enteric.

"He must have had it on him for weeks and yet went on with his work to the last. If ever a man sacrificed himself for his friends, he did.

"He will be buried this evening at seven o'clock."

Truly a brief and pathetic story of a member of our profession, who did his duty with singleness of heart; thinking of and attending upon others, when he must have known that he himself was a victim to that fell disease which he had fought so long. And dying in a far-off land without hope of reward, of the coveted Victoria Cross, or of even being mentioned in the despatches. What higher ideal of life or of death can there be than this one so, briefly chronicled—a duty cheerfully performed, a life for others willingly laid down. Surely, when this spirit crossed the bar it was greeted with these words: "Well done, thou good and faithful servant."

At a meeting of the Harvard Medical School in Boston, some years ago, the following timely suggestions were made by Professor David Cheever. In addressing those who were about to take their degrees, in referring to the essentials of success, he said:

"The first requisite is work—the will to work, zeal, pertinacity; any work that is professional; always work—there is no other lasting road to success. Cultivate good manners; they go far. Be reticent. Do not gossip. Do not think aloud; it is fatal to confidence. You are to be the family confessor; respect the confessional. Never betray family secrets, unless under order of the judge. The laws of Massachusetts will not protect you in withholding them in a court of justice; but make them public only under protest. Be guarded in the-

opinions you express ; if you say but little you will have less to take back. When the confidence of the patient wavers, be before him in asking for a consultation. Always show a cheerful face in the sick-room ; its effect on the sufferer is incalculable. I hope you will be sympathetic, for you cannot feign it with success. Never give up a case whilst the patient breathes. Promote euthanasia, but only with the full assent of the friends. Stay at home ; be ready in your office. Do not allow yourself to be known as anything but a doctor ; everything else must be secondary, if you would build up a practice.

Begin as a general practitioner ; you may remain such with honor and profit. If you aim to be a specialist you will be a one-sided one without first doing general practice. Take everything that comes to you, and do the best you can.

“ Where shall you settle ? Select with care and stick. Identify yourself with a locality. If you have absolutely no capital do not begin in a large city, unless you can earn money by side labor. Ten years in a city, five years in a town, one or two years in a village, represent the time required to get a good living. The ideal place is a medium-sized town combining an agricultural and a manufacturing population. Manufactures mean ready money, agriculture means no cash ; but, on the other hand, manufactures mean bad debts, and agriculture means barter, and some sort of pay for all you do. Unlike the law, medicine leads to nothing else, save science, and science is not wealthy. So much for the lower and material view of our calling.

“ For the higher and nobler view—so surely as you nourish the sacred flame of professional and scientific ardor, so surely you shall be warmed, sustained, upheld amid reverses, calumny and disappointments. If you are thus just to yourself, be as careful to be just to other doctors. The Golden Rule is the true code of ethics. Be gentlemen, and not rude, grasping bores ; respect others rights, and yours will be respected. In no calling does bread cast upon the waters so surely return after many days. I have come to believe more and more that no effort is ever lost, no work but brings back some result. If you maintain your honor, your industry, your health, there is nothing to fear.”

I strongly commend to you these words of an experienced man, of a successful man, and of a gentleman :

Be proud, gentlemen, of the land in which you live, of its sunny skies, of its healthy climate, where pestilence and famine and tornado are unknown ; of its magnificent stretches of water and forest ; of its freedom, of its excellent laws, and of the high code of morality which is expected of all those that live beneath the shadows of the Maple Leaf.

Remember that you are Canadians ; do not allow yourselves

to be styled Americans—yours is the better country. No portion of Greater Britain stands higher in the estimation and affection of the Mother-land than does loyal Canada to-day. Those of you whose lot may be cast among our neighbors to the south, do not, I beg of you, throw off your allegiance to the old flag, that flag upon which the sun never sets, nor to that good and gracious Queen, who for sixty-three years has ruled over the greatest empire the world has ever known.

Be loyal to your *Alma Mater*, the University of Toronto, the kindly mother who is ever ready to do her best to further your interests, and to equip you to fight the battle of life. Should you hear her maligned, be ever ready to defend her good name. Keep your own fair name unsullied, and so will you reflect credit upon your university, whilst she, on her part, will be proud to number you among her sons. And so shall you say from the depths of your hearts the prayer in which all here to-night will join :

“ God save the Queen,  
God bless our land,  
God prosper the University of Toronto.”

## TWO CASES OF FATAL LEAD POISONING.\*

BY ALLEN BAINES, M.D.,

Lecturer on Diseases of Children and Associate Professor of Medicine, Trinity Medical College, Toronto; Physician to Victoria Hospital for Sick Children and Assistant Physician, Toronto General Hospital.

It is not with an idea of producing anything original that this paper is presented, but from the fact that clinical histories of lead poisoning in children of a sufficiently extended and minutely noted character are but few. Dr. Putnam, in his comprehensive article on "Lead Poisoning" in *Keating's Cyclopaedia*, says:

"The justification for the present article is found not in the abundance, but in the meagreness of the present accumulation of facts relating to children, and the importance of taking steps toward increasing it." There is no doubt that cases of lead poisoning in children are rare, the diagnosis not at all simple, and the treatment unsatisfactory.

My justification is somewhat on the same line, and I can, bring but one symptom, unknown to me before now, into prominence, viz., a very pronounced dark blue circle about the anus, more marked from the fact that the children were of fair complexion, otherwise, there is nothing but a carefully-taken clinical history and the fact that until the day of the first child's death, no previous history having been obtained, the case resembling so clearly that of basilar meningitis, it was treated as such.

Charles H., aged two years, eight months, admitted to the Hospital for Sick Children, November 20th, 1899.

*Family History.*—Father: living, healthy, not affected by the lead. Mother: living, healthy until three weeks since, when she was taken ill with a sharp attack of lead colic, accompanied by the other classical symptoms found in these cases.

The other members of the family consisted of a brother aged five years, nine months, since dead from same cause; an infant at the breast, perfectly well, apparently untouched by the lead. The manner of absorption being, that for a week previous to the first child being affected, the meals had been cooked with firewood procured from staves of old barrels which had contained white lead, so the fumes of lead not only entered into the food, but permeated the atmosphere.

*Previous History.*—The child had never been ill with any complaint whatever until November 6th, when he had a well-marked convulsion, lasting about five minutes. He recovered

\*Read by title before the American Pediatric Society, Washington, D.C., May 1st, 2nd, 3rd, 1900.

completely from this attack and was quite well until the evening of the 19th, when he had four convulsions in a few hours' time, the duration lasting from three to six minutes. He has been practically unconscious since the first convulsion, rousing slightly at intervals for a few moments, and has had frequent attacks of vomiting; bowels for the past few days have been somewhat constipated, necessitating mild purgation; appetite ravenous, no history of worms having been passed.

*Examination.*—General inspection: he lies on his back in a semi-comatose condition, from which he cannot be roused; eyelids half closed, eyes roll slowly from side to side, mouth slightly open, tongue moist and coated, breath nasty and offensive, the same odor seemingly to emanate from the whole body. The right arm and hand firmly flexed, the left extended at the side, occasional twitching of the right fingers of a spastic character. Respiration slow and irregular: abdomen markedly contracted, legs extended, but nothing abnormal. Lungs, normal; heart: first sound, aortic accentuated—second sound, pulmonary accentuated. Rhythm: irregular, intermitting. Pulse: irregular, full-soft. Eyes: sclera pale, but clear; pupils dilated, but react and are equal.

*Reflexes.*—Plantar absent, patellar absent, cremasteric absent, abdominal absent, Kernig's sign absent.

Can rouse patient only by causing pain on pressure, when he utters a moan and sinks back into comatose condition. Temperature 99.3° F., pulse 60, respiration 14. The condition remained practically the same during the night; temperature rose to 101°, pulse 65, respirations to 20. A condition of meningitis being suspected, collodion vesicants were applied to nape of neck and ice-cap to head—an enema was given, without any effect. Three convulsions occurred during the night, the first two involving the right side of the body, the third, the left—in all three the face and neck were violently convulsed.

November 21st.—Twenty-four hours after admission—9 a.m. Abdomen still more contracted, breathing slow, deep, entirely thoracic, very irregular, intervals of six to ten seconds, occurring between respirations, then regular again. Tache cérébrales well marked. The eyes—examination showed marked neuritis, no choked discs, veins engorged and tortuous. During the day, eighteen distinct convulsions were recorded, most of them being general and epileptiform, but some were unilateral—sometimes only the fingers being involved. Patient still comatose, temperature 102° F., pulse 72, respiration 30, being more regular. Pupils now contracted and equal.

The following description of the features of the convulsions most marked:

First, the face would get flushed, eyes would open wide,

fixed and staring, pupils widely dilated. The eyes would then roll about the eyelids and lips begin to twitch, and soon whole sets of muscles, face, arms, legs and body; every convulsion beginning from above downwards, care having to be taken to prevent biting of the tongue and lips. During these attacks he gave vent to a peculiar, grunting moan; no opisthotonos.

November 22nd.—For the next twenty-four hours there were no convulsions, not even twitching; he appeared much better, retained nutrient enemata—all food by the mouth being at once expelled. Respirations more rapid—34 free, deep and slightly abdominal, at times, however, becoming irregular or rather Cheyne-Stokes in character; pulse rapid—124, regular and soft.

November 23rd.—Seemed better and possibly partially conscious. He kept licking his lips, and when asked if thirsty, would nod his head, swallow water eagerly and retain it, but about 3 p.m. began to vomit and kept it up incessantly, not with any effort, the vomitus simply running from the mouth. At 4 p.m. he became quite conscious, sat up and asked for his mother, but almost immediately sank back, lapsing into a comatose condition. The vomiting ceased and twitching began again, pulse went up to 130, respiration 34, temperature 103.3° F. He could not now be aroused. For the first time eye symptoms were noticed, external strabismus of left eye with pupil contracted, right dilated and not reacting to light.

During ophthalmoscopic examination, he had a strong convulsion, head being retracted and drawn to the right side. After the cessation of the convulsion the left external strabismus had disappeared, and instead, there was right external strabismus with the pupil still dilated. Ten more convulsions followed, they were slight, involving the facial muscles and right arm, respirations deep and irregular, pulse rapid, low tension. During the next two hours he had twelve convulsions, nearly all general. The last one was simply a series following each other in such rapid succession as to be uncountable, and lasting for thirty-five minutes. One hour after the last convulsion the patient died, the cardiac centres failing first, the breathing going on in long inspirations, ten to twenty seconds apart for three or four minutes after the pulse had ceased to beat.

A *post-mortem* examination was refused.

CASE II.—S. H., aged five years, nine months, brother of Case I., admitted to the Hospital for Sick Children, December 4th, 1899. Previous history very good, no illness of any kind. Present illness: for past three or four days had severe pain in abdomen, bowels obstinately constipated; this morning had a convulsion of entire body. Whilst waiting for admission had

a series of seven or eight convulsions in twenty minutes. These differed, some being general, some unilateral, mostly right side, and, as in the case of his brother, remained in a semi-comatose condition.

The history so nearly resembles that of Case I. as to make it unnecessary to repeat it. The child lived for nearly the same time to an hour. Knowing of the history of Case I., I had Prof. Ellis examine the urine, four ounces being sent him. He reported the quantity to contain four milligrams of lead.

The convulsions were many, ninety-five on the first day, eighteen during the night. Towards morning the convulsions ceased, but he gradually became weaker and died at 3 p.m.

The *post-mortem* examination revealed nothing markedly abnormal.

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#### BACTERIOLOGICAL REPORT.

*Post-mortem* examination, December 7th, 1899 (twelve hours after death.)

Cultures, from kidney, spleen, liver, base of brain and lung, all on blood serum.

Coverslips, preparations from brain, show a large, thick bacillus, freely segmenting, ends rounded; also a diplococcus, the body of which is elongated, resembling the micrococcus lanceolatus; some pairs are enclosed in capsules, others not so.

December 8th, 1899.—Cultures from kidney, liver and spleen show no growth. Cultures from brain show numerous small, raised, discrete colonies, white or pearly in color, with glistening surface.

Coverslips show short, elongated bodies in pairs, end to end, as in the original coverslip preparations, no capsules are seen about them. They are isolated in pure culture. The large rod is not found in culture. The reactions on different media are as follows:

Seventy-two hours old.

Bouillon: dense, clouding, stringy sediment.

Gelatin: growth of white colonies along the stab; no liquefaction.

Agar-agar: diffuse, greyish film along line of smear; the edge is wavy and more dense than the central part.

Potato: slight but distinct, moist growth, white in color along line of smear.

Litmus milk: marked acid production and coagulation of casein.

Culture from the lung show (1st) a yellow, raised colony; (2nd) a white, raised colony.

Colony 1: "the yellow colony," shows staphylococcus; the cocci occur singly, in pairs, and in chains of three or four, and in masses.

On different media after one week—

Bouillon: cloudy, slight, stringy sediment.

Gelatin: growth along the stab. liquefaction along the line of growth is evident, but slow.

Agar-agar: diffuse growth on surface of greyish color; distinctly yellow in color in the thicker portions.

Potato: slight, dry, yellow growth.

Litmus milk: marked acid production and coagulation.

## LUNG.

Colony 2: "the white colony," shows a diplococcus in all respects morphologically similar to that from the brain.

On media, after seventy-four hours—

Bouillon: slight, clouding, stringy sediment.

Gelatin: growth along stab; no liquefaction.

Agar-agar: free growth along the stab; white in color.

Potato: abundant, rather dry, uneven growth; whitish in color.

Litmus milk: no change.

## ANIMAL INOCULATION.

December 9th, at 5 p.m., two full-grown healthy house mice were inoculated at the root of the tail with a forty-eight hour blood serum culture of the white colonies, from brain and lung cultures. After inoculation both animals appeared sick, and remained quiet for about twenty-four hours, after which time they seemed active and well. On December 12th the mouse inoculated from the culture from the lung seemed unwell. At 5 p.m. a lameness and spasm of left hind legs were noticed, with inability to use them. At 5.20 animal was found dead.

*Post-mortem* examination nineteen hours after. At seat of inoculation is a small amount of hemorrhagic exudate; tissues much infected and edematous. Extending down into the left groin is more extensive infiltration, hemorrhagic in character. Abdominal cavity is free from disease, the organs appear normal, spleen is small; lungs collapsed, normal; heart, right auricle distended with dark blood.

Coverslip preparations from heart's blood, back and groin show a small diplococcus as in the original cultures, lance-shaped, mostly encapsulated, but some are without capsules. The cocci always occur in pairs, end to end. There is also some variation in size.

Cultures were in all respects similar to those of the inoculated organism. The mouse inoculated with the brain culture recovered entirely.

Unfortunately the hospital pathologist was unable to give microscopic results from sections of the brain and cord in time to be included in this paper. I have to thank Dr. Archibald for his untiring energy in watching these cases for me, and Dr. Harold Parsons for the bacteriological notes.

## SPECIFIC VS. SYMPTOMATIC TREATMENT OF TYPHOID FEVER, WITH REMARKS ON FEEDING.

BY L. BENTLEY, M.B., TORONTO.

Dr. Frederick P. Henry, in Hare's "System of Practical Therapeutics," after a discussion on treatment of typhoid fever covering fifty pages, concludes by a quotation from Dujardin Beaumetz, thus: "The best treatment of typhoid fever is a good physician." No doubt all medical men will agree with this conclusion, and also acknowledge that a good physician will be an intelligent one. But it is doubtful if an intelligent physician would care to treat a case of enteric fever with medicines compounded under the directions of another physician, miles away, who had never seen the case, but insisted that his prescription should be given in divided doses and changed at certain intervals regardless of symptoms and circumstances. Still this principle has been advocated for some years, and is still being pushed as the proper treatment. Witness the "Woodbridge Treatment," and the so-called "Eliminative, Antiseptic Treatment." Some time ago a case of the latter treatment was brought to the writer's notice—the patient at the fortieth day was still regularly taking his calomel and salol. Other cases might be cited where patients, under the same treatment, have lingered along far past the usual time of convalescence.

The death rate is too low in typhoid fever to be safe in making conclusive deductions on the evidence of one physician's practice. The fact that a practitioner has had no deaths or cases of hemorrhage counts for nothing. With our present knowledge of typhoid fever it may be safely said that the profession is pretty thoroughly agreed that the treatment should be entirely symptomatic. There are but few diseases that present such a variety of conditions as typhoid fever, and this fact should of itself indicate a variety of method of treatment and that each case should be treated on its own merits. Mild cases, in which no complications are met with, do well with little or no medicine. When medicine is given, it should be given only for a definite purpose; and such remedies prescribed as are known to give definite results. Giving medicine such as salol, as routine practice, will not tend to shorten the disease, nor be conducive to the comfort of the patient.

To illustrate: I have just now two cases convalescent; neither have had any medicine, except such as was clearly indicated.

One of the patients, a young man of twenty-three years, in the third week, was not digesting his food properly; had some tympanites and slight diarrhea. I suppose the supply of hydrochloric acid was deficient. It was supplied by the way of medicine, and the symptoms quickly subsided. The other patient, a girl of seventeen years, at the beginning of third week had a few loose stools—the last two had considerable blood with them. A pill of ext. opium, ext. ergot and acetate of lead was given, the bowels were completely locked; all food was stopped that would leave much *debris*, bowels were moved in four days by an enema and daily after till natural motions appeared. Both of these cases were convalescent within four weeks.

Judicious feeding and proper nursing are of more importance than drugs. By judicious feeding it is not to be inferred that the patient should be given milk, whether he likes it or not. Nor is it judicious feeding to give milk, and console one's self he is giving fluid diet. If the stools are watched, and the milk does not agree with the patient, the fluid food idea will soon be dispelled by the presence of undigested curds in stools. We must remember that the disease saps the strength very rapidly, and that fluid food as a rule is not a good tissue builder. It is quite true that fluid foods can be made to contain some nitrogenous principles, but even so, the fluid with which they are administered is quickly absorbed by the stomach, and the residue remains as a finely divided solid food. Why not give this portion as solid food at first and let it have the benefit of the saliva in mastication? For nineteen years I have followed the plan of giving my patients such food as was agreeable to the palate—preferring milk as a constant diet when the patient could take it, and when there was a dislike to milk I could often give it in cocoa as a drink, and occasionally in properly-made ice cream or cold, plain custards, and sometimes well toasted bread with boiled milk poured over it. I have given other foods, such as calves' foot jelly, or broths thickened with flour which had been boiled for several hours in a linen bag: or, at times, soft boiled eggs.

Suffice to say, I have given all the nourishment I thought could be easily assimilated. During these years I have not lost a typhoid patient, which, perhaps, does not mean much in itself, but it at least shows I have not killed any patients by injudicious feeding.

Apropos to treatment of typhoid fever, I may say I had the disease myself twenty-eight years ago. The physician who attended me is still in active practice in Toronto. Long may he live! His treatment was perhaps ahead of the times, but is somewhat interesting. I was given a large, airy room with

plenty of ventilation. I had my regular dose of quinine every four hours; and, I think, about every alternate day, a dose of castor oil with laudanum and spirits turpentine, and there was no substitution—I knew it all by the taste. Three times a day I had a slice of bread, known as salt-rising—toasted, buttered—with boiled milk. I remember missing one meal only. I also smoked a pipe of tobacco after each meal. I was no doubt very ill, as I remember at times after the exertion of merely being raised to take a drink I would have difficulty for some time in getting my breath; I also felt a choking sensation in my throat, such as we see in patients dying of wasting diseases. I once got out of bed, there being no one in the room. I sank to the floor, and had to remain there, unable to help myself until I was lifted back to bed. I also had a bed sore on each hip, and one very large one on my back. Whether it is from a change in treatment or a change in the disease itself I know not, but we seldom see such cases now.

# Society Reports.

## TORONTO CLINICAL SOCIETY.

The first regular meeting of the Toronto Clinical Society was held in St. George's Hall, Elm Street, on Wednesday evening, the 3rd of October, Dr. W. H. B. Aikins, the President occupying the chair.

### PRESIDENT'S INTRODUCTORY REMARKS.

After thanking the Fellows for the honor conferred on him in his election to the presidency, he referred to the honor brought to the Clinical Society and to Mr. Cameron, who had lately received the honorary distinction of F.R.C.S., thus making three members of the Society who now hold that proud distinction. Reference was also made to Dr. G. S. Ryerson's work in South Africa. Dr. Ryerson, by his devotion to the Red Cross organization, had brought great credit to the Clinical Society, as well as to the whole profession in the Dominion of Canada, and had advanced the profession of Canada in the eyes of the world. The conclusion of the introductory remarks of the President was a plea for the better consideration of mental or suggestive therapeutics, which, although connected with a great deal of foolishness in the past, was now being considered on a more scientific basis. He thought it should receive the same recognition as other agents, as it was of value in diagnosis as well as in treatment. The very fact of the physician visiting a patient every morning, even although no medicine was being given, was an important item in the way of recovery of the patient.

### The Medical Side of the South African War.

Dr. G. Stirling Ryerson gave an interesting address on the above subject. This side of the war had not been written on to the same extent as the surgical side; and although his business in South Africa was not medical in its character, he was still able to acquire a certain amount of information, which might be of general interest to the profession. Up to July 25th, no less than 31,305 have been treated in the base hospitals, with 362 deaths; and it is not far from the truth to say that 100,000 men have passed through the hospitals from disease alone.

This emphasizes the fact that the physician is required more than the surgeon in war, 4,867 officers and men have

died of disease up to the 25th of July; 3,463 were killed in action or died of their wounds. The statistics of this war compare most favorably with those of other wars, as, for instance, in the Crimean war, 4,602 were killed, while 17,580 died of disease. Others were quoted, which Dr. Ryerson said made a favorable showing for the present war. Referring to the condition of the camps at Modder River, the soil in that district is of an exceedingly light character, easily pulverized, and this mixed with excreta was wafted into the men's tents and into their mouths, etc. Their meat was literally black with flies and covered with dust. The water was muddy and drawn from the Modder River, probably infected by the Boers higher up, resulting in an outbreak of enteric fever. The camps contained from two hundred to three hundred men, in the ordinary position, close together, with nine or ten men in a tent. More than that, there is the fact of urination and defecation after dark. The men will not take the trouble to go one hundred or even fifty yards to the latrine; but urinate and defecate in the neighborhood of the tent. This is wafted into the dust and then becomes mixed with the food. He spoke of the circular dust storms, nothing being able to keep the dust out. This was the way in which infection was carried, and then the men were exhausted after long marches. They had had little food, of imperfect character, and had been living on one or two biscuits a day. They were thoroughly used up and in a position to acquire any disease that might be going. Regarding the disease itself, it seemed to present the ordinary appearance, no special characteristics to be observed. The blood test was used in many cases. Regarding the question of immunity after inoculation or by the hypodermic injection of serum, very careful accounts have been kept in the hospitals of those inoculated and those who were not; and while statistics have not yet been published, where they were inoculated once or twice, especially twice, they avoided the disease or had it mildly. Dr. Ryerson mentioned the case of an officer who had been inoculated twice, who contracted the disease, but recovered. The opinion is that the inoculation is preventive. With improved serum we may be able yet to prevent this great scourge of armies. In addition, there is endemic enteric, especially in Bloemfontein; therefore there are local causes also. The treatment of typhoid was practically the treatment which is adopted in Toronto and everywhere else. Disinfection of the bowel either by means of listerine or boric acid, taken internally, or enemata were considered in many cases to be remarkably successful. Another form of treatment was that of starvation. They were starved for seven or eight days. He considered that in some cases it might be dangerous, because a number of the men were

exhausted when brought in. Nothing whatever to eat for seven days was their treatment—nothing at all except water, and all of that they could drink. The medical officer in charge of these cases, and under whose supervision this plan of treatment was carried out, informed Dr. Ryerson that he had fewer deaths than in any other hospital in Bloemfontein. Dysentery: this was another very prevalent disease; and you hear of a great many men affected with this disease when they merely had ordinary diarrhea. The number of them was comparatively few. The treatment of dysentery out there usually employed, was pretty thorough purging by means of castor oil, followed by Dover's powder; and in many cases it was found to work extremely well. Syringing, etc., did not work so satisfactorily. Sulphate of magnesia in drachm doses, frequently repeated, was successful—one in an hour or one in two hours. These two forms of treatment were the most satisfactory of anything used there. The tenesmus, etc., was always causing a great deal of annoyance. This was chiefly treated by free enenata and some form of narcotic. Another special form of fever which is endemic out there was a form of fever resembling Malta fever. Dr. Ryerson believes this to be really a form of malaria, because it was ushered in with a chill, followed by high temperature—a rising temperature at night, and a falling temperature in the morning, attended sometimes with diarrhea, afterwards attended by pain in all parts of the body and followed by intense prostration. It seems to demoralize the red blood corpuscles. The patient is as white as a ghost when he comes through it. The pallor is intense and the prostration great which follows it. Another form of fever, and that is continued fever, in which there is a very slight rise at night and fall in temperature in the morning, and which lasts usually three weeks, forms a very large proportion of these cases going to hospital with fever. No case has ever been followed by death; and it is not followed by that intense anemia of veldt fever. Referring to the medical orderlies in time of war, Dr. Ryerson stated that there was no duty which was so disgusting, and at the same time so trying and tiresome, as that performed by these men. Dealing with the cases of enteric fever, for instance, when a man has seventeen or eighteen motions a day, and an orderly has twelve to twenty men to attend to, the duty is very trying indeed; but Dr. Ryerson believes that these men performed their duty well. The treatment of the surgical case, as compared with the enteric, is simply fun for the orderly. With the modern bullet wound there is very little dressing required; but, of course, when there is destruction of bone there is more to be done. The conduct of these orderlies has been of the most noble character.

Answering an inquiry of Dr. A. A. Small, Dr. Ryerson stated that pneumonia was not common during the early period of the epidemic; but later on, when the wet weather set in, pneumonia became a very constant accompaniment; then ten or twelve men would be carried out during the course of the day as a result of that complication.

Dr. Peters asked regarding Miss Kingsley's report in the *British Medical Journal* as to whether there were any cases of typhus fever. Dr. Ryerson said that was a mistake; there was no typhus. He referred also to the absence of small-pox. With an enormous army of 200,000 men, nothing proves more definitely and more emphatically the importance and power of vaccination when there never was a single case of small-pox in the entire army. There was small-pox among the blacks, but not a single case among the white soldiers.

Dr. Parsons requested further information regarding inoculation.

Dr. Ryerson: Inoculation was not compulsory, and, so far as he was aware, no Canadians had been inoculated. The serum was supplied by the Imperial Government authorities. The symptoms are practically those of typhoid: severe pain in the abdomen; temperature runs up to 102° or 103°; morning fall and evening rise, accompanied by prostration, furred tongue, loss of appetite, and general malaise. This condition lasted about a week. Some suffer more than others. There were no undesirable results that he heard of; no mortality.

Dr. H. B. Anderson asked whether there were any epidemics among horses, and referred to the cause of as many as five thousand horses being lost in one week.

Dr. Ryerson: Rinderpest has disappeared, and there was no foot or mouth disease. The animals died simply from exhaustion, or want of food.

#### **Retro-Pharyngeal Abscess, with Exhibition of Patient.**

Dr. G. Silverthorn presented the patient and described the case. It occurred in a child who, in July last, was less than a year old. The child was born on July 18th, 1899, and had always been healthy and was of healthy parents. On May 17th, 1900, the child had measles, contracted from other children in the house, with a well-developed rash. In June—on the 2nd, 3rd and 4th—two weeks later, the child had a series of convulsions, five or six on the first day, and about two on the two succeeding days. Dr. Silverthorn did not see the child in any of the convulsions, but arrived shortly after in one or two, then the child was exhausted, and the history of convulsions was marked. When examined by the doctor at this time, there was a small lump on the right side of the neck

below the ear, which appeared to be an enlarged gland. About a week later, on June 9th, the child had a boil on the right heel, which opened spontaneously and healed up. From June 2nd, the time when he had the first convulsion until July 3rd, this lump, below the ear on the neck, gradually enlarged in size, and about the middle of June some softening was first noticed, and this condition, *i.e.*, the softening, got gradually worse. Towards the end of the month the child seemed feverish and restless. The last two weeks in June the child held its head quite stiff-like, and it even held its head up with its hand. About June 23rd there was some difficulty of breathing noticed, more especially at night. This dyspnea increased towards the end of the month, and towards July 3rd, the child could not sleep except in snatches. No difficulty was noticed in nursing until July 3rd; but the difficulty seemed more in respiration than in swallowing. Inspiration and expiration were both noisy and laboring. The lump in the neck was now of considerable size, and appeared to be solid and had no distinct sense of fluctuation. On July 3rd, Dr. Silverthorn considered the child was in a dangerous condition. He was afraid to examine the throat, as the abscess—if it was an abscess—might be ruptured, and in a child of that age, and with an abscess of that size, it might prove fatal. Next day the parents consented to an operation, and the child was removed to the hospital, and examined first of all without anesthesia. It was then given an anesthetic, as examination was not found practicable without it. One could feel perfectly well the bulging in the back of the pharynx. It was decided to make an incision through the side of the neck, over the most prominent part of the tumor, and it was done in that situation. In making the incision, we went through the fibres of the sterno-mastoid, and dissecting down with a blunt instrument, pus came out in very large quantities, and you could pass artery forceps from one side almost through to the other side. The child remained in the hospital for one week, and by the end of July the wound was healed up.

Dr. A. H. Garratt, in discussing the case, stated that Dr. Silverthorn had accounted symptom for symptom almost similarly to a case occurring in his own practice. Hereditary syphilis, however, was in his child very well marked. His child is now two years of age, and in a fairly good state of health.

Dr. Silverthorn stated that this child was not syphilitic; there were several other children in the family, and all were perfectly healthy.

Dr. George Peters related a similar case following scarlet fever. He agreed with Dr. Silverthorn that this case was glan-

dular in origin and not osseous. You will hardly get carious disease of the spine that would undergo spontaneous recovery, and that points to the fact that the disease has not its origin in tubercular bone. The glands of a child may be enlarged on either side, and it may be due simply to a degree of ill-health in the child. These enlarged glands are not always tubercular. For pharyngeal abscess, operation should be done as soon as the condition is diagnosed, and it should be done from the outside, and it is not always easy to strike the pus. It should be attacked through the planes of the neck in front of the sternomastoid, and dissecting very carefully between the vessels, trachea and thyroid gland. The external wound has to be pretty large. If the condition is not due to carious bone, he thinks the prognosis good.

#### Displacement of the Liver, with Exhibition of Patient.

Dr. H. B. Anderson presented this patient, and recited the history of the case. It occurred in a young man of twenty-five years of age, who for some ten years had been the subject of repeated attacks of asthma. The family and personal history were good, although the patient was always delicate. During the summer of 1890 he worked on the farm and got very thin. He became troubled with catarrh in the nose and throat, and some wheezing. About the first of the following July he returned to the farm. In the fall of that year he got very fat, weighing 155 lbs. Catarrh became worse, with coughing, fits at night but no wheezing. During that winter he had an attack of pneumonia and pleurisy, followed by genuine attacks of spasmodic asthma. Polypi were removed from the nose, which relieved the catarrhal condition to a considerable extent. He had a second attack of right-sided pleurisy about Christmas, 1893, which lasted three weeks. In May, 1894, a doctor told him that his liver was enlarged. He went to the North-West Territories in June, 1894. His asthma continued, and towards the end of the summer the attacks were more frequent and severe. He then began to suffer from indigestion. His bowels were irregular, and mucus appeared in the stools. A doctor in the North-West examined him and told him his liver was displaced downwards. The patient took the Salisbury treatment for the digestive trouble, with the result that his asthma improved to a considerable extent. His indigestion also got better. In November, 1895, he had another attack of right-sided pleurisy, and he returned to Toronto in January, 1896. The asthmatic attacks returned that spring, and at this time the patient came under Dr. Anderson's care. The attacks were always preceded and accompanied by severe indigestion. Dr. Anderson examined him, and found that the liver was very

much displaced downward, appearing as a prominent tumor, extending as low as the umbilicus. By manipulation the liver was returned to its proper position, and from the month of July of that year he was pretty free from the asthmatic attacks, and in a much more satisfactory condition than he had been before. He continued in this way pretty fairly well until this last July (1900), when he was again taken with very severe attacks of intense dyspnea. He went to Muskoka, but he became worse, and returned to Toronto about the first of August, when Dr. Anderson was called to see him again. At this time he complained of a feeling of pressure in the epigastric region—a feeling of weight, of more or less tenderness, and he wanted to sit down all the time. He felt more relieved when he was sitting down, but had a peculiar feeling as if his food did not enter the stomach properly. There was no vomiting, and his bowels at this time were fairly regular. There was bloating after meals, along with a flabby tongue, and he was now in a very miserable condition. On examining him this time, the liver formed a very prominent tumor, the upper margin being above the free margin of the ribs, and the lower extending below the umbilicus. One could palpate the lower margin quite definitely. There was a tympanitic note over the normal liver region. It was quite visible to the naked eye; the patient could notice it himself. Attempted to replace it by postural methods, but was unable to do so. There seemed to be much retraction of the ribs on account of the difficulty of breathing, and on account of the dyspnea, that the attempt to replace it proved futile. The patient was put to bed on a low diet, and he immediately began to improve. He also had an antispasmodic mixture. He continued fairly well, when he was taken a week ago with an attack of diarrhea, with a slight return of the asthma at this time. The liver, from the time Dr. Anderson saw him in August, did not return completely to its proper position, although it raised up considerably. It is higher now than it was in August, but it is still very much displaced. As to this condition of hepaptosis, it is said to be due to stretching of the ligaments of the liver, and may be congenital or acquired. The most able article on the subject is that written by the late Dr. Graham, where he describes seventy cases—an article delivered before the Association of American Physicians. The cases are mostly found in women, and particularly in those who have been through several pregnancies. Other causes are collections of fluid in the pleural cavities, subphrenic abscess, etc. Right-sided pleurisy may be of some importance in this case, as he had it three times. This condition is usually accompanied with displacement of other organs, as in Glenard's disease or gastro-

ptosis. The right kidney seems also to be lower than its normal position. Another cause of the trouble is spinal deformity. In some cases there are no symptoms except those of Glenard's disease. The patient complains of more or less weight and uneasiness in the epigastric region. This is the only case Dr. Anderson has seen associated with definite asthmatic attacks, and he thinks that here, the displacement of the liver, either acting as a reflex cause or bringing about the digestive disturbances, may have had to do with bringing about the asthma. In the treatment of the case, rest seems to have had a very beneficial effect in relieving his symptoms. He would like to have the opinion of the Fellows in regard to an operation, although it does not seem that much could be done, and besides that there is the displacement of the other organs with which the condition is associated. Something may be done with abdominal support. The interesting point in this case is that it is associated with definite attacks of spasmodic asthma.

In the absence of Dr. Bruce, Dr. Silverthorn showed a pathologic specimen, a double pyosalpinx, showing adhesions very nicely.

#### **Bullet Wound, with Specimens.**

Dr. G. Silverthorn presented these very interesting specimens. The course of the bullet is one of special interest. He first exhibited a portion of the anterior wall of the left thorax. On the left side, commencing one and five-eighths inches outside the nipple line, and on a line with the nipple itself, was the external wound, or wound of entrance, three-eighths inch wide. On following this wound backward the bullet was found to have punctured the fifth rib—had fractured it and torn up a portion of the upper edge of the fifth rib, two and three-quarter inches from its junction, with its cartilage. It then passed through the pleura, and through the anterior angle of the upper lobe of the lung, and then through the pericardium; then along the left border of the heart, which it grooved up, and passed on backwards, tunnelling the fat in the auriculo-ventricular groove; then passing out again from the pericardium and backwards through the anterior portion of the lower lobe, and still backwards into the aorta, and just through the aorta opposite the ninth dorsal vertebra, with immense amount of hemorrhage in the posterior mediastinum; but the bullet could not be found in any place. It could not be found apparently where it was lost, and an examination of the arteries was made, and the bullet was found in the left femoral artery, just below where the profunda femoris is given off. The bullet was one-quarter inch in diameter, and in impinging the posterior wall of the aorta, had perforated that wall.

supported behind by the vertebral column, had fallen back into the blood stream, and either through the force of gravity or the force of the blood current, or both combined, had been swept on to the position in which it was ultimately located. The specimen of the artery was shown with the bullet *in situ*. The bullet was slightly deformed, probably from its force in striking against the rib.

GEORGE ELLIOTT.

*Recording Secretary.*

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## TORONTO MEDICAL SOCIETY.

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STATED MEETING, OCTOBER 4TH, 1900.

The President, Dr. Primrose, in the Chair.

The President, in his address, outlined the work for the session, and extended to the young men of Toronto an invitation not only to join the society, but to take part in the discussions and in the programmes of the society.

He spoke of the relation of the profession to the public, and expressed a hope that legislation would be sought to protect the public from the "shady" advertisements now seen in the public press, religious and secular.

He referred to specialism, and expressed a fear that the specialist, in devoting himself almost entirely to one subject or department neglected others, or, at least, had a too superficial knowledge of the whole. "My advice to all gynecologists is to study general surgery and become general surgeons."—*Howard A. Kelly*. He also quoted Lauder Brunton as advising years of general practice before devoting time to a speciality.

He expressed a hope of being able to continue the enthusiasm stirred up by the late President, Dr. Gilbert Gordon.

Dr. Machell gave a demonstration of a new method of applying obstetrical forceps. The patient is placed upon the left side in the knee-chest position. The forceps are placed in a sterilizing solution (locked); then sitting on the bed, the operator introduces two or three fingers of the left hand into the vagina to guide the blades past the os. The forceps are then removed from the solution with the right hand, and unlocked by allowing the blades to collapse, and the upper handle with the lower blade are seized in the forefinger and thumb, retaining hold of the other handle by the remaining fingers of the hand. Then the blade seized is inserted, following the curve of the sacrum, then rotated to the proper position on the head. Then the other blade is inserted in the same manner and rotated to the opposite side until the handle is directly under the upper one.

The handles then locked without. He claimed that this was quicker, safer, and no danger of infection from bedding, nurse or a soiled hand. The position was an advantage, as it was possible to reach higher when following the hollow of the sacrum. There were no disadvantages, as this method does not injure the ears or face.

*Discussion.*—Dr. Smuck said he had come to-night especially to learn this new method, and he had found that for some time he had been using a part of the method, viz., using one hand to introduce both blades.

Dr. A. G. Ashton-Fletcher said that he had quite often applied the forceps to the sides of the head, using one hand only to guide both blades, by twisting the wrist.

Dr. G. Gordon said one objection he saw was, with heavy forceps or axis traction, parts getting tangled. He said one became an expert in the method adopted and used continually.

Dr. Webster said an advantage not mentioned by Dr. Machell, was the unnecessary extending of hips over the bedside. He used one hand only, the front of the fingers for one blade, and the backs for the other.

Dr. Bascomb always used the left side—apply forceps along the sacral hollow. He had never seen any injury to the child from that method.

Dr. Rudolf said this method of Dr. Bascomb's was the method taught in Edinburgh.

Dr. J. Hunter said the method preferred was a matter of experience.

*Reply.*—The saving of the introduction of fingers was a benefit of the method, and was easier for the patient. There was less fuss.

Dr. Fotheringham reported a case of tubercular meningitis (patient exhibited) with recovery. Admitted to Sick Children's Hospital on May 14th; aged 3 years, 3 months. Pulse 118; respiration, 28; temperature, 99.2° F. Recovering from measles; had been hit by a stone fourteen days before upon the head; complained of pain in legs and feeling tired on May 10th; on 12th head was retracted. There was cough, drowsiness, opisthotonos, Kernig's sign marked, pupils equal. At the base of the left lung a focus, probably tubercular; characteristic cry, with periods of rest. During first fortnight convergent strabismus became a symptom. Second fortnight: less pain, more stupor, temperature lower, irregular and subnormal for a time; had to apply external heat to sustain life. Pupils unequal; slept with eyes drawn down, showing whites. Third fortnight: temperature nearer normal, and less pain. Fourth fortnight: improvement, able to sit up at the middle of August.

Diagnosis: Onset gradual, stupor, not recovered from measles,

convergent strabismus, pupils unequal, spasms of neck muscles for a time; Kernig's sign; cry was characteristic; vomiting gradual, course; extreme emaciation, temperature variable, functions all suspended, no irritative symptoms and no continuous twitchings.

Tubercular: 1st, because of lesion in left lung, no otitis; 2nd, gradual onset; 3rd, slow development of symptoms, squint not early. as in other meningitis, the preponderance of tubercular over non-tubercular meningitis.

*Treatment.*—Ice was applied to the head for weeks; gelsemium ℥ij, ammon. brom. gr. iv., pot. iodid gr.  $\frac{5}{8}$ , in mixture, were given from May till July. On the 26th and 28th of May 1-30th gr. of morphine was given, and phenacetine gr.  $\frac{1}{2}$  on June 6th. This is much more a sedative in children than antipyretic. From July on, the gelsemium was omitted and ferrol and hema-boloids added.

*Discussion.*—Dr. Reeve wished to publicly thank Dr. Clifford Albutt for a work on "Ophthalmoscopy," in which he said children who recovered from presumably tubercular meningitis always showed impairment of vision or defective mentality. He had no doubt that recovery did occur at times.

Dr. McPhedran said he would like to present a case to the society very much like this one, of cerebro-spinal meningitis: but the onset was different—acute.

Dr. Henry Wright had long held that many cases did recover, but it was better if they did not, as they were maimed.

Mr. Cameron said one case he knew of where Dr. Henry Wright had diagnosed tubercular meningitis had recovered without any bad results, and one case was weak intellectually.

Dr. Clarence Starr: In Dr. Holt's service no cases recovered; he had seen twenty-four cases which were diagnosed tubercular, as none had passed the sixteenth day.

Dr. Hunter spoke of the Protestant Orphans' Home as a good field for research.

Dr. Greig: Gibbney, of New York, reported two cases strengthened by hip-joint disease, in which no *post-mortem* evidence could be obtained. Prof. Caillé used lumbar puncture. He was sorry it had not been used in the reported case.

Dr. McKee said he had had a case he called tubercular, because it died. He asked if syphilis had been considered; were lost elasticity of the skin and doughy feel of abdomen observed?

The President said he had been unable to find any spinal lesion. He reported a case of trephining for a cerebral abscess following otorrhea, and finding of no pus. *Post-mortem* made, and tubercular meningitis found.

*Reply.*—Recovery was not usually a mixed blessing. His patient showed no bad signs as yet. He had discarded lumbar puncture as not being curative, and an absence of bacilli was not a proof of absence of tubercular processes, and therefore, the pain caused was not of any benefit to the patient. He had not considered syphilis, nor were the signs asked for by Dr. McKee present.

Society adjourned until first Thursday in November.

A. G. ASHTON-FLETCHER,

*Recording Secretary.*

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## THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

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The tenth annual meeting of the American Electro-Therapeutic Association was held in the Academy of Medicine, New York City, Sept. 25th, 26th and 27th, 1900, under the presidency of Dr. Walter H. White, of Boston, Mass. The address of welcome was delivered by the acting mayor, Hon. Randolph Guggenheimer, and was responded to by Dr. Charles R. Dickson, of Toronto, Canada. Dr. Louis F. Bishop, Secretary of the Academy of Medicine, extended the good wishes of the Academy, and Rev. Newman Lawrence also spoke.

The Report of the Committee on Electrodes was presented by Dr. Charles R. Dickson, of Toronto, Chairman; several new electrodes were submitted for inspection by Dr. Walter H. White, Mr. R. G. Brown, E.E., of Brooklyn, N.Y., and Dr. C. R. Dickson; the recommendations of the committee in regard to the standard dimensions of connections, and the manner of marking bipolar electrodes were adopted by the association.

Rev. Newman Lawrence, of Stapleton, Staten Island, read a paper on "Electro-Therapeutic Sins," scoring vigorously the use of electricity by those who did not understand it, the fraudulent character of so-called electro-magnetic body appliances, and the testimonial evil. A discussion on "Electricity in Tuberculosis and Present Modes of Treatment" was taken part in by the following: Dr. S. A. Knopf, of New York, spoke on the "Étiology of Tuberculosis; its Course and Termination." Dr. M. J. Brooks, of Stamford, Conn., dealt with "The Modern Treatment of Pulmonary Tuberculosis." "Electric Light as a Therapeutic Agent" was presented by Dr. Charles O. Files, of Portland, Me. "Electric Light; its Physiological Action and Therapeutic Value in Tuberculosis of the Throat and Lungs"

was the subject of Dr. Wolff Freudenthal, of New York. Dr. Egbert LeFevre, of New York, gave a "Report on the Practical Value of Grotte's Method and of Others who Advertise Cures." The report was not of a favorable character. A committee was appointed to investigate the method of M. Grotte, consisting of Drs. William J. Morton, Robert Newman and Emil Heuel, of New York. Dr. J. Griffith Davis made a "Plea for the Better Application of Electricity in Diseases.

#### **Some New Appliances for X-Ray Work.**

Mr. E. W. Caldwell, E.E., of New York, brought out an improved stand and holder for the X-ray tube, discarding the rigid clamp for a spring; an ingenious shelf for supporting the arm in any position and steadying it there; a device to keep the limbs in the same relative position in taking radiographs of the hip joint; and a suggestion to interpose a thin sheet of celluloid to prevent injury to the plate by the moisture of the person's body

#### **Combined Electrization, or Galvano-Faradization.**

By Dr. A. D. Rochwell, of New York. Among the advantages of combined treatment over the use of either current alone, he instanced the more powerful excitation of contractile fibre cells, greater stimulation of waste and repair, stimulation of osmosis, increase of heat production, and especially its value in local spasmodic conditions and the control of the symptoms of exophthalmic goitre.

#### **Gleanings in the Field of Electro-Therapeutics.**

By Dr. Charles O. Files, of Portland, Me. Several suggestive cases were alluded to. During a double amputation of the thigh about an hour after a railway accident, the patient suddenly developed symptoms of severe shock to such an extent that he appeared to be dead; the prompt application of galvanism with one pole to the epigastrium and the other to the base of the brain revived the patient almost immediately; electrization had to be resorted to at short intervals for three weeks to avert collapse; the patient completely recovered. Every surgeon who had seen the case during the first fortnight had given a practically hopeless prognosis. A second was a most gratifying improvement following electricity and massage in a case of incipient tuberculosis. Electricity was a most valuable ally as an hypnotic, and in many inveterate cases of facial neuralgia persisting after operative measures for relief.

### Discussion on Electricity in Gynecology, and the Present Reluctance of Gynecologists to use Electricity :

#### The General Office Work of a Gynecologist.

Dr. Fred. H. Morse, of Melrose, Mass., outlined the value of electricity in diagnosing the presence of deep seated pus; in metritis, endometritis, subinvolution, uterine displacement, ovarian neuralgia, painful menstruation, electrical treatment was most satisfactory; in acute inflammatory conditions electrical treatment was not contraindicated, but special care was requisite then: a reliable battery, amperemeter, and a good high-tension faradic battery were absolutely essential: asbestos cloth made a capital dispersing pad.

#### The Morton Wave Current—A Valuable Addition in Electro-Therapeutics.

In the absence of the author, Dr. W. B. Snow, of Atlanta, Ga., this was read by Dr. C. R. Dickson. The wave current was unique in many respects; thus, it was administered from but one side of the generator, the alternations were of charge and discharge, though of high potential it could be passed to and fro through the body with little discomfort; the patient received general electrization; the surges of the current passing through the tissues of the body, it permitted the use of the highest possible electro-motive force: it was readily controllable; the constitutional effects were marked lowering of arterial tension, lessened frequency of the heart's action and increased volume of pulse, increased oxidation and metabolic activity, marked diminution of nervous irritability, with sense of drowsiness, and a sense of fatigue if the treatment was too prolonged; it was indicated in all atonic conditions, chronic menstrual disorders, uncomplicated neuralgias, sciatica, sprains and bruises, and many other conditions.

#### The Nervous Disorders Peculiar to Women.

Dr. G. Betton Massey, of Philadelphia, dealt chiefly with the relation of neurasthenia to these disorders, and the frequent need for well-regulated and properly directed activity as opposed to the notion of rest.

#### Use of the Continuous Current and Electrolysis.

Dr. Robert Newman, of New York, outlined his successful use of electricity for many years in a large range of cases, including the absorption of pelvic exudates, prolapsus uteri, fibroid tumors.

### Spark-Gap Currents, viz., Franklinic Interrupted, Static Induced, and Wave Currents.

By Dr. William J. Morton, of New York. The wave current, or "displacement current," presented more advantages than either of the others, it embodied all that could be obtained from an electro-static machine in current form for therapeutic purposes; it was of especial value in neurasthenia and all cases where it was desired to improve the general nutrition.

### A Lecture on Methods of Generating and Transforming Electric Currents for Therapeutic Uses.

By Mr. Charles T. Child, E.E., Technical Editor of the *Electrical Review*, was, in his unavoidable absence through illness, delivered by Dr. C. R. Dickson from Mr. Child's manuscript. The officers and a large number of the members of the New York Society of Electrical Engineers were present on invitation. The direct current was a special case of the alternating current, in which the frequency was reduced to zero; the maximum of pressure for therapeutic use was sixty or seventy volts: the battery, though it had recently celebrated its centennial, was still far from perfect; the so-called dry battery was only useful for small currents and for short periods; for motors and cauteries, storage batteries were the best. High pressure currents were reduced for therapeutic use by employing a shunt around a resistance such as coils or lamps; static machines generated potentials up to several hundred thousand volts.

### Illustrations of the Value of the Cataphoric Method in Cancer.

By Dr. G. Betton Massey, of Philadelphia. The method consisted in driving the salts of mercury into the cancer by cataphoresis with heavy electric currents; the patient being etherized and placed on a large leaden plate covered with heavy pads, constituting the negative electrode, the positive being a tube of gold with amalgamated tip through which mercury was injected; three or four hundred milliamperes of current were used, sometimes for two hours or more. An inodorous slough separated in one to three weeks. Eleven out of thirty-seven cases had been successful; in twenty-two the treatment had been begun too late. The treatment was not intended to take the place of the knife, but was very applicable to early manifestations, particularly carcinoma of cervix uteri, and before metastasis.

### The Causes of Some Cases of Neurasthenia and Their Treatment.

By Dr. Francis B. Bishop, of Washington, D.C. A systematic quantitative analysis had showed quite commonly a diminution

of the daily quantity of urea and an excess of phosphates; muscular tissue seemed to be the chief seat of the metabolism; exercise increased the output of urea; the object should be to promote chemical changes by muscular exercise, which ordinarily was followed by fatigue, and such cases were already fatigued, therefore he used electricity, beginning with a mild galvanic current to stimulate the cells of the brain and spinal cord, followed by general galvanization, and then by general faradization; lastly, about fifteen minutes in the ozone cage with static spray.

### **X-Ray Photography.**

By Dr. E. R. Corson, of Savannah, Ga. Unless the X-rays were powerful enough to penetrate the bone, details could not be properly brought out. Mere length of spark did not indicate the efficiency of apparatus. By increasing enormously the number of interruptions, the quantity of current passing through the tube was augmented, and efficiency proportionately increased. A coil giving a spark of only eight or ten inches and all the current the X-ray tube could stand, was recommended; also the use of a hydrochinone developer. All negatives, no matter how strong, should be intensified after development; this gave sharp contrasts, showing no flesh.

### **Electricity in Brain Failures.**

By Dr. D. R. Brower, of Chicago, Ill. The frequency of cerebral neurasthenia was to be attributed to the almost universal condition of unrec<sup>t</sup>, keenness of competition, drifting away from the authorities of the past, and not a little to "young America" and the "new woman." It was frequently associated with disorders of the intestinal tract, or with dilatation of the stomach; daily séances of intra-gastric electrization lasting five minutes, carried out by the patient himself three or four hours after a meal, with attention to diet, with intestinal faradization by the physician, galvanization of the brain, and bulbar galvanization, followed by static insulation, were recommended.

### **Electro-therapy of Insanity.**

By Dr. Alfred T. Livingston, of Jamestown, N.Y. The author had been using electricity in the treatment of mental disorders for about nineteen years. The calmative effect of the galvanic current in some cases was very marked; the treatment was founded on the theory that insanity was dependent largely, in the first instance, upon circulatory changes in the brain. An earnest plea was made for larger medical staffs in

insane hospitals, and the better treatment of insanity in the earlier stages.

The following officers were elected for the ensuing year: President, Dr. Ernest Wende, of Buffalo; 1st Vice-President, Dr. Frederick H. Morse, of Melrose, Mass.; 2nd Vice-President, Dr. Daniel R. Brower, of Chicago, Ill.; Treasurer, Dr. Richard J. Nunn, of Savannah, Ga.; Secretary, Dr. George E. Bill, of Harrisburg, Pa.; Executive Council vacancies: Dr. Francis B. Bishop, of Washington, D.C., and Dr. Walter H. White, of Boston, Mass. The next annual meeting will be held in Buffalo, on September 16th, 17th and 18th, 1901. The New York Telephone Co. very kindly installed a private phone at headquarters, Hotel Bristol, for the exclusive and free use of the members, who were accorded also the privileges of the wires to the surrounding towns and cities, and the Long Distance Company extended like privileges. The efforts of the indefatigable chairman of arrangements, Dr. Robert Newman, of New York, for comfort and entertainment were untiring. Visits were paid to a most modern and typical Telephone Exchange, the Electric Vehicle Transportation Co. (automobiles), and the Metropolitan Power House, at each of which most interesting addresses were delivered by those in charge; and on the last day of the meeting Park carriages were in waiting at headquarters after lunch, and a most enjoyable drive taken through Central Park, and Riverside Drive—visiting Grant's Tomb, Columbia College, Library and Laboratories, St. Luke's Hospital and the Crypt of the Episcopal Cathedral. An informal reception at Hotel Bristol was an unqualified success. A very popular feature was an energetic Ladies' Auxiliary Committee, whose excursions started daily from the place of meeting, an opportunity being thus afforded of seeing the Stock Exchange, Trinity Church, the Aquarium, Central Park, the Obelisk, Metropolitan and other museums, and places of interest, under most favorable auspices.

The association is to be congratulated on its choice of President for the ensuing year. Dr. Ernest Wende, in his important and responsible position as Health Commissioner of Buffalo, has displayed very marked ability, and possesses more than a national reputation; his strong personality and great energy, coupled with the fact that the Pan-American Exhibition will also be held in Buffalo next year, cannot but prove a very powerful incentive to a large attendance, increased membership, and meetings of exceptional interest in 1901, preparations for which are already well under way.

Specially reported by C. R. DICKSON, M.D.

# Progress of Medical Science.

## MEDICINE.

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

### Gastric Ulcerations.

At the Thirteenth International Congress of Medicine the Section on Internal Pathology, under the presidency of Prof. Potain, was opened by the reading of Prof. Dieulafoy's report on gastric ulcerations. The following are the conclusions:

In the stomach are found ulcerations of all sizes, from the small erosion to the large deep ulcerations, greater in extent than a five franc piece. Digestive troubles, stomachic intolerance, vomiting, hematemesis, perforation of the stomach with its results, the development of cancer, are symptoms and complications common to a large number of stomachic ulcerations. Instead of considering each of these symptoms and each of these complications, it will be preferable to choose among stomachic ulcerations a certain number of types, representing, from the clinical, pathogenic and anatomical points of view, pretty clearly defined morbid entities.

Stomach erosion is the smallest of the ulcerations, appearing in the mucous membrane in the form of hemorrhagic points. Although small, the erosions sometimes give rise to abundant hematemesis. Under some circumstances we find on the mucous membrane losses of substance more extensive than in the erosion. To this lesion I give the name *exulceratio simplex*. However superficial it may appear, this ulceration may attack the arterioles which are under the muscularis mucosæ and give rise to hematemesis, which may prove fatal if not treated promptly. The simple ulcer of Cruveilhier (*ulcus simplex*) is the type of chronic ulcer showing a tendency to perforation. Hemorrhage and perforation are its most formidable complications. There are also specific ulcerations due to tuberculosis and syphilis, also ending in hemorrhage and perforation. Cancer is not seldom grafted on an ulcer.—Translated from *Gazette des Hôpitaux*, by HARLEY SMITH.

### Acromegaly with Diabetes—Tumor of the Pituitary Gland.

The patient presented the classical symptoms of acromegaly, and had suffered from this disease for six years. He was attacked with intense headache, ocular disturbances, especially in the left eye, and at the same time polydipsia and polyuria.

The examination of urine revealed the presence of sugar. The polyuria was to the extent of twenty litres, and the glycosuria to the extent of 1,200 grs. of sugar in the twenty-four hours. This severe diabetes lasted six and a half months, the polyuria and the glycosuria maintaining the same proportions. Meanwhile there occurred crises of diabetic coma, relieved on every occasion by large doses of alkalines. The patient died of pneumonia. At the autopsy, in the position usually occupied by the pituitary gland there was found a lobular tumor, soft, of a reddish-brown color, composed of a number of vegetations forming a hernia through the left cavernous sinus and a portion of the dura mater which covers the sella turcica. Histologically this tumor, in some of its parts, resembles the normal pituitary gland, but in others it presents the appearance and the elements of sarcoma. All the other viscera were increased in weight and size.—Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

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## OBSTETRICS AND GYNECOLOGY.

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

### Placental Inspection.

In connection with the radical views I hold regarding the proper method of dealing with the parturient woman after the extrusion of the placenta, I think the following may be of interest:

Two years ago, June 6th, 1898, a doctor well known in this city, attended a case of confinement. He inspected the placenta and concluded that it was all away. A few days after the patient took a violent chill and became septic. I saw her in consultation and removed a piece of placenta, two inches square, from the interior of the uterus. She made a good recovery owing to the fact that the cause of the sepsis was recognized early, and removed.

Two years passed by, she again became pregnant, engaged the services of the same doctor, and this time he made up his mind that he would not be caught "napping," as he was on the former occasion. The mother of the patient was a midwife. After delivery the doctor and midwife made a most thorough inspection of the placenta, floated it in water, felt the edges, and concluded that without a doubt this time it had been entirely extruded. Two days passed by, the patient took a violent chill and shook till her teeth chattered. The doctor then explored the interior of the uterus with the finger and

found a piece of placenta. There was no difficulty in detecting it. He could have removed it, but they insisted that I should be sent for. I removed the fragment September 29th, 1900. It was about two inches square.

It seems to me that the text-books should modify their teaching and put in some such paragraph as the following:

*Third Stage of Labor—Placental Inspection.*—"As a matter of routine and as a tribute to ancient custom, it is advisable to inspect the placenta. Notwithstanding the fact that it is carefully inspected it is even then impossible to say that no portion of the afterbirth has been left in the uterine cavity. As we, unfortunately, have no other safe means of ascertaining the fact that the uterus is empty, it is necessary for us to hope that it is empty, and to leave the patient alone until sepsis has set in, after which time we are justified in exploring the uterine cavity with the finger.

"This is not, however, the modern practice adopted in treating cases of miscarriage. Here the rule is to immediately empty the uterus and to satisfy ourselves, by means of the introduction of the index finger, that it is empty. It has been found that no ill results follow such treatment of cases of miscarriage, when this exploration is properly and promptly carried out; but at a full time labor, for some unknown reason, matters are entirely different.

"At this period the finger should never be introduced into the uterine cavity because, in spite of the use of modern antiseptic treatment, it is liable to carry in deadly germs. After damage has been done, however, and the woman has become septic we must no longer hesitate but must immediately proceed to remove the piece of placenta, that is so frequently the cause of the trouble, by means of the introduction of the index finger." The husband of the patient, whose case is detailed above, asked the doctor, on the second occasion, why it was that it took two days to find out what might have been found out on the day of confinement—rather an impertinent but not a foolish question.

The modern abdominal surgeon has almost done away with peritonitis following abdominal operations. Cannot the modern accoucheur almost do away with puerperal sepsis? Notwithstanding modern antiseptic methods there is a great deal of puerperal sepsis to be met with. There is one important point that has not yet been grasped by the profession, namely that a thorough uterine toilet should be carried out. Until this is attended to puerperal sepsis will remain undiminished, pieces of afterbirth will be left, and hundreds of women will continue to be left with damaged appendages after having become mothers.

JAMES F. W. ROSS.

## OPHTHALMOLOGY AND OTOTOLOGY.

IN CHARGE OF G. STERLING RYERSON, J. T. DUNCAN AND J. O. ORR.

### Treatment of Incipient Cataract.

W. R. Pyle (*Philadelphia Med. Jour.*) quotes the experiments of Kalish, who, in 1891, after discarding all drugs, evolved a form of treatment which he has followed to the present time. Kalish insists upon strict bodily and ocular hygiene, careful and repeated refraction, a special form of manipulation to the eye, and the installation of a mixture of equal parts of glycerine and a 1 per cent. solution of boracic acid in rose water. For this treatment, Kalish claims successful results in 69 out of 118 cases. There is little doubt that, with the maintenance of good health, careful and repeated refraction, and the proper use of the eyes, the chances of cataract maturing are greatly lessened.

### Sudden Changes in Refraction in Diabetes.

Sourdille (*La Clinique Ophthalmologique*), reports the case of a man suffering from diabetes, suddenly had failure of vision. On examination two dioptries of hyperopia were found—correction of this brought the vision to full acuity. The diabetes was successfully treated in so far as the amount of urine excreted was concerned, and the hyperopia disappeared. The author feels that the least improbable theory in regard to these refractive changes is an abstraction of fluids from the vitreous chamber, the fluid being replaced by blood which is overloaded with sugar.

### Spontaneous Disappearance of Senile Cataract.

W. R. Pyle (*Philadelphia Med. Jour.*) says that ordinarily, after once losing its transparency, the cataractous lens remains opaque—in other words, it is very rare for a cataract to disappear without operation. A number of cases have, however, been reported, and a careful digest of the literature in regard to the subject allows the following classification:

1. Cases in which there was absorption after spontaneous rupture of the anterior or posterior capsule.
2. Cases in which there was spontaneous dislocation of the cataractous lens.
3. Cases in which there was intracapsular resorption of the opaque cortex and sinking of the nucleus below the axis of vision, after degenerative changes in Morgagnian cataract, without rupture of the capsule or dislocation of the lens.
4. Cases in which there was complete spontaneous resorption

of both nucleus and cortex without reported history of ruptured capsule, dislocation or degenerative changes of the Morganian type.

5. Cases of spontaneous disappearance of incipient cataract without degenerative changes or marked difference in the refraction.

Illustrative cases of these types are given in detail.

### Eye Diseases Complicating Typhoid Fever.

Dr. Schwienitz (*Philadelphia Med. Jour.*) discusses this interesting subject.

He says there are no ocular lesions characteristic of typhoid fever, nevertheless, a number of diseases of the eye may accompany or follow it. In the following list they are arranged in the order of relative frequency:

1. Affections of the conjunctiva and cornea.
2. Affections of the retina and retinal vessels.
3. Affections of the ureal tract, viz., iris, ciliary body, choroid, and of the vitreous humor.
4. Affections of the crystalline lens.
5. Affections of the muscles (intra and extra-ocular).
6. Affections of the optic nerve.
7. Affections of the orbit.

1. Under this we may have conjunctivitis and ulcer of the cornea.

2. Here we may have retinal hemorrhage, anesthesia of the retina.

3. Under this may be seen iritis or iridocyclitis choroiditis.

4. Cataract is sometimes caused by typhoid fever.

5. This group may show optic neuritis (which rarely is retrobulbar), optic atrophy. The optic atrophy may be caused by the antecedent neuritis, by excessive hemorrhage (intestinal, nasal or menstrual) or by the injudicious use of quinine.

6. Here the intra-ocular muscles may be affected, causing paresis of accommodation. If the extra-ocular muscles are affected we may have strabismus of various kinds. Some of these paralyzes (especially in children) have been considered as due to the basilar meningitis, which is supposed to accompany some cases, but they may also be explained by an intense effect of the poison on the nervous system without the production of inflammation.

7. Affections of the orbit and its vessels are very rare. There have been noticed thrombosis of the orbital veins, orbital cellulitis, orbital hemorrhage. In the treatment of these various affections the general principles of ocular therapeutics must be applied, bearing in mind, of course, the extremely depressing influence of the fever under discussion.

## PATHOLOGY AND BACTERIOLOGY.

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

### Infarcts of the Placenta.

J. Whitridge Williams, in a paper on "The frequency and significance of infarcts of the placenta based upon the microscopic examination of five hundred placentæ," gives the result of a thorough study of the subject, illustrated by a series of fine plates. His conclusions are as follows: (1) Infarcts measuring at least 1 cm. in diameter were observed in 315 out of 500 consecutive placentas (63 per cent.). (2) Smaller infarcts, many just visible to the naked eye, were observed in the great majority of placentas, while microscopic examination revealed early stages of infarct formation in every full-term placenta which he examined. (3) The primary cause of infarct formation in the great majority of cases is to be found in an endarteritis of the vessels of the chorionic villi. (4) The primary result of the endarteritis is coagulation necrosis of portions of the villi just beneath the syncytium, with subsequent formation of canalized fibrin (as the process becomes more marked, the syncytium likewise degenerates, and is converted into canalized fibrin, which is followed by coagulation of the blood in the intervillous spaces, which results in a matting together of larger or smaller groups of villi by masses of fibrin). (5) The part played by the decidua in the production of infarcts has been greatly overestimated by many observers, it is more than probable, in many cases at least, that the tissue which they designate as decidual, is really fetal ectoderm. (6) Moderate degrees of infarct formation are not pathologic and exert no influence upon the mother or fetus, and are to be regarded as a sign of senility of the placenta, analogous to the changes which take place in the villi of the chorion at an earlier period. (7) Marked infarct formation is not infrequently observed, and often results in the death or imperfect development of the fetus. It is usually associated with albuminuria on the part of the mother, though at present we cannot account satisfactorily for the relationship between them. (8) Infarct formation is not particularly marked in cases of eclampsia, being usually observed only in those cases which were preceded by marked albuminuric symptoms. (9) There is no evidence in favor of the bacterial origin of infarcts.—*Philadelphia Med. Jour.*

### Tuberculosis of the Female Genital Tract in Children.

Wollstein describes the case of a girl, two years old, in which the child had had a purulent vaginal discharge for several weeks before death, but it had not been investigated pathologi-

cally. At the autopsy broncho-pneumonia of the lung with scattered miliary tubercles, cheesy bronchial glands, and tubercles in several of the other organs were found. There was a fluctuating mass in the right broad ligament which contained green pus; the fallopian tube to the left was dilated to three times its normal size, and both tubes contained cheesy material. Microscopic examination showed cheesy material in the right ovary which contained tubercles, and the mucous membrane of both fallopian tubes showed tubercles. The wall of the pelvic abscess was tuberculous. Tubercle bacilli were found in sections from both tubes, the peritoneum, and the lungs. In all eighteen cases of tuberculous of the genital organs in children have been described. In no other was there a pelvic abscess. Tuberculous peritonitis is noted in every case involving the tubes, uterus and ovaries, but did not occur in the six cases affecting the vulva or vagina, and in the remainder involving the genital tract. The tubes were involved in ten cases, and the uterus in the same number. Vaginal ulcers occurred in five cases. The order of frequency of involvement is as follows: Tubes, uterus, vagina, vulva, ovary, cervix. The genital lesion may be primary or secondary.—*Archives of Pediatrics*.

#### Method of Determining the Hydrochloric Acid in Combination in the Gastric Juice.

O. Cohnheim and H. Krieger (*Munchener Med. Woch.*)—Part of the hydrochloric acid secreted by the stomach combines with the albumins to form salts that are acid in the reaction. When to the hydrochlorate of an albumin phosphotungstic acid or a salt of phosphotungstic acid is added, the insoluble phosphotungstate of albumin is precipitated and the acidity is diminished. If the acidity that was present was dependent entirely upon the hydrochlorate of albumin, the reaction will be neutral; if there was free hydrochloric acid present as well, the acidity will be diminished, to the amount of the acid that had been combined with the albumin. Upon these principles the authors have based their test. They determine in the stomach-contents the total acidity and the free hydrochloric acid, using 10 cc. for each test. Another 10 cc. they precipitate with phosphotungstate of calcium. The latter is prepared by adding to a boiling 4 per cent. solution of phosphotungstic acid enough carbonate of calcium to render the solution neutral. The precipitate is filtered off, and the acidity determined in the clear filtrate, using rosolic acid or phenolphthalein as an indicator. The difference between this acidity and the total acidity indicates the amount of combined hydrochloric acid.—*Philadelphia Medical Journal*.

### The Growth of Bacteria.

Feinberg (*Deutsche Med. Woch.*) claims to have demonstrated by special method of staining the presence of nuclei in bacteria. The staining is carried out by fixation in absolute alcohol, then placing in eosin methylene-blue mixture. The preparation is left about 20 minutes in the stain. It is then washed and placed in absolute alcohol to remove the excess of stain and the precipitate. This takes several minutes. He now reports that he has been able to observe multiplication of bacteria, by division of the nucleus, followed by division of the body. This he has seen repeatedly in cultures of the diphtheria-bacillus, and also of the hay-bacillus, so that he believes that it may be considered proved that bacteria multiply by direct amitotic nuclear division.—*Philadelphia Medical Journal*.

### Bacteria Similar to Tubercle Bacilli in Gangrene of the Lungs.

Lydia Rabinowitsch (*Deutsche Med. Woch.*) describes the case of a man who was supposed to have chronic bronchitis. The sputum contained no tubercle-bacilli. Toward the latter part of life he had signs of gangrene of the lung, and post-mortem showed a cavity filled with gangrenous material without any other signs of tuberculosis. In the last few days of life the sputum was discovered to contain bacteria which had the same staining characteristics and the same morphology as the tubercle-bacillus. Injection into guinea-pigs, however, did not produce tuberculosis. Mice also remained free from the disease. Evidently, then, this is a bacillus resembling the tubercle-bacillus, but it is not the tubercle-bacillus. The cultures were different from the latter. This is the first instance in which a bacillus of the tinctorial characteristics of the tubercle-bacillus, but which was not this bacillus, has been discovered in the sputum.—*Philadelphia Medical Journal*.

### The Pathology of Bronchial Asthma.

Fraenkel (*Deutsche Med. Woch.*) describes some extremely interesting pathological observations in a case of bronchial asthma. The man had extremely frequent attacks, the last of which occurred thirty-six years before death, the end being caused by increased weakness of the heart. There has always been some doubt as to the manner of origin of Curschmann's spirals. This case he believes explains their origin. The staining with Schmidt's modification of the Blondi-Heidenhain triacid mixture demonstrated satisfactorily that they are composed purely of mucus and not of fibrin, and the microscopic examination showed changes which consisted essentially in a curious elongation of the cells with narrowing of the lateral diameter. Firmly

adherent to the cells were masses which projected into the bronchi. Various stages could be observed which led Fraenkel to conclude that the method of formation of the Curschmann spirals with gradual secretion of sticky mucus which remained adherent to the cells, and thereby the respiratory movement of air was whipped about until it assumed a spiral form. He believes that the central portion of the spiral, the nature of which has been in doubt, as the remnant of the body of the epithelial cell which has been stretched into a narrow and elongated form. Many eosinophiles were observed in the bronchial exudate. They were chiefly of a mononuclear character, a fact which has been observed previously in asthma-sputum.—*Philadelphia Medical Journal*.

#### Diphtheria Bacilli in the Mouths of Healthy Persons.

There is so much difference of opinion regarding the presence of diphtheria bacilli in the mouths of perfectly healthy individuals and of those attending patients sick with this disease that the work of Kober (*Zeitschrift für Hygiene und Infektionskrankheiten*, 1899, Vol. XXXI, p. 433), carried on in the laboratory of Professor Flügge, should be very gratefully received. These researches were carried on upon 128 persons who had come in contact with diphtheritics, and upon 600 persons who had not come in contact with those suffering from this disease.

In the cases in which the bacilli of Leoffler were found the diagnosis was based upon (1) growth on blood serum and microscopic examination at the end of six hours; (2) the double coloration of Neisser of cultures from nine to eighteen hours old; (3) testing the acidity, and (4) inoculation of guinea-pigs.

The results which Kober reached showed that the ideas usually held regarding the frequency of diphtheria bacilli in the mouths of healthy individuals are much exaggerated, for while the view has been generally held that the bacilli are present in the mouths of 7 per cent. of healthy individuals, Kober found them only in fifteen of his 600 cases examined, or 2.5 per cent. In ten of these fifteen cases the bacilli were not virulent. A minute inquiry showed that ten of these fifteen had recently come in contact with a focus of diphtheria, so that in reality the diphtheria bacillus is met with in the mouths of only .83 per cent of healthy persons who have not come in contact with diphtheritics. In the series of 123 cases that had come in contact with diphtheritics Kober found that in only ten, or in 8 per cent of the cases, were the bacilli to be found, although it has generally been supposed that this was so in 13.8 per cent. of all such cases. In these ten cases the bacilli were virulent.—*Maryland Med. Jour.*

### Contribution to the Knowledge of the Etiology of Syphilis,

Max Schüller (*Centralb. f. Bakt. u. Parasit.*) has also found in syphilis a micro-organism of probably protozoan nature, present in the hard chancre, the secondary and tertiary lesions of the disease, and especially in the hereditary form of the disease. In hard chancres kept in alcohol he was able to find, by 1,000 times magnification, exceptionally small oval vesicular bodies arranged in rows. They had double contoured glittering capsules and brownish or brown-yellowish, sometimes darker, contents. In teased and stained preparations larger free bodies were observed. Their appearance and finer structure recall those found by S. in tumors, though they are obviously different. In addition, by treating sections with iodid of potassium and examining them under a high power, he was able to demonstrate fine, zig-zag or spiral passages passing directly from the surface of the chancre in an oblique or transverse direction to tubes or pockets in the deeper part of the inflammatory infiltrated tissue. These were filled with peculiar "shot-like" round or conical dark-brown or violet bodies, in which by appropriate transmitted light doubly contoured vesicles are visible. These parasites were found in all of the tissues examined and were present in the blood of the spleen of a case of fatal florid syphilis. The presence of the bodies is as constant and of as great diagnostic value as the presence of the tubercle bacillus in tuberculosis, in Schüller's opinion. The experimental cultivation of the organisms was attempted similarly to the method described for the microparasite of carcinoma.—*International Med. Magazine.*

### The Absorption of Iodide by the Human Skin.

According to *La Semaine Medicale*, ZALLARD has applied the iodide of sodium in the form of a watery solution to the skin of lower animals, and also to the skin of human beings, in an endeavor to find out whether a solution of iodide of sodium of the strength of five per cent. is absorbed in considerable quantity so that it can be obtained in the urine. As a result of his investigation, he finds that it is so absorbed, and that it is quite slowly eliminated. He believes that a sufficient quantity of the drug may be absorbed through the skin, particularly if large areas of the skin are wet with the solution, or if the body is immersed in it, to produce very distinct therapeutic effects.

### The Artificial Production of Gout.

Kionka (*Berl. klin. Woch.*) has succeeded in producing a condition strongly simulating gout, by administering chronic or oxalic acid to poultry, or by feeding them upon lean horse

meat. Upon an exclusive diet of horse meat, with a free allowance of water, the birds in from three to five months developed repeated attacks of swelling of the joints, with symptoms of pain, and finally the formation of localized concretions. There was a marked craving for lime, which greatly increased the amount of excrement and changed its reaction from acid to alkaline. There was also a decided diminution of the uric acid elimination produced by the lime. It is suggested that the lime combines with the nitrogenous compounds and prevents the formation of urea and urates.—*International Medical Magazine*.

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## PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

### Antitoxin (in favor of).

Although the majority of physicians the world over agree that antitoxin is the best treatment for diphtheria, there are still some who claim that the mortality from the disease is, at least, as great as ever, and many who believe that the injection of antitoxin lessens the patient's chances of recovery. These objections are not all in the rank and file of our profession by any means; some are, or are claimed to be, authorities, Monte of Vienna, Epstein of Gottingen. In spite of this reports are still appearing giving statistics favoring antitoxin. One, that of Marsden, in the *British Medical Journal*, is remarkable, both for the large percentage of recoveries and the number of cases in which the disease was complicated by the presence of scarlet fever. In his series of 105 cases one died.

In substance, he says: "It is wasting time to bring forward facts simply to prove the value of antitoxin. Those who have treated the disease by the old and new methods need nothing to prove the inestimable value of the latter. Its detractors are few and must necessarily be inexperienced in its use." However, a good story will bear repeating, and here he gives his series of cases. The serum was always used on the clinical diagnosis. Diphtheria was always suspected in cases where there was sore throat and fever, and in which the fever declined and the throat symptoms remained the same or became worse. Improvement was noted in all cases, even in those in which the diagnosis was not confirmed by microscope. Even negative reports as to presence of K. L. bacillus was not always proof that the disease was not diphtheria, as in some it appeared later. He always gives serum on clinical diagnosis, as it never does any harm, and at first even in the true form

only small doses are necessary, 750 to 1,500 units, while later three or four times this dose must be given. The only objection he has to giving it on first seeing the case is the pain and expense. In his cases the membrane always stopped spreading and disappeared promptly.

Allen, in a paper read at the meeting of the American Medical Association, and published in the *Journal* of the society, October 13th, 1900, discusses the advances made in studying the disease by bacteriologists. First, taking up the diagnosis of diphtheria, he says that "the disease cannot be considered as present unless the K. L. bacillus is discovered. A clinical diagnosis should not content one, as other bacilli can cause the membrane. The K. L. bacillus has a distinct position as the cause of diphtheria, but it is very difficult to recognize it positively, as the variations as to shape, size and arrangement are many, and also the fact that the bacilli of the pseudo group are indistinguishable from the true. However, the disease presents a definite clinical picture, even if the organisms do vary." This difficulty in recognizing the bacillus has given and does give objectors to the serum treatment an opening.

Coming to the questions of immunity and serum treatment he says: "Ehrlich's theory that no animal can be inoculated with a disease unless it has in its body-cells a substance capable of combining with the toxins. The act of union between this substance in the cells and the toxins gives rise to the fever and other symptoms. Apply the theory to diphtheria—the toxins of the disease combine with this cell-substance and give the symptoms of diphtheria intoxication. If the toxins are in too large amounts death results, the cells being damaged beyond possibility of further physiologic function. If in less amount the cells are only stimulated to further effort to produce more of this substance to combine with the toxins. This is overproduced very soon, and is taken up by the blood, and can come in contact immediately with the toxins being produced at the focus of the disease and recovery takes place. This same substance, the combination of which in the cells with the toxin, gives rise to the symptoms of diphtheria, if taken up by the blood acts as an antitoxin and is the antitoxin. The injection of ready-made antitoxin does the same thing as regards the limitation and cure of the disease as it is taken up by the blood, and acts as the toxins at the time of formation. Antitoxin is not antitoxin until it gets into solution in the blood, and can have no effect on toxins already combined with the cells, nor can it repair cells overdamaged, hence use it early. Cases still die, as we must expect, considering this theory. Use large doses, use a reliable article and use it early. It does no harm of itself, but may if it is not pure.

Sharly, of Detroit, in his report in the *Jour. A. M. A.*, is still another who gives statistics hard to refute as to the benefit of antitoxin—100 cases of intubation and antitoxin with 31 deaths, as against 70 per cent. deaths without antitoxin.

In the *British Med. Jour.*, October 13th, 1900, Bokenham, after using it in over 500 cases, is also entirely in its favor. He also believes that it lessens danger of after-trouble, such as heart failure, a somewhat different view from that held by most physicians. He also advocates makers of serum discarding all samples prone to produce unpleasant affects, such as rashes, no matter what the antitoxic strength or value. This, he thinks, to argue against cheap serums.

The above extracts are all from reports favorable to antitoxin. That both sides may be heard, next month extracts from papers opposing will be given.

C. S. M.

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Dr. C. M. Stewart (Trinity, '98), of University College, has passed the conjoined examination in medicine and surgery and has been admitted to membership. He has secured the position of surgeon on a P. & O. mail steamer to India, China and Japan.

Dr. Geo. W. Badgerow is now in England. His present address is 17 Torrington Square, London, W.C.

## Editorials.

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### REPORT OF COMMITTEE OF HOSPITAL ABUSE.

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The Ontario Medical Association, in 1899, appointed a committee, with Dr. D. J. Wilson, as its chairman, to report on the question of the abuse of the hospital privileges by patients. The report of the committee was submitted and adopted at the meeting in June of this year. It is an excellent report, and should find the support of all the hospitals throughout the Province. The report deals specially with those cases which pay the hospital charge of \$2.80 per week, and then receive free attendance. The recommendation of the committee is that only those who are sent into the hospitals as paupers should receive free attendance. In like manner, patients paid for by lodges, corporations and companies, should not receive gratuitous treatment by the physician or surgeon. This is sound. Hospitals, which do anything that might deprive the profession of its proper fee, are not working on right lines, and should revise their methods.

The report recommends that the greatest care should be taken with regard to outdoor patients. It is notorious that very many seek treatment at the different dispensaries and outdoor departments who are quite able to pay some fee. They should be taught that free medical attendance, like any other free aid, is only for the destitute poor. In the case of emergency hospital, only "first aid" should be given. In all cases the patient should be handed over at once to the regular attendant.

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PREVALENCE OF CANCER.—Roger Williams, of Bristol (*Med. Press and Cir.*, Sept. 19th), maintains that the tendency to cancer might be increased by unsuitable modes of living, and that hyper-nutrition was the key to the cancer problem. This view is borne out by the fact that cancer is most frequent in the wealthiest countries. In France and England, where the people were exceptionally well nourished, the disease was increasing with the greatest rapidity. In France, in 1876, the death rate from cancer was 7.6 per 10,000 living; in 1895 it had gone up to 10 in the same number. In England, in 1850, the mortality was 2.9 on the same basis, now it was 7.5. In countries and districts where the method of life is simple, and

the food of unstimulating character, the disease was low, as in Sardinia, 1.9; in Sicily, 2.8; in Calabria, 2.4; in Southern Spain, the same; in Northern Africa, almost none. Open-air life; frugality in living, and little animal food, greatly lessened the frequency of the disease.

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DIPSOMANIA TREATED BY HYPNOTISM.—Dr. J. Milne Bramwell (*Quarterly Journal of Inebriety*, July, 1900), relates his experience in this method of treatment. He claims to have had good results. The main points to be observed are that the patient must be willing to be cured. In chronic cases there may be much difficulty in gaining the patient's assent to treatment and cure. The susceptibility to hypnotism varies, all yield in time, except idiots and some insane cases. Treatment ought to commence at the beginning of a period of quiescence. When stimulants are used continuously, these patients should be encouraged to lessen as much as possible. Before suggestion has taken effect, these patients should always have some reliable person with them. They often relapse, but the treatment must be continued. The distaste for alcohol, as well as the abolition of the craving, must be suggested—the will must be strengthened by suggestion.

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ANNUAL MEETING OF TRAINED NURSES.—The graduates of the Toronto General Hospital held their annual meeting on October 16th at the Temple Cafe. Representatives were present from Guelph, Stratford, Hamilton and St. Catharines. Miss Snively, Superintendent of the Training School of Nurses in the Toronto General Hospital, presided. After luncheon the business of the society was discussed and reports were presented by the secretary and treasurer. The attention of the alumni was devoted to the discussion of two important matters. During the past fifteen years 347 nurses have graduated from the Training School, and they are now most desirous of having in the city of Toronto a home for nurses. It is desirable that this home be open to all general nurses, who will have a place of rest and retirement, congenial society, and the enjoyment of intercourse with kindred spirits. Another project discussed was the formation of a sick benefit association. In connection with this association, it is intended that there shall be a bed endowed either in the General Hospital or in the proposed home. Both matters met with the fullest approval of the alumni, and steps will be taken during the coming year to secure some tangible result of the deliberations.

## Personals.

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Dr. A. S. Tilley, of Bowmanville, was married, October 10th, to Miss Philip, of Toronto.

Dr. J. T. Duncan, of Toronto, returned from a holiday trip to California, October 17th.

Dr. Howard Kelly, of Baltimore, paid a short visit to Toronto in September, the guest of Dr. L. Sweetnam.

Dr. W. T. Connell, Professor of Pathology Queen's Medical College, was married September 19th, to Miss Ford.

Dr. W. E. Graham, who has been associated with Dr. Mitchell, of Enniskillen, is leaving shortly for a year in Europe.

Dr. E. H. Stafford, (Tor. '89), formerly a medical assistant at the Asylum for Insane, Toronto, expects to spend the winter in the West Indies.

Dr. E. A. Spilsbury, formerly lecturer on laryngology and rhinology, Trinity Medical College, Toronto, has commenced practice in Ottawa.

Dr. George A. Peters is declining general practice, and has given notice that for the future his professional work will be confined to surgery.

Dr. Bryce, Provincial Health Officer, left October 23rd, for Indianapolis to attend the annual meeting of the American Health Association, of which he is president.

Dr. Geo. S. Burt (Tor. '96), who has been practising at Severn Bridge, Muskoka, sailed October 20th for Europe, where he will spend some time in post-graduate work.

Drs. Harold Parsons and Arthur Small have been appointed physicians to the Hillcrest Convalescent Home, Toronto, in the place of Drs. Bertram, Spencer and Allen Baines resigned.

Dr. F. Hershey Sherk (Tor. '90), formerly of Sault Ste. Marie, has commenced practice in Campbellford, in the place of Dr. Haig, recently appointed Superintendent of the Kingston General Hospital.

The Honorable Dr. Sullivan, Professor of Surgery, Medical Faculty of Queen's University, commenced his regular course of lectures October 3rd. The students were pleased to see him, especially because he was unable to lecture last session on account of illness.

Dr. Fife Fowler, who graduated in Edinburgh in 1846, and who has been connected with Queen's Medical College, Kingston, for over fifty years, has resigned his professorship in medicine, but still remains dean of the Medical Faculty.

Dr. A. A. Shepard, who recently commenced practice in Sault Ste. Marie, visited Toronto, September 28th, being called by telegram to see his brother who was dying, Mr. Charles Shepard, son of the late Dr. Allen A. Shepard, of Michigan, and who died at his mother's residence on the evening of September 28th, a few hours after the arrival of his brother.

Dr. James Third, of Kingston, has been appointed Professor of Medicine in the Medical Faculty of Queen's University in the place of Dr. Fife Fowler resigned. Dr. Third was formerly a student of Trinity Medical College, Toronto. He graduated M.D. Trinity University, and M.B. Toronto University in 1891, and was a resident physician Toronto General Hospital, 1891-1892. After practising for a short time in Trenton, he was appointed Superintendent of the Kingston General Hospital in 1895. During the last three years he has been a member of the Examining Board of the Ontario Medical Council. He resigned his position in the hospital a few months ago, and entered into general practice in the City of Kingston.

## Obituary.

### WILLIAM SUMNER SCOTT, M.D.

Dr. W. S. Scott, an old and highly respected citizen of Southampton, died at his home October 18th, and was buried October 21st, the officers and men of the 32nd Regiment, the civic officials and fraternal societies of Southampton taking part in the funeral. Dr. Scott received his medical education in Kingston, and graduated M.D. Queen's University, 1851.

### DUKE W. KESTER, M.D.

Dr. D. W. Kester, a well-known physician of Ingersoll, died October 22nd, after suffering from a lingering illness. He received his medical education at Trinity Medical College, Toronto, and graduated M.D. 1887.

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